Chapter 3

Microsoft Excel 2010

Welcome to the world of Excel. Now in the business world, the financial world, the manufacturing world, and any other industry you can think of, you will see people using Excel. It is by far one of the most used programs in the history of business applications.

The contents of this chapter are sketched in Figure 3-1.



Figure 3-1 The relationship chart of this chapter

3.1 An Overview of Microsoft Excel 2010

To make managing and analyzing a group of related data easier, you can turn a range of cells into an Excel table as shown in Figure 3-2.

| 1 | A | B | C | D | |
|---|---------------------|-------------|------------|-------------|---|
| 1 | Product 🗸 | Qtr 1 💌 | Qtr 2 🔽 | Grand Tota | Ī |
| 2 | Chocolade | \$744.60 | \$162.56 | \$907.16 | |
| 3 | Gummibarchen | \$5,079.60 | \$1,249.20 | \$6,328.80 | |
| 4 | Scottish Longbreads | \$1,267.50 | \$1,062.50 | \$2,330.00 | |
| 5 | Sir Rodney's Scones | \$1,418.00 | \$756.00 | \$2,174.00 | |
| 6 | Tarte au sucre | \$4,728.00 | \$4,547.92 | \$9,275.92 | |
| 7 | Chocolate Biscuits | \$943.89 | \$349.60 | \$1,293.49 | |
| 8 | Total | \$14,181.59 | \$8,127.78 | \$22,309.37 | |
| | | | | | |

Figure 3-2 An example of an Excel table

3.1.1 The elements of Excel table

A table can include the following elements:

1. Header row

By default, a table has a header row. Every table column has filtering enabled in the header row so that you can filter or sort your table data quickly, which are shown in Figure 3-3. And you can turn off the header row in a table.

2. Banded rows

Alternate shading or banding in rows helps to better distinguish the data, as shown in Figure 3-4.



Figure 3-3 Filter data and Sort data

| 1 | A | В | С |
|---|---------------------|-----------|-----------|
| 1 | Column1 🗾 | Column2 - | Column3 👻 |
| 2 | Product | Qtr 1 | Qtr 2 |
| 3 | Chocolade | 744.6 | 162.56 |
| 4 | Gummibarchen | 5079.6 | 1249.2 |
| 5 | Scottish Longbreads | 1267.5 | 1062.5 |

Figure 3-4 Banded rows

3. Calculated columns

By entering a formula in one cell in a table column, you can create a calculated column in which that formula is instantly applied to all other cells in that table column, which is shown in Figure 3-5.

4. Total row

Once you add a total row to a table, Excel gives you an AutoSum drop-down list to select from functions such as SUM, AVERAGE, and so on. When you select one of these options, the table will automatically convert them to a SUBTOTAL function, which will ignore rows that have been hidden with a filter by default. If you want to include hidden rows in your calculations, you can change the SUBTOTAL function arguments, which is shown in Figure 3-6.

| \times | √ f _x | =SUBTOTAL(109,[Mid | west]) | |
|----------|--|--------------------|--------|-------------------|
| | С | | or SUM | E |
| Re | evenue | e Audit (Si | mall | Busine |
| | | | | |
| | Europe 🗖 | Midwest 🖵 | North | east _l |
| 100 | \$7,200 | \$5,700 | | \$6,90 |
| 00 | \$2,300 | \$9,400 | | \$7,30 |
| 00 | \$9,300 | \$3,700 | | \$8,60 |
| 800 | \$4,300 | \$5,600 | | \$5,60 |
| 300 | \$23,100 | \$24,400 | * | \$28,40 |
| | None Average Count Count N Max Min Sum | lumbers | | |
| | StdDev Var More Fu | inctions | | |
| | | | | |

| В | C | D | E |
|-------------|------------|-----------------|-----------------|
| Qtr 1 💌 | Qtr 2 🔽 | Grand Tota | |
| \$744.60 | \$162.56 | =sum(Table1[@[0 | 2tr 1]:[Qtr 2]] |
| \$5,079.60 | \$1,249.20 | SUM(number1, [| number2],) |
| \$1,267.50 | \$1,062.50 | | |
| \$1,418.00 | \$756.00 | | |
| \$4,728.00 | \$4,547.92 | | |
| \$943.89 | \$349.60 | | |
| \$14,181.59 | \$8,127.78 | \$0.00 | |

Figure 3-5 An example of calculated columns

5. Sizing handle

A sizing handle in the lower-right corner of the table allows you to drag the table to the size that you want, as shown in Figure 3-7.

3.1.2 Create a table

| \$2,174.00 | \$16.00 |
|-------------|------------|
| \$9,275.92 | \$4,547.92 |
| \$1 293 / 9 | \$349.60 |

Figure 3-6 An example of total row

Figure 3-7 Resize the table by sizing handle

You can create as many tables as you want in a spreadsheet. To quickly create a table in Excel, do the following:

- (1) Select the cell or the range in the data.
- (2) Select "Home" \rightarrow "Format as Table", as shown in Figure 3-8.
- (3) Pick a table style, as shown in Figure 3-9.
- (4) In the "Format as Table" dialog box, set your cell range.

(5) In the "Format as Table" dialog box, select the checkbox next to "My table as headers", an shown in Figure 3-10. if you want the first row of the range to be the header row, and then click "OK".

| file | Home Insert Page Layout Formula | a Data Review View (| Mice Tab Help ACROBA | Baked Goods Salesatiar - Excel J V Tell me what you want to do | l Ref | Good | N |
|-------|---|----------------------|------------------------|---|-----------|-----------------|-------------------|
| Paste | The Copy - If Format Painter B I U - □ - □ - □ | | ge & Center - \$ - % > | Conditional Format as Neutra | d Calcula | tion Check Cell | Insert Delete For |
| | Spboard 15 Fort | rs Aligoment | rs Number | 5 | Styles | | Cells |
| Al | • I × ✓ Jx Product | | | | | | |
| | A | В | С | D | E | F | G |
| 1 | Product | Qtr 1 | Qtr 2 | Grand Total | | | |
| 2 | Long Rolls | \$304.03 | \$502.01 | \$806.04 | | | |
| 3 | Biscuits | \$2,080.83 | \$1,099.20 | \$3,180.03 | | | |
| 4 | Scones | \$4,504.42 | \$6,003.20 | \$10,507.62 | | | |
| 5 | Muffins | \$1,089.01 | \$1,200.80 | \$2,289.81 | | | |
| 6 | Crossoints | \$203.56 | \$607.82 | \$811.38 | | | |
| 7 | Cookies | \$1,103.33 | \$804.60 | \$1,907.93 | | | |
| 8 | | | 1.00 | | | | |
| 9 | Select H | lome → | Forma | at as Tab | e | | |
| 10 | | | | | | | |

Figure 3-8 Select "Home"→"Format as Table"

| - fortis | Server and a server a | | | Baked Goods Salesa | dox - Exce | 5 | = | | | , |
|----------|---|------------------------|-------------------------|--------------------|------------|----------|-------------|----------------|-------|------------------|
| | Home Insert Page Layout Formula | n Data Review View | Office Tab Help ACROBAT | | | | | | | |
| n. | K Cut Calibri + 11 + A | κ́ === ₩ ↔ ttw | ap Text General | · 192 | 12 | Normal | 8ad | Good | | |
| Paste | Gopy • S Format Painter B I U • □ • □ • □ • □ | <u>A</u> ·≡≡≡ ⊞ ⊞ ⊞ Ma | nge & Center - \$ - % + | Conditional | Format as | Neutral | Calculation | Check Cell | | Insert Delete Fo |
| 0 | Spboard 15 Fort | 7. Alignment | 7a Number | 5 | Light | 4 | | | | |
| A1 | ↓ × ✓ fr Product | | | | | BRANK I | | C REAL P | | |
| | | | | | | - | | | | |
| _ | A | В | C | D | | | | | | |
| 1 | Product | 01-1 | 01-2 | Gran | | | | | | |
| 2 | Long Rolls | Choos | e a stvl | A \$8 | Medium | | | - contractor (| | [=]=]=]=] |
| 3 | Biscuits | 011000 | e a sey. | \$3,1 | | | | | | |
| 4 | Scones | \$4,504.42 | \$6,003.20 | \$10,5 | | 00000 | | | 20000 | 00000 |
| 5 | Muffins | \$1,089.01 | \$1,200.80 | \$2,2 | | | | | | |
| 6 | Crossoints | \$203.56 | \$607.82 | \$8 | | | | | | |
| 7 | Cookies | \$1,103.33 | \$804.60 | \$1,9 | | | | | | 56666 |
| 8 | | | | | | | | 8 88888 8 | | 899999 |
| 9 | | | | | Dark | | | | | - |
| 10 | | | | | | | | 100000 | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | COLUMN 1 | | 2 | | |

Figure 3-9 Choose a style for your table

| 1 | A | | В | с | D | E | F | |
|--------|-----------------------|------------|------------|------------|-------------------------|--|-----|---|
| 1 2 | Product Long Rolls | Set | vour ce | ell range | Grand Total \$806.04 | Format Aa Table Sphere is the data for your table | 1 | × |
| 3 | Biscuits | an an aile | <i>J</i> | | \$3,180.03 | 1 to he has headers | | |
| 4 | Scones | | \$4,504.42 | \$6,003.20 | \$10,507.62 | J ox | Cam | - |
| 5 | Muffins | | \$1,089.01 | \$1,200.80 | \$2,289.81 | | | - |
| 6 | Crossoints | | \$203.56 | \$607.82 | \$811.38 | | | |
| 7 | Cookies | | \$1,103.33 | \$804.60 | \$1,907.93 | | | |

Figure 3-10 Set cell range

3.2 Experiment 1: Basic Excel

3.2.1 Experiment purpose

The purpose of this experiment is to master the operations of building and closing an Excel, some basic operations including inserting and deleting rows and columns, basic formulas, table design and charts.

3.2.2 Experiment contents

Experiment 3.1

This part of experiment should be finished in "Excel Data. xlsx" and save it as "Excel Datapractice 0".

- Insert a new row before the 16th row and input "Tom", "6000", "Master", "132204198810018822", "85.5".
- Delete the 18th row (After inserting).
- Insert a new column named "Index" on the leftmost table and finish indexing.
- Insert a new column named "Location" on the rightmost table and finish the input shown in Figure 3-11.
- Insert a new column named "Total Salary" on the rightmost table. The "Total Salary" equals to "Salary * Score / 100".
- Insert a new column named "Tax Rate" on the rightmost table. When the "Total Salary" is greater than 7000, the "Tax Rate" is 0.3. Otherwise it is 0.
- Insert a new column named "Age" before "Salary" and finish calculations. (Format: int (year(today())-mid(ID Card,7,4)). (Hint: you cannot input "ID Card" directly.)
- Insert a heading:

① Insert a new row before the first row and input "Information and Salary of the Dahua Company", Merge and Center A1:K1, and set the font to "Calibri", size 14, bold, light green.

- 2 Select A2:K2, and set the font to bold, Orange Accent 6.
- Add "All Borders" on the table, and center texts.
- Insert a Chart of 2D Clustered Column according to A3:C22.

After finishing this part of experiment, the final effect is shown as Figure 3-11 and Figure 3-12.

3.2.3 Experiment procedures

3.2.3.1 Insert and Delete Rows and Columns

- (1) Open the file "Excel Data. xlsx", and save it as "Excel Data practice 0".
- (2) Select the 16th row, right click it and select "Insert" (Shown in Figure 3-13).

| A | A | В | С | D | E | F | G | н | 1 | J |
|----|-------|--------|-----|-----------|--------------|--------------------|-------|----------|--------------|----------|
| 1 | | | | Informati | ion and Sala | ary of the Dahua C | ompa | iny | | |
| 2 | Index | Name | Age | Salary | Diploma | ID card | Score | Location | Total Salary | Tax Rate |
| 3 | 1 | Stu 1 | 31 | 8000 | Master | 200921198712260546 | 95.3 | Beijing | 7624 | 0.3 |
| 4 | 2 | Stu 2 | 39 | 6000 | Bachelor | 110501197905031267 | 88.2 | Beijing | 5292 | 0 |
| 5 | 3 | Stu 3 | 39 | 5000 | College | 456723197901211672 | 92.4 | Beijing | 4620 | 0 |
| 6 | 4 | Stu 4 | 50 | 3500 | Senior High | 551164196811292168 | 75 | Beijing | 2625 | 0 |
| 7 | 5 | Stu 5 | 28 | 6000 | Bachelor | 123642199012193315 | 85 | Beijing | 5100 | 0 |
| 8 | 6 | Stu 6 | 42 | 5000 | College | 543784197605081524 | 84.6 | Beijing | 4230 | 0 |
| 9 | 7 | Stu 7 | 42 | 8000 | Master | 516195197606110549 | 65.6 | Beijing | 5248 | 0 |
| 10 | 8 | Stu 8 | 51 | 6000 | Bachelor | 123784196706304567 | 63 | Beijing | 3780 | 0 |
| 11 | 9 | Stu 9 | 50 | 5000 | College | 154978196810289234 | 78.1 | Beijing | 3905 | 0 |
| 12 | 10 | Stu 10 | 59 | 3500 | Senior High | 456789195905084945 | 86 | Beijing | 3010 | 0 |
| 13 | 11 | Stu 11 | 38 | 8000 | Master | 456713198007145522 | 92.5 | Beijing | 7400 | 0.3 |
| 14 | 12 | Stu 12 | 39 | 6000 | Bachelor | 154795197905031679 | 75 | Shanghai | 4500 | 0 |
| 15 | 13 | Stu 13 | 51 | 5000 | College | 157164196703175756 | 51.4 | Shanghai | 2570 | 0 |
| 16 | 14 | Stu 14 | 58 | 3500 | Senior High | 159456196008060917 | 33.2 | Shanghai | 1162 | 0 |
| 17 | 15 | Tom | 30 | 6000 | Master | 132204198810018822 | 85.5 | Shanghai | 5130 | 0 |
| 18 | 16 | Stu 15 | 30 | 6000 | Bachelor | 132204198810018822 | 88 | Shanghai | 5280 | 0 |
| 19 | 17 | Stu 17 | 51 | 8000 | Master | 123456196702164567 | 80.5 | Shanghai | 6440 | 0 |
| 20 | 18 | Stu 18 | 36 | 6000 | Bachelor | 187341198211304655 | 91 | Shanghai | 5460 | 0 |
| 21 | 19 | Stu 19 | 42 | 5000 | College | 356715197607153497 | 38 | Shanghai | 1900 | 0 |
| 22 | 20 | Stu 20 | 38 | 3500 | Senior High | 187167198007168713 | 60 | Shanghai | 2100 | 0 |

Figure 3-11 The resulting table for Experiment 1



Figure 3-12 The resulting chart for Experiment 1

| | A10 | 5 • (| - | fx | Stu 15 | | | | | | ~ |
|----|--------|----------------|-------|---------|----------|--------------|--------|---|-----|---|----|
| 4 | A | В | | С | 2 | D | E | F | G | н | - |
| 1 | Name | Salary | Diple | oma | ID card | l. | Score | | | | |
| 2 | Stu 1 | 8000 | X | Cut | | 18712260546 | 95.3 | | | | |
| 3 | Stu 2 | 6000 | B | Com | | 7905031267 | 88.2 | | | | |
| 4 | Stu 3 | 5000 | 100 | Copy | Intioner | 7901211672 | 92.4 | | | | |
| 5 | Stu 4 | 3500 | 5 | Paste C | puons: | 6811292168 | 75 | | | | |
| 6 | Stu 5 | 6000 | | | | 9012193315 | 85 | | | | |
| 7 | Stu 6 | 5000 | | Paste S | pecial | 7605081524 | 84.6 | | | | |
| 8 | Stu 7 | 8000 | - | Insert | | 7606110549 | 65.6 | | | | |
| 9 | Stu 8 | 6000 | - | Delete | | 6706304567 | 63 | | | | |
| 10 | Stu 9 | 5000 | | Class | ontentr | 6810289234 | 78.1 | | | | |
| 11 | Stu 10 | 3500 | l | clear c | ontents | 15905084945 | 86 | | | | |
| 12 | Stu 11 | 8000 | (T | Format | Cells | 8007145522 | 92.5 | | | | = |
| 13 | Stu 12 | 6000 | | Row H | eight | 7905031679 | 75 | | | | |
| 14 | Stu 13 | 5000 | | Hide | | 6703175756 | 51.4 | | | | |
| 15 | Stu 14 | 3500 | | Unhide | | 6008060917 | 33.2 | | | | |
| 16 | Stu 15 | 6000 | Bach | elor | 132204 | 198810018822 | 88 | | - | | |
| 17 | Stu 16 | 5000 | Calil | bri + 1 | 1 · A | A | -11 73 | | | | |
| 18 | Stu 17 | 8000 | R | 1 = | 8 - A | | 0.5 | | | | |
| 19 | Stu 18 | 6000 | bach | | 10/341 | | 91 | | | | |
| 20 | Stu 19 | 5000 | Colle | ege | 356715 | 197607153497 | 38 | | | | |
| 21 | Stu 20 | 3500 | Seni | or High | 187167 | 198007168713 | 60 | | | | |
| 22 | | | | | | | | | | | |
| 23 | | | | | | | | | | | |
| 24 | | | | | | | | | | | |
| 25 | | | | | | | | | | | * |
| 14 | | ata 1 / Data 2 | /Da | ta 3 / | Data 4 | 82/ | | | 101 | | 14 |

Figure 3-13 Right click and select "Insert"

(3) Input "Tom", "6000" and "Master" from A16 to C16 respectively (Shown in Figure 3-14).

| | A16 | - (| × √ f _x | Tom | | | | | | * |
|----|----------|------------|--------------------|--------------------|------|---|----|---|------|---|
| 1 | A | В | С | D | E | F | G | н | | - |
| 4 | Stu 3 | 5000 | College | 456723197901211672 | 92.4 | | | | | |
| 5 | Stu 4 | 3500 | Senior High | 551164196811292168 | 75 | | | | | |
| 6 | Stu 5 | 6000 | Bachelor | 123642199012193315 | 85 | | | | | |
| 7 | Stu 6 | 5000 | College | 543784197605081524 | 84.6 | | | | | |
| 8 | Stu 7 | 8000 | Master | 516195197606110549 | 65.6 | | | | | |
| 9 | Stu 8 | 6000 | Bachelor | 123784196706304567 | 63 | | | | | |
| 10 | Stu 9 | 5000 | College | 154978196810289234 | 78.1 | | | | | |
| 11 | Stu 10 | 3500 | Senior High | 456789195905084945 | 86 | | | | | |
| 12 | Stu 11 | 8000 | Master | 456713198007145522 | 92.5 | | | | T I | |
| 13 | Stu 12 | 6000 | Bachelor | 154795197905031679 | 75 | | | | | |
| 14 | Stu 13 | 5000 | College | 157164196703175756 | 51.4 | | | | | |
| 15 | Stu 14 | 3500 | Senior High | 159456196008060917 | 33.2 | | | | | |
| 16 | Tom | | | | | | | | | |
| 17 | Stu 15 | 6000 | Bachelor | 132204198810018822 | 88 | | | | | = |
| 18 | Stu 16 | 5000 | College | 123497198511261239 | 73 | | | | | |
| 19 | Stu 17 | 8000 | Master | 123456196702164567 | 80.5 | | | | | |
| 20 | Stu 18 | 6000 | Bachelor | 187341198211304655 | 91 | | | | | |
| 21 | Stu 19 | 5000 | College | 356715197607153497 | 38 | | | | | |
| 22 | Stu 20 | 3500 | Senior High | 187167198007168713 | 60 | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | 1 | + |
| 14 | + H Data | 1 / Data 2 | / Data 3 / | Data 4 / 💬 / | | | 10 | | ► II | |

Figure 3-14 Input the first 3 columns

(4) Right click D16 and select "Format Cells" (Shown in Figure 3-15).

| K | - 17 · | (° ⁱⁱ - ∓ | Prace Page Layout | tice on Excel Data. | xlsx - | Microsoft E | xcel | ins T | - | | × A |
|-----|--------|---------------------------------------|--------------------------------|--|--------|---|--------------|---------|--------|------------------|------------------|
| Pa | iste | Calibri B Z U → ⊞ → ③ → Font | - 10.5 - = A A A ■ A - ∰ | ■ 日 日 日 日 日 日 日 ・ 日 ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ | Gener | ral • Cut <u>C</u> opy Paste Optic | A Bal | nsert • | Σ 2 | Sort & Filter | Find & Select |
| | D16 | • (| f_x | | | | | | | | ~ |
| | A | В | С | D | | Paste Speci | ial | | | н | |
| 4 | Stu 3 | 5000 | College | 4567231979012 | | | | | | | _ |
| 5 | Stu 4 | 3500 | Senior High | 5511641968112 | | insert | | | | | |
| 6 | Stu 5 | 6000 | Bachelor | 1236421990121 | | Delete | | | | | |
| 7 | Stu 6 | 5000 | College | 5437841976050 | | Clear Cont | ents | | | | |
| 8 | Stu 7 | 8000 | Master | 5161951976061 | | Filter | | | | | |
| 9 | Stu 8 | 6000 | Bachelor | 1237841967063 | | Sort | | | | | |
| 10 | Stu 9 | 5000 | College | 1549781968102 | 0.0 | Incard Com | | | | | |
| 11 | Stu 10 | 3500 | Senior High | 456789195905 | - | Insert Com | ment | _ | | | |
| 12 | Stu 11 | 8000 | Master | 456713198007 | 3 | Eormat Cel | l\$ | _ | | | |
| 13 | Stu 12 | 6000 | Bachelor | 1547951979050 | | Pick From D | Drop-down Li | ist | - | | |
| 14 | Stu 13 | 5000 | College | 1571641967031 | | Define Nan | ne | | | | |
| 15 | Stu 14 | 3500 | Senior High | 1594561960080 | 8 | Hyperlink | | | | | |
| 16 | Tom | 6000 | Master | | | 1 | 1 | 1 | - | | |
| 17 | Stu 15 | 6000 | Bachelor | 1322041988100 | Calib | ri - 10.5 | · A | g - % | , | 1 | |
| 18 | Stu 16 | 5000 | College | 1234971985112 | D | $r \equiv h$ | - A - 100 | . +.0 | .00 | | |
| 19 | Stu 17 | 8000 | Master | 1234561967021 | 0430 | | · 🕰 · 🖽 | .00 4 | -0 4 | | |
| 20 | Stu 18 | 6000 | Bachelor | 1873411982113 | 30465 | 5 93 | 1 | | | | |
| 21 | Stu 19 | 5000 | College | 3567151976071 | 15349 | 7 38 | 3 | | | | |
| 22 | Stu 20 | 3500 | Senior High | 1871671980071 | 6871 | 3 60 | 5 | | | | |
| 23 | | | | | | | | | | | |
| 24 | | | | | | | | | | | |
| 25 | | 1 | | | | 1 | | | | | |
| 26 | | 1 | | 1 | | | | | | | |
| 27 | | | | | | - | | | | | |
| 28 | | | | | | | | | | | 1 |
| 14 | + H D | ata 1 / Data 2 | /Data 3 /I | Data 4 / 23 / | | | - | 111 | _ | | • 1 |
| Rei | ady | | | | | I.E | 1 | 00% (- |) | -0- | -(+) |

Figure 3-15 Right click D16 and select "Format Cells"

(5) Choose the tab "Number" and select the "Text" on the Category (Shown in Figure 3-16).

| ormat Ce | ells | | | | | ? | × |
|--|-----------|------------------|----------------------------------|-------------------------|--------------------------------------|--------------------|---------|
| Number | Alignment | Font | Border | Fill | Protection | | |
| | : | | | | | | |
| General Number | 1 | Samp | ke | | | | |
| Accounti Date Time Percenta Fraction Scientific | ng ige | Text f The ce | ormat cells a Il is displayed | re treated d exactly | d as text even when a as entered. | a number is in the | e cell. |
| Special Custom | | 1 | | | | | |
| | | | | | | | |
| | | 1 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Figure 3-16 Change the format to "Text"

(6) Input "132204198810018822" and "85.5" on D18 and E18 respectively.

(7) Select the 18th row and right click it, choose "Delete" (Shown in Figure 3-17). After deleting, the resulting table is shown in Figure 3-18.

| 16 | ie no ≊į X | Calibri | + 11 + 3 | | General | - | A | add-in | s iea sert • | Σ • 1 | | din. | 3 |
|--|---------------|-----------------------------|--------------|--|----------|--------|--------|--------------|----------------------------|----------------|---------------------------------|------------------|---|
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| | A18 | - (| - fx | Stu 16 | | | | | | | | 1 | ~ |
| | A | В | С | D | | E | | F | G | | н | | |
| 7 | Stu 6 | 5000 | College | 543784197605 | 081524 | 84. | 6 | | | | | | |
| 8 | Stu 7 | 8000 | Master | 516195197606 | 110549 | 65. | 6 | | | | | | |
| 9 | Stu 8 | 6000 | Bachelor | 123784196706 | 304567 | 6 | 3 | | | | | | |
| 10 | Stu 9 | 5000 | College | 154978196810 | 289234 | 78. | 1 | | | | | | |
| 11 | Stu 10 | 3500 | Senior High | 456789195905 | 084945 | 8 | 6 | | | | | | |
| 12 | Stu 11 | 8000 | Master | 456713198007 | 145522 | 92. | 5 | | | | | | |
| 13 | Stu 12 | 6000 | Bachelor | 154795197905 | 031679 | 7 | 5 | | | | | | |
| 14 | Stu 13 | 5000 | College | 157164196703 | 175756 | 51. | 4 | | | | | | |
| 15 | Stu 14 | 3500 | Senior I Cal | ibri • 11 • A | A" III - | % | 南 | | | | | | |
| 16 | Tom | 6000 | Master " | $r = \Delta - \Delta$ | | .0 .00 | - | | | | | | |
| 17 | Stu 15 | 6000 | Bachelo | 1 = 1 - 1 | 100022 | 50 ÷.0 | | | | | | | |
| 18 | Stu 16 | 5000 | College v | 64 | 1239 | 7 | 3 | | | | | | |
| 19 | Stu 17 | 8000 | Master | Cuĩ | 4567 | 80. | 5 | | | | | | |
| 20 | Stu 18 | 6000 | Bacheld | Copy | 4655 | 9 | 1 | | | | | | |
| 21 | Stu 19 | 5000 | College | Paste Options: | 3497 | 3 | 8 | | | | | | ė |
| 22 | Stu 20 | 3500 | Senior I | | 8713 | 6 | 0 | | | | | | |
| | | | | Paste Special | | | | | | | | | |
| 23 | | | | Insert | | | | | | | | | |
| 23 24 | | | 100 | Delete | - | | | | | | | | |
| 23 24 25 | | | | Delete | | | | | | | | | |
| 23 24 25 26 | | | | Clear Contents | | | | | | | | | |
| 23 24 25 26 27 | | | | | | | | | | | | | |
| 23 24 25 26 27 28 | | | 3 | Eormat Cells | | | | | | | | | |
| 23 24 25 26 27 28 29 | | | đ | Format Cells Bow Height | | | | | | | | | |
| 23 24 25 26 27 28 29 30 | | | đ | Format Cells Bow Height Hide | | | | | | | | | |
| 23 24 25 26 27 28 29 30 31 | | | 1 | Eormat Cells Row Height Hide Unhide | | | | | | | | | |

Figure 3-17 Delete the 18th row

| X | ile Ho | C¤ + ↓ me Insert | Prace Page Layout | tice on Excel Data.xlsx - Mic Formulas Data Revie | rosoft Excel | Add-Ins | Tea | | × ap 13 |
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| | A18 | • (| • fx | Stu 17 | | | | | * |
| 4 | A | В | С | D | E | F | G | н | 5 |
| 7 | Stu 6 | 5000 | College | 543784197605081524 | 84.6 | | | | |
| 8 | Stu 7 | 8000 | Master | 516195197606110549 | 65.6 | | | | |
| 9 | Stu 8 | 6000 | Bachelor | 123784196706304567 | 63 | | | | |
| 10 | Stu 9 | 5000 | College | 154978196810289234 | 78.1 | | | | |
| 11 | Stu 10 | 3500 | Senior High | 456789195905084945 | 86 | | | | |
| 12 | Stu 11 | 8000 | Master | 456713198007145522 | 92.5 | | | | |
| 13 | Stu 12 | 6000 | Bachelor | 154795197905031679 | 75 | | | | |
| 14 | Stu 13 | 5000 | College | 157164196703175756 | 51.4 | | | | |
| 15 | Stu 14 | 3500 | Senior High | 159456196008060917 | 33.2 | | | | |
| 16 | Tom | 6000 | Master | 132204198810018822 | 85.5 | | | | |
| 17 | Stu 15 | 6000 | Bachelor | 132204198810018822 | 88 | | | | |
| 18 | Stu 17 | 8000 | Master | 123456196702164567 | 80.5 | | - | | |
| 19 | Stu 18 | 6000 | Bachelor | 187341198211304655 | 91 | | | | |
| 20 | Stu 19 | 5000 | College | 356715197607153497 | 38 | | | | |
| 21 | Stu 20 | 3500 | Senior High | 187167198007168713 | 60 | | | | |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
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| 14 | PH Da | ata 1 / Data 2 | /Data 3 /I | Data 4 / 20 | | | | | • |
| Rea | ady | | Average: 40 | 040.25 Count: 5 Sum: 808 | 0.5 | 100 | % 🕀 | 0 | + |

Figure 3-18 The resulting table after deleting

(8) Right click the first column and select "Insert" (Shown in Figure 3-19).

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| | A | В | C | D | | E | F | G | н | | |
| 1 | Nam & | cuţ | oma | ID card | | Score | | | - | -1 | |
| 2 | Stu 1 -D | Сору | er | 200921198712 | 260546 | 95.3 | 3 | | | | |
| 3 | Stu 2 | Paste Options: | elor | 110501197905 | 031267 | 88.2 | 2 | | | | |
| 4 | Stu 3 | | ege | 456723197901 | 211672 | 92.4 | 4 | | _ | | |
| 5 | Stu 4 | Paste Special | or High | 551164196811 | 292168 | 75 | 5 | | _ | | |
| 6 | Stu 5 | Inced | elor | 123642199012 | 193315 | 8 | 5 | | | | |
| 7 | Stu | Insert | ge | 543784197605 | 081524 | 84.0 | 5 | | - | | |
| 8 | Stu 7 | Delete | er | 516195197606 | 110549 | 65.6 | 5 | | - | | |
| 9 | Stu 8 | Clear Contents | elor | 123784196706 | 304567 | 63 | 3 | | | | |
| 10 | Stu 9 | Eormat Cells | ege | 154978196810 | 289234 | 78.1 | 1 | | | | |
| 11 | Stu 1 | Column Width | or High | 456789195905 | 084945 | 80 | 5 | | | | |
| 12 | Stu 1 | Hide | er | 456713198007 | 145522 | 92.5 | 5 | | | | ł |
| 13 | Stu 1 | Unhide | elor | 154795197905 | 031679 | 7 | 5 | | | | |
| 14 | Stu 1 | 1 | ege | 157164196703 | 175756 | 51.4 | 4 | | | | |
| 15 | Stu 14 | 3500 Se | enior High | 159456196008 | 060917 | 33.2 | 2 | | | | |
| 16 | Tom | 6000 M | aster | 132204198810 | 018822 | 85.5 | 5 | | | | |
| 17 | Stu 15 | 6000 Ba | chelor | 132204198810 | 018822 | 88 | 8 | | - | | |
| 18 | Stu 17 | 8000 M | aster | 123456196702 | 164567 | 80.3 | 5 | | | | |
| 19 | Stu 18 | 6000 Ba | chelor | 187341198211 | 304655 | 93 | 1 | | | | |
| 20 | Stu 19 | 5000 C | ollege | 356715197607 | 153497 | 38 | 8 | | | | |
| 21 | Stu 20 | 3500 Se | enior High | 187167198007 | 168713 | 60 | 0 | | _ | | |
| 22 | | | | | | | | | _ | | |
| 23 | - | | | | | | | | - | | 1 |
| 24 | 1 | - | | | | | | | | _ | |
| 25 | | | | | | | | | | | ÷ |

Figure 3-19 Insert a new column

35

(9) Input "Index" on A1, and "1" and "2" on A2 and A3 respectively. Select A3, press your mouse on the lower right corner of A3 and drag to A21 (Shown in Figure 3-20).

| Pas | te | Calibri BIJI | $ \begin{array}{c c} \bullet & 11 & \bullet \\ I \bullet & A^* & A^* \\ \hline \bullet \bullet & \underline{A} \bullet \\ \text{int} & \hline \hline s \end{array} $ | = = = = E = ∃ = = E f = ≫- Alignment | General → ∰ → % → *.68 ↔ % Number G | a and a second | sert + elete + ormat + ells | Σ · A Sort & F 2 · Filter · So Editing | ind a elect |
|--------|-------|-----------------|--|---|--|--|--------------------------------------|---|-------------|
| | A2 | | • (* 1 | 1 | | - | - | | _ |
| 1 | A | B | Calani | Dialama | E ID soud | F | G | н | |
| 1 | Index | Name Ctu 1 | Salary | Dipioma | 1D Card | Score | | | |
| 2 | 1 | 5101 | 6000 | Pacholor | 110501197005031257 | 90.5 | | | |
| 5 A | | d+ 2 | 5000 | Collogo | 456722197901211672 | 00.2 | | | |
| 4 5 | | Gtu S | 3500 | Coniege | 450725157501211072 551164196911292169 | 75 | | | |
| 5 | | Ctu 5 | 6000 | Bachalor | 122642199012192215 | 25 | | | |
| 7 | | Stu 5 | 5000 | College | 543784197605081524 | 84.6 | | | |
| 8 | | Stu 7 | 8000 | Master | 516195197606110549 | 65.6 | | - | |
| 9 | | Stu 8 | 6000 | Bachelor | 123784196706304567 | 63 | | | |
| 10 | | Stu 9 | 5000 | College | 154978196810289234 | 78.1 | | | |
| 11 | | Stu 10 | 3500 | Senior High | 456789195905084945 | 86 | | | |
| 12 | | Stu 11 | 8000 | Master | 456713198007145522 | 92.5 | | | |
| 13 | | Stu 12 | 6000 | Bachelor | 154795197905031679 | 75 | | | |
| 4 | | Stu 13 | 5000 | College | 157164196703175756 | 51.4 | | | |
| 15 | | Stu 14 | 3500 | Senior High | 159456196008060917 | 33.2 | | | |
| 16 | | Tom | 6000 | Master | 132204198810018822 | 85.5 | | | |
| 17 | | Stu 15 | 6000 | Bachelor | 132204198810018822 | 88 | | | |
| 18 | | Stu 17 | 8000 | Master | 123456196702164567 | 80.5 | | | |
| 19 | | Stu 18 | 6000 | Bachelor | 187341198211304655 | 91 | | | |
| 20 | | Stu 19 | 5000 | College | 356715197607153497 | 38 | | | |
| 21 | | Stu 20 | 3500 | Senior High | 187167198007168713 | 60 | | | |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 14 | | | | | | 1 | | | |

Figure 3-20 Create index for the table

(10) Input "Location" and "Beijing" on relevant positions (Shown in Figure 3-21). SelectG2. Press your mouse on the lower right corner of G2 and drag to G12.

(11) Input "Shanghai" from G13 to G21 in the same way (Shown in Figure 3-22).

3.2.3.2 Basic Formulas

(1) Input "Total Salary" on H1. Select H2. Input the formula "=C2 * F2/100". Or input '=', and then click C2, and input '*', and click F2, and finally input "/100". Press the key Enter (Shown in Figure 3-23).

(2) Select H2 and press the lower right corner of it, drag it to H21 (Shown in Figure 3-24).

(3) Input "Tax Rate" on I1. Select I2. Select "Insert Function" on the "Formulas" tab. Then there will be a dialog box. Select "IF" from the list. Click "OK" (Shown in Figure 3-25).

(4) Input each item in "Logical_test", "Value_if_true" and "Value_if_false" on the dialog box "Function Arguments". After that, click "OK" (Shown in Figure 3-26).

| Pa | ste | Calibri B I U | • 11 • • A A • A • nt 5 | ■ ■ 章 章 書 注 作 ≫・ Alignment | General • General • • • • • • • • • • • • • • • • • • • | A ityles | | nsert + relete + ormat + fells | Σ | Sort & Filter * Editing | Find & Select |
|----|-------|---------------|----------------------------------|--|--|-------------|------|---|---|-------------------------------|------------------|
| _ | G2 | | • (= | Beijing | 1 | | | | _ | | |
| 4 | A | В | C | D | E | | F | G | | Н | |
| 1 | Index | Name | Salary | Diploma | ID card | S | core | Location | n | | - |
| 2 | 1 | Stu 1 | 8000 | Master | 20092119871226054 | 6 | 95.3 | Beijing | - | | |
| 3 | 2 | Stu 2 | 6000 | Bachelor | 11050119790503126 | 7 | 88.2 | | | | |
| 4 | 3 | Stu 3 | 5000 | College | 45672319790121167 | 2 | 92.4 | | | | |
| 5 | 4 | Stu 4 | 3500 | Senior High | 55116419681129216 | 8 | 75 | - | | | |
| 6 | 5 | Stu 5 | 6000 | Bachelor | 12364219901219331 | 5 | 85 | 1 | - | | |
| 7 | 6 | Stu 6 | 5000 | College | 543784197605081524 | 4 | 84.6 | - | - | | |
| 8 | 7 | Stu 7 | 8000 | Master | 516195197606110549 | 9 | 65.6 | | + | | |
| 9 | 8 | Stu 8 | 6000 | Bachelor | 12378419670630456 | 7 | 63 | | + | | |
| 10 | 9 | Stu 9 | 5000 | College | 154978196810289234 | 4 | 78.1 | - | + | | |
| 11 | 10 | Stu 10 | 3500 | Senior High | 45678919590508494 | 5 | 86 | | + | | |
| 12 | 11 | Stu 11 | 8000 | Master | 45671319800714552 | 2 | 92.5 | | _ | | _ |
| 13 | 12 | Stu 12 | 6000 | Bachelor | 154795197905031679 | 9 | 75 | | | | |
| 14 | 13 | Stu 13 | 5000 | College | 157164196703175750 | 6 | 51.4 | | _ | | |
| 15 | 14 | Stu 14 | 3500 | Senior High | 15945619600806091 | 7 | 33.2 | | - | | |
| 16 | 15 | Tom | 6000 | Master | 13220419881001882 | 2 | 85.5 | | - | | |
| 17 | 16 | Stu 15 | 6000 | Bachelor | 13220419881001882 | 2 | 88 | | - | | |
| 18 | 17 | Stu 17 | 8000 | Master | 12345619670216456 | 7 | 80.5 | | - | | |
| 19 | 18 | Stu 18 | 6000 | Bachelor | 18734119821130465 | 5 | 91 | | | | |
| 20 | 19 | Stu 19 | 5000 | College | 35671519760715349 | 7 | 38 | | _ | | |
| 21 | 20 | Stu 20 | 3500 | Senior High | 18/16/198007168713 | 3 | 60 | | - | | |
| 22 | | | | | | | | | + | | |
| 23 | | | | | | - | | | | | |
| 24 | | | | | | | | | - | | |
| 25 | | | | 10 1 1 10 | | | | | _ | | |

Figure 3-21 Input "Beijing" from G2 to G12

| | Tile Hor | t≌ - ↓ me Inse | P rt Page Layou | ractice on Excel | Data.xlsx - Microsoft Data Review | t Excel View | Add-Ir | ns Team | | × ت و د |
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| | G13 | | • (* 1 | 🖌 Shanghai | | | | | | * |
| 4 | A | В | С | D | E | | F | G | Н | - |
| 1 | Index | Name | Salary | Diploma | ID card | | Score | Location | | 1 |
| 2 | Beijing | Beijing | Beijing | Beijing | Beijing | | Beijing | Beijing | | |
| 3 | 2 | Stu 2 | 6000 | Bachelor | 110501197905031 | 267 | 88.2 | Beijing | | |
| 4 | 3 | Stu 3 | 5000 | College | 456723197901211 | 672 | 92.4 | Beijing | | - |
| 5 | 4 | Stu 4 | 3500 | Senior High | 551164196811292 | 168 | 75 | Beijing | | |
| 6 | 5 | Stu 5 | 6000 | Bachelor | 123642199012193 | 315 | 85 | Beijing | | |
| 7 | 6 | Stu 6 | 5000 | College | 543784197605081 | 524 | 84.6 | Beijing | | |
| 8 | 7 | Stu 7 | 8000 | Master | 516195197606110 | 549 | 65.6 | Beijing | | |
| 9 | 8 | Stu 8 | 6000 | Bachelor | 123784196706304 | 567 | 63 | Beijing | | |
| 10 | 9 | Stu 9 | 5000 | College | 154978196810289 | 234 | 78.1 | Beijing | | |
| 11 | 10 | Stu 10 | 3500 | Senior High | 456789195905084 | 945 | 86 | Beijing | | |
| 12 | 11 | Stu 11 | 8000 | Master | 456713198007145 | 522 | 92.5 | Beijing | | |
| 13 | 12 | Stu 12 | 6000 | Bachelor | 154795197905031 | 679 | 75 | Shanghai | | |
| 14 | 13 | Stu 13 | 5000 | College | 157164196703175 | 756 | 51.4 | Shanghai | | |
| 15 | 14 | Stu 14 | 3500 | Senior High | 159456196008060 | 917 | 33.2 | Shanghai | | |
| 16 | 15 | Tom | 6000 | Master | 132204198810018 | 822 | 85.5 | Shanghai | | |
| 17 | 16 | Stu 15 | 6000 | Bachelor | 132204198810018 | 822 | 88 | Shanghai | | |
| 18 | 17 | Stu 17 | 8000 | Master | 123456196702164 | 567 | 80.5 | Shanghai | | |
| 19 | 18 | Stu 18 | 6000 | Bachelor | 187341198211304 | 655 | 91 | Shanghai | | |
| 20 | 19 | Stu 19 | 5000 | College | 356715197607153 | 497 | 38 | Shanghai | | |
| 21 | 20 | Stu 20 | 3500 | Senior High | 187167198007168 | 713 | 60 | Shanghai | | |
| 22 | | | | | | | | | B7 | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | - |
| 25 | | | | | | | | | | |
| 14 | + H Da | ta 1 Da | ta 2 / Data 3 | Data 4 / 8 | 1/ 04 | | | | | • |
| Rei | ady | | | | Count: 9 | | 10 10 | 0% - | 0 | -+ |

Figure 3-22 Input "Shanghai" from G13 to G21

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| X. | 0.0.0 | ¥ = ∓ | P | ractice on Exce | Data.xlsx - Microsoft | Excel | | | - 0 | × |
|------|---------|-------------------------|---------------------------------------|--|--|-------------|----------------------|--|-----------------------|--------|
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| | LINEST | C | (= x v 1 | =C2*F2/1 | 00 | | | | | * |
| 4 | A | В | C | D | E | | F | G | н | - |
| 1 | Index | Name | Salary | Diploma | ID card | E Se | 9101 | Lecation | Total Salar | х П |
| 2 | 1 | Stu 1 | 8000 | Master | 2009211987122605 | i46 | 95.3 | Beijing | *F2/100 | 411 |
| 3 | 2 | Stu 2 | 6000 | Bachelor | 1105011979050312 | 267 | 88.2 | Beijing | | 1 |
| 4 | 3 | Stu 3 | 5000 | College | 4567231979012116 | 572 | 92.4 | Beijing | | |
| 5 | 4 | Stu 4 | 3500 | Senior High | 5511641968112921 | 168 | 75 | Beijing | | |
| 6 | 5 | Stu 5 | 6000 | Bachelor | 1236421990121933 | 315 | 85 | Beijing | | |
| 7 | 6 | Stu 6 | 5000 | College | 5437841976050815 | 524 | 84.6 | Beijing | | |
| 8 | 7 | Stu 7 | 8000 | Master | 5161951976061105 | 549 | 65.6 | Beijing | | |
| 9 | 8 | Stu 8 | 6000 | Bachelor | 1237841967063045 | 67 | 63 | Beijing | | |
| 10 | 9 | Stu 9 | 5000 | College | 1549781968102892 | 234 | 78.1 | Beijing | | |
| 11 | 10 | Stu 10 | 3500 | Senior High | 4567891959050849 | 945 | 86 | Beijing | | |
| 12 | 11 | Stu 11 | 8000 | Master | 4567131980071455 | 522 | 92.5 | Beijing | | |
| 13 | 12 | Stu 12 | 6000 | Bachelor | 1547951979050316 | 579 | 75 | Shanghai | | |
| 14 | 13 | Stu 13 | 5000 | College | 1571641967031757 | 756 | 51.4 | Shanghai | | |
| 15 | 14 | Stu 14 | 3500 | Senior High | 1594561960080609 | 917 | 33.2 | Shanghai | | |
| 16 | 15 | Tom | 6000 | Master | 1322041988100188 | 322 | 85.5 | Shanghai | | |
| 17 | 16 | Stu 15 | 6000 | Bachelor | 1322041988100188 | 322 | 88 | Shanghai | | |
| 18 | 17 | Stu 17 | 8000 | Master | 1234561967021645 | 67 | 80.5 | Shanghai | | |
| 19 | 18 | Stu 18 | 6000 | Bachelor | 1873411982113046 | 555 | 91 | Shanghai | | |
| 20 | 19 | Stu 19 | 5000 | College | 3567151976071534 | 197 | 38 | Shanghai | | |
| 21 | 20 | Stu 20 | 3500 | Senior High | 1871671980071687 | 713 | 60 | Shanghai | | |
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | - |
| 14 4 | I M Da | ta 1 Dat | a 2 / Data 3 | Data 4 / 8 | 2/ 04 | | | 11 | | • |

Figure 3-23 Input a formula

| Pas | ste J | Calibri B Z U H - 3 For | • 11 • I• A A • <u>A</u> • nt 5 | ■ ■ 章 章 ■ 〕 注 律 》 Alignment | General · A · · · · · · · · · · · · · · · · · · | | ormat • 2 Cells | Sort & Fin Sort & Fin Filter * Sele Editing | d & |
|-----|-------|----------------------------------|--|---|--|-------|--------------------|--|-----|
| _ | H2 | 1 | • (= 1 | =C2*F2/10 | 00 | 1 | 1 | 1 | ~ |
| 1 | A | 8 | C | D | E | F | G | н | - |
| 1 | Index | Name | Salary | Diploma | ID card | Score | Location | Total Salary | -1 |
| 2 | 1 | Stu 1 | 8000 | Master | 200921198712260546 | 95.3 | Beijing | 7624 | - |
| 3 | 2 | Stu 2 | 6000 | Bachelor | 110501197905031267 | 88.2 | Beijing | | |
| 4 | 3 | Stu 3 | 5000 | College | 456/2319/9012116/2 | 92.4 | Beijing | | |
| 5 | 4 | Stu 4 | 3500 | Senior High | 551164196811292168 | /5 | Beijing | | |
| 0 | 5 | Stu 5 | 6000 | Bachelor | 123042199012193315 | 85 | Beijing | | |
| / | 0 | Stu 0 | 5000 | College | 543784197605081524 | 84.0 | Beijing | | |
| 0 | 1 | Stu 7 | 6000 | Naster | 10195197000110549 | 05.0 | Beijing | | |
| 5 | 0 | Stub | 5000 | College | 154070106010200224 | 70 1 | Beijing | | |
| 11 | 10 | Stu 9 | 3500 | Conier High | 1545780105005084045 | 70.1 | Boiiing | | |
| 12 | 10 | Stu 10 | 8000 | Martor | 456712199007145522 | 92.5 | Politing | | |
| 12 | 12 | Stu 12 | 6000 | Bachelor | 154795197905031679 | 75 | Shanghai | | -11 |
| 14 | 12 | Stu 12 | 5000 | College | 157164196703175756 | 51.4 | Shanghai | | |
| 15 | 14 | Stu 14 | 3500 | Senior High | 159456196008060917 | 33.9 | Shanghai | | |
| 16 | 15 | Tom | 6000 | Master | 132204198810018822 | 85.5 | Shanghai | | |
| 17 | 16 | Stu 15 | 6000 | Bachelor | 132204198810018822 | 88 | Shanghai | | |
| 18 | 17 | Stu 17 | 8000 | Master | 123456196702164567 | 80.5 | Shanghai | | |
| 19 | 18 | Stu 18 | 6000 | Bachelor | 187341198211304655 | 91 | Shanghai | | |
| 20 | 19 | Stu 19 | 5000 | College | 356715197607153497 | 38 | Shanghai | | |
| 21 | 20 | Stu 20 | 3500 | Senior High | 187167198007168713 | 60 | Shanghai | | |
| 22 | | | | series mon | | | erran Brian | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| - | | | | | | - | | | |

Figure 3-24 Fill the column "Total Salary"

| in Fur | ile f _x sert httion γ | C ^a + ∓ fome Insert AutoSum * Recently Used * Financial * | Pra Page Layout Cogical * A Text * | Formulas Data Formulas Data 6 * Name Manager | lsx - Mic Revi Defi f ⁽²⁾ Use | ew Vi ne Name in Formu te from S | xcel iew Add ia ila - Selection | I-Ins Tei Sormula Auditing * | am A Calculati | 0 = | × ₽ | 23 |
|-----------|--|---|---|--|---|---|---|------------------------------------|-------------------|---------|--------|----|
| - | 12 | - | (= X V fx | = | Denneu | reames | | | | | _ | |
| .4 | В | C | D | E | | F | G | н | | 1 | | E |
| 1 | Name | Salary | Diploma | ID card | | Score | Location | n Total S | alary T | ax Rate | - | ű |
| 2 | Stu 1 Stu 2 | Insert Functio | on | | | ? | × | 1 | 762 = 5292 | _ | 1 | |
| 4 | Stu 3 | Search for a fu | unction: | | | | | | 4620 | | | 1 |
| 5 | Stu 4 | Type a brief | f description of wi | hat you want to do and | then dia | k | Go | | 2625 | | | 1 |
| 6 | Stu 5 | Go | | | | _ | | | 5100 | | | 1 |
| 7 | Stu 6 | Or select a g | ategory: Most R | ecently Used | | ~ | | | 4230 | | | 1 |
| 8 | Stu 7 | Select a function | on: | | | | | | 5248 | | | 1 |
| 9 | Stu 8 | IF. | | | | | | | 3780 | | | 1 |
| 10 | Stu 9 | LINEST | | | | | _ | 1 | 3905 | | | 1 |
| 11 | Stu 10 | AVERAGE | | | | | | | 3010 | | | 1 |
| 12 | Stu 11 | HYPERLINK | | | | | | | 7400 | | | 1 |
| 13 | Stu 12 | MAX | | | | | ~ | | 4500 | | | 1 |
| 14 | Stu 13 | IF(logical_t | test,value_if_t | rue,value_if_false) | | | | | 2570 | | | 1 |
| 15 | Stu 14 | Checks whet | her a condition is | met, and returns one | value if T | RUE, and | another | | 1162 | | | 1 |
| 16 | Tom | Value IT FALS | кс., | | | | | | 5130 | | | 1 |
| 17 | Stu 15 | | | | | | | | 5280 | | | 1 |
| 18 | Stu 17 | | | _ | _ | - | | | 6440 | | | 1 |
| 19 | Stu 18 | Help on this fur | nction | | OK | | Cancel | | 5460 | | | 1 |
| 20 | Stu 19 | | o concec | | | | unungn | | 1900 | | | 1 |
| 21 | Stu 20 | 350 | 00 Senior High | 18716719800710 | 58713 | 60 | Shangh | i | 2100 | | | |
| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | 1 |
| 24 | | | | | | | | | | | | ĭ |
| 25 | | | | | | | | | | | | 1 |
| H | 4 + + | Data 1 / Data | 2 / Data 3 / | Data 4 / 22 | | 14 | | | | _ | • | 1 |
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Figure 3-25 Another way to input a formula

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|----------------------|---------------|-----------------|----------------------------|----------------------------|--------------------------|--------------|--------------|-------------|--------|--------------|-----|-----|
| File | Home | Insert | Page Layout | Formulas | Data Rev | iew Vi | ew Add-I | ins Tea | m c | ۵ 0 - | - B | 8 |
| fr | Σ Auto | Sum * | Logical - | A., | A Sold | ine Name | * | 1 | 1 | | | |
| Insert | Br Recer | ntly Used - | A Text - | li0 - | Jame fi [©] Use | in Formu | la - | Formula | Calcul | ation | | |
| unction | n 🎯 Finar | icial - | 📴 Date & Time | * 🗊 * M | anager IIIP Cre | ate from S | election A | uditing + | • | | | |
| | | Function Lib | itary | | Define | d Names | | | | | | Ļ |
| | IF | • (| × √ fx | =IF(H2>70 | 00,0.3,0) | - | | | | | _ | _ |
| 4 | В | C | D | | E | F | G | н | | 1 | | ļ |
| 1 Nar | me Sa | lary | Diploma | ID card | | Score | Location | Total Sa | alary | Tax Ra | te | - |
| 2 Stu | 1 | 8000 | Master | 20092119 | 8712260546 | 95.3 | Beijing | 1 | 7624 | 0,0.3,0 |) | - |
| 3 Stu | 2 | 6000 | Bachelor | 11050119 | 7905031267 | 88.2 | Beijing | | 5292 | | - 1 | - |
| Functio | on Argum | ents | | | | | | ? × | 20 | | - | |
| IF . | _ | | | | _ | | | | 5 | | - | - |
| - 1 | Logica | I test H2: | >7000 | | TRUE | 6 | | | 0 | | | 1 |
| | Value | if true 0.3 | | | 56 0.3 | | | | 18 | | | - |
| | Value | F Falsa Ol | | | 58 - 0 | | | | 10 | | | 1 |
| - 4 | value_ | _iabe _0 | | | Hall I | | | | 15 | | | 1 |
| Charles | whether a | condition is a | ut and rations | one value if T | = 0.3 | er unhen ift | | | 10 | | | |
| Criebos | S MILICULES O | condition is in | ieų anu returnis i | | | | ALSC. | | 10 | | | |
| | | Value | _if_taise is the is ret | e value that is turned. | returned if Logi | cal_test is | FALSE. If om | itted, FALS | E 10 | | | |
| | | | | | | | | | 70 | | | |
| | | | | | | | | | 52 | | _ | |
| Formula | a result = | 0.3 | | | | | _ | | 10 | | _ | _ |
| Help or | n this functi | on | | | | (| ж | Cancel | 10 | | _ | _ |
| | | | | | | | | 1 | 10 | | - | - |
| 9 Stu | 18 | 6000 | Bachelor | 18/34119 | 8211304655 | 91 | Shanghai | | 1000 | | | - |
| tu Stu | 30 | 2500 | Coniege Senier High | 330/1519 | 007159712 | 38 | Shanghai | | 2100 | | - | - |
| T DIN | 20 | 3500 | Senior High | 18/10/19 | 000/108/13 | 60 | snanghai | | 2100 | | - | - 1 |
| 2 | | | | - | | - | | | | | | 1 |
| 2 | | | | | | | | | | | | - |
| 12 | | | | | | | | | | | | - |
| 12 13 14 | | | | | | - | | | | | | |
| 22 13 14 15 | 비 Data | 1 / Data 2 | Data 3 | Data 4 / 2 | | 14 | | | | |) | 1 |

Figure 3-26 Input a formula in "Function Arguments"

(5) Select I2 and press the lower right corner of it. Drag it to I21 to finish the calculation (Shown in Figure 3-27).

| In | fx ΣA Sert | utoSum • Recently Used • (inancial • Function Lib | Logical * Text * Date & Time rary | Ar Def Ar Use Manager Defined | ine Name in Formu ate from S 1 Names | * la - election Ar | Formula uditing + Calcul | ation | |
|-----|---------------|---|---|--|---|--------------------------|-----------------------------|----------|--|
| | 12 | - (| f _x | =IF(H2>7000,0.3,0) | | | | | |
| sil | В | С | D | E | F | G | Н | 1 | |
| 1 | Name | Salary | Diploma | ID card | Score | Location | Total Salary | Tax Rate | |
| 2 | Stu 1 | 8000 | Master | 200921198712260546 | 95.3 | Beijing | 7624 | 0.3 | |
| 3 | Stu 2 | 6000 | Bachelor | 110501197905031267 | 88.2 | Beijing | 5292 | | |
| 4 | Stu 3 | 5000 | College | 456723197901211672 | 92.4 | Beijing | 4620 | | |
| 5 | Stu 4 | 3500 | Senior High | 551164196811292168 | 75 | Beijing | 2625 | | |
| 6 | Stu 5 | 6000 | Bachelor | 123642199012193315 | 85 | Beijing | 5100 | | |
| 7 | Stu 6 | 5000 | College | 543784197605081524 | 84.6 | Beijing | 4230 | | |
| 8 | Stu 7 | 8000 | Master | 516195197606110549 | 65.6 | Beijing | 5248 | | |
| 9 | Stu 8 | 6000 | Bachelor | 123784196706304567 | 63 | Beijing | 3780 | | |
| 10 | Stu 9 | 5000 | College | 154978196810289234 | 78.1 | Beijing | 3905 | | |
| 11 | Stu 10 | 3500 | Senior High | 456789195905084945 | 86 | Beijing | 3010 | | |
| 12 | Stu 11 | 8000 | Master | 456713198007145522 | 92.5 | Beijing | 7400 | | |
| 13 | Stu 12 | 6000 | Bachelor | 154795197905031679 | 75 | Shanghai | 4500 | | |
| 4 | Stu 13 | 5000 | College | 157164196703175756 | 51.4 | Shanghai | 2570 | | |
| 15 | Stu 14 | 3500 | Senior High | 159456196008060917 | 33.2 | Shanghai | 1162 | | |
| 16 | Tom | 6000 | Master | 132204198810018822 | 85.5 | Shanghai | 5130 | | |
| 17 | Stu 15 | 6000 | Bachelor | 132204198810018822 | 88 | Shanghai | 5280 | | |
| 18 | Stu 17 | 8000 | Master | 123456196702164567 | 80.5 | Shanghai | 6440 | | |
| 19 | Stu 18 | 6000 | Bachelor | 187341198211304655 | 91 | Shanghai | 5460 | | |
| 20 | Stu 19 | 5000 | College | 356715197607153497 | 38 | Shanghai | 1900 | | |
| 21 | Stu 20 | 3500 | Senior High | 187167198007168713 | 60 | Shanghai | 2100 | | |
| 2 | | | | | | | | | |
| 23 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |

Figure 3-27 Calculate Tax Rate for all students

(6) To calculate the age of each students, add a new column named Age before the columnD. Select C2 and input "=INT(YEAR(TODAY())-MID(F2,7,4))" on the "Formula Bar" (Shown in Figure 3-28).

(7) Select C2 and press the lower right corner of it. Drag it to C21 (Shown in Figure 3-29).

3.2.3.3 Table Design

(1) Insert a new row before the first row and input the title "Information and Salary of the Dahua Company" (Shown in Figure 3-30).

(2) Set the title's font to "Calibri", size 14, bold, light green, center, and the second row's font to bold. Fill the second row with "Orange Accent 6" by using "Fill Color" on the "Home" tab (Shown in Figure 3-31).

(3) Select A1: J22. Double click Center button on the "Home" tab to center all texts. Add all borders for it by using "More Borders" on the "Home" tab (Shown in Figure 3-32).

| In Fur | fx Σ Au Sert Section D Fil | ne inse utoSum * cently Use nancial * Functio | d + (A Text + Date & T n Library | ime + ime + | Name Manager III C | Define Name * Jse in Formula * Foreate from Selection Aud ned Names | mula Ca | | 1 1 1 |
|-----------|----------------------------------|---|--|-------------|-----------------------|--|---------|----------|-------|
| _ | IF | | • (= X • | fx =INT(YE | AR(TODAY()) | -MID(F2,7,4)) | | | |
| 4 | А | В | C | D | E | F | G | н | |
| 1 | Index | Name | Age S | alary | Diploma | ID card | Score | Location | Tota |
| 2 | 1 | Stu 1 | =INT(YEAR(| ODAY())-N | IID(F2,7,4)) | 200921198712260546 | 95.3 | Beijing | |
| 3 | 2 | Stu 2 | and the second s | 6000 | Bachelor | 110501197905031267 | 88.2 | Beijing | |
| 4 | 3 | Stu 3 | | 5000 | College | 456723197901211672 | 92.4 | Beijing | |
| 5 | 4 | Stu 4 | | 3500 | Senior High | 551164196811292168 | 75 | Beijing | |
| 6 | 5 | Stu 5 | | 6000 | Bachelor | 123642199012193315 | 85 | Beijing | |
| 7 | 6 | Stu 6 | | 5000 | College | 543784197605081524 | 84.6 | Beijing | |
| 8 | 7 | Stu 7 | | 8000 | Master | 516195197606110549 | 65.6 | Beijing | |
| 9 | 8 | Stu 8 | | 6000 | Bachelor | 123784196706304567 | 63 | Beijing | |
| 10 | 9 | Stu 9 | | 5000 | College | 154978196810289234 | 78.1 | Beijing | |
| 11 | 10 | Stu 10 | | 3500 | Senior High | 456789195905084945 | 86 | Beijing | |
| 12 | 11 | Stu 11 | | 8000 | Master | 456713198007145522 | 92.5 | Beijing | |
| 3 | 12 | Stu 12 | | 6000 | Bachelor | 154795197905031679 | 75 | Shanghai | |
| 4 | 13 | Stu 13 | | 5000 | College | 157164196703175756 | 51.4 | Shanghai | |
| 15 | 14 | Stu 14 | | 3500 | Senior High | 159456196008060917 | 33.2 | Shanghai | |
| 6 | 15 | Tom | | 6000 | Master | 132204198810018822 | 85.5 | Shanghai | |
| 7 | 16 | Stu 15 | | 6000 | Bachelor | 132204198810018822 | 88 | Shanghai | |
| 8 | 17 | Stu 17 | | 8000 | Master | 123456196702164567 | 80.5 | Shanghai | |
| 19 | 18 | Stu 18 | | 6000 | Bachelor | 187341198211304655 | 91 | Shanghai | |
| 20 | 19 | Stu 19 | | 5000 | College | 356715197607153497 | 38 | Shanghai | |
| 1 | 20 | Stu 20 | | 3500 | Senior High | 187167198007168713 | 60 | Shanghai | |
| 22 | | | | | | | 1.000 | | |
| 23 | | | | | | | | | _ |
| 24 | | | | | | | | | |
| | | | - | | | | | | - |

Figure 3-28 Calculate age for each students

| In Fur | fx ∑ Au Sert Section D Fi | ntoSum * ecently Use nancial * Functio | ed • 🔏 Text • | al * 🛱 * 100 * 8: Time * 1110 * | Name Manager III (| Define Name ~ Jse in Formula ~ For Create from Selection Aud ned Names | mula iting • Ca | Iculation | | |
|-----------|---------------------------------|---|---------------|---------------------------------------|-----------------------|--|--------------------|-----------|------|----|
| _ | C2 | | • (= | fx =INT(Y | EAR(TODAY() |)-MID(F2,7,4)) | | | | |
| - | А | В | C | D | E | F | G | н | | E |
| 1 | Index | Name | Age | Salary | Diploma | ID card | Score | Location | Tota | al |
| 2 | 1 | Stu 1 | 31 | 8000 | Master | 200921198712260546 | 95.3 | Beijing | | 1 |
| 3 | 2 | Stu 2 | | 6000 | Bachelor | 110501197905031267 | 88.2 | Beijing | | 1 |
| 4 | 3 | Stu 3 | | 5000 | College | 456723197901211672 | 92.4 | Beijing | | Ш |
| 5 | 4 | Stu 4 | | 3500 | Senior High | 551164196811292168 | 75 | Beijing | | 1 |
| 6 | 5 | Stu 5 | | 6000 | Bachelor | 123642199012193315 | 85 | Beijing | | 1 |
| 7 | 6 | Stu 6 | | 5000 | College | 543784197605081524 | 84.6 | Beijing | | 1 |
| 8 | 7 | Stu 7 | | 8000 | Master | 516195197606110549 | 65.6 | Beijing | | 1 |
| 9 | 8 | Stu 8 | | 6000 | Bachelor | 123784196706304567 | 63 | Beijing | | 1 |
| 10 | 9 | Stu 9 | | 5000 | College | 154978196810289234 | 78.1 | Beijing | | 1 |
| 11 | 10 | Stu 10 | | 3500 | Senior High | 456789195905084945 | 86 | Beijing | | 1 |
| 12 | 11 | Stu 11 | | 8000 | Master | 456713198007145522 | 92.5 | Beijing | | 1 |
| 13 | 12 | Stu 12 | | 6000 | Bachelor | 154795197905031679 | 75 | Shanghai | | 1 |
| 14 | 13 | Stu 13 | | 5000 | College | 157164196703175756 | 51.4 | Shanghai | | 1 |
| 15 | 14 | Stu 14 | | 3500 | Senior High | 159456196008060917 | 33.2 | Shanghai | | 1 |
| 16 | 15 | Tom | | 6000 | Master | 132204198810018822 | 85.5 | Shanghai | | 1 |
| 17 | 16 | Stu 15 | | 6000 | Bachelor | 132204198810018822 | 88 | Shanghai | | 1 |
| 18 | 17 | Stu 17 | | 8000 | Master | 123456196702164567 | 80.5 | Shanghai | | 1 |
| 19 | 18 | Stu 18 | | 6000 | Bachelor | 187341198211304655 | 91 | Shanghai | | 1 |
| 20 | 19 | Stu 19 | | 5000 | College | 356715197607153497 | 38 | Shanghai | | 1 |
| 21 | 20 | Stu 20 | | 3500 | Senior High | 187167198007168713 | 60 | Shanghai | | 1 |
| 22 | | | | | | | | | | 1 |
| 23 | | | | | | | | | | 1 |
| 24 | | | | | | | | | | ï |
| 25 | | | | | | | | | | 1 |

Figure 3-29 Finish calculating ages

| P | aste 🖋 | Calibri B Z E * | <u>и</u> . Эл. <u>А</u> Font | 14 • A A | 三 正 译 4 | ■ = 副 = ■ 国 律 ※・ lignment | General • | A | Delete | Σ·Α Z·Sor Q·Filt Ed | t & Find er * Selec iting |
|----|----------|-----------------------|------------------------------------|-------------|----------------|------------------------------------|---|---------|----------|------------------------------|---------------------------------|
| | Al | L | • (= | | f _x | Informatio | n and Salary of the | Dahua (| Company | | |
| 4 | A | B | C | D | 1 | E | F | G | н | 1 | J |
| 1 | Informat | tion and | Salary c | f the D | ahu | a Company | 1 | | | | |
| 2 | Index | Name | Age | Salary | | Diploma | ID card | Score | Location | Total Salary | Tax Rate |
| 3 | 1 | Stu 1 | 31 | | 8000 | Master | 200921198712260546 | 95.3 | Beijing | 7624 | 0.3 |
| 4 | 2 | Stu 2 | 39 | | 6000 | Bachelor | 110501197905031267 | 88.2 | Beijing | 5292 | 0 |
| 5 | 3 | Stu 3 | 39 | | 5000 | College | 456723197901211672 | 92.4 | Beijing | 4620 | 0 |
| 6 | 4 | Stu 4 | 50 | | 3500 | Senior High | 551164196811292168 | 75 | Beijing | 2625 | 0 |
| 7 | 5 | Stu 5 | 28 | | 6000 | Bachelor | 123642199012193315 | 85 | Beijing | 5100 | 0 |
| 8 | 5 | Stu 6 | 42 | | 5000 | College | 543784197605081524 | 84.6 | Beijing | 4230 | 0 |
| 9 | 7 | Stu 7 | 42 | - | 8000 | Master | 516195197606110549 | 65.6 | Beijing | 5248 | (|
| 10 | 8 | Stu 8 | 51 | | 6000 | Bachelor | 123784196706304567 | 63 | Beijing | 3780 | 6 |
| 11 | 9 | Stu 9 | 50 | | 5000 | College | 154978196810289234 | 78.1 | Beijing | 3905 | |
| 12 | 10 | Stu 10 | 59 | | 3500 | Senior High | 456789195905084945 | 80 | Beijing | 3010 | 0 |
| 13 | 11 | Stu 11 | 38 | | 8000 | Master | 456/1319800/145522 | 92.5 | Beijing | 7400 | 0.3 |
| 14 | 12 | Stu 12 | 39 | | 6000 | Bachelor | 154/9519/9050316/9 | /5 | Shanghai | 4500 | 0 |
| 15 | 15 | Stu 15 | 51 | - | 5000 | College | 15/164196/031/5/56 | 51.4 | Shanghai | 2570 | 0 |
| 15 | 14 | Stu 14 | 58 | | 3500 | Senior righ | 159456196008060917 | 33.4 | Shanghai | 1162 | U |
| 17 | 15 | 10m | 30 | | 6000 | Master | 132204198810018822 | 85.5 | Shanghai | 5130 | 0 |
| 18 | 16 | Stu 15 | 30 | | 6000 | Bachelor | 132204198810018822 | 60 | Shanghai | 5280 | 0 |
| 19 | 17 | Stu 1/ | 20 | | 6000 | Pachelor | 123430190/0210430/ | 80.5 | Shanghai | 6440 | 0 |
| 20 | 10 | Stu 10 | 30 | | 5000 | College | 356715107607159403 | 91 | Shanabai | 1000 | 0 |
| 22 | 20 | Stu 20 | 29 | | 8500 | Senior High | 187167108007168719 | 50 | Shanghai | 2100 | 0 |
| 22 | 20 | 0.0 20 | | | | action right | 201 201 200001 2007 13 | | anungoar | 2.100 | 0 |
| 24 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 77 | | | | | | | | | | | |
| 28 | | | - | | | | | - | | | |
| 20 | | | | | | | | | | | |

Figure 3-30 Input the title

| Pa | ste | Calibr | i · | 11 - = A' A' ≡ A' 6 | 「日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日 | General • • • • • • • • • • • • | A Styles | Format Cells | Σ·A a·Z · C2·Filt Ec | rt & Find ter * Select |
|----|-------|--------|------|---------------------------|---------------------------------------|---|-------------|-----------------|-------------------------------|---------------------------|
| | A | 2 | • (= | f _x | Index | | | | | |
| d. | A | B | C | D | E | F | G | н | 1 | J |
| 1 | 4 | _ | | Informati | on and Sal | ary of the Dahua | Compa | iny | | |
| 2 | Index | Name | Age | Salary | Diploma | ID card | Score | Location | Total Salary | Tax Rate |
| 3 | 1 | Stu 1 | 3: | 1 800 | Master | 20092119871226054 | 5 95.3 | Beijing | 7624 | 0.3 |
| 4 | 2 | Stu 2 | 35 | 9 600 | Bachelor | 11050119790503126 | 7 88.2 | Beijing | 5292 | 0 |
| 5 | 3 | Stu 3 | 35 | 9 500 | College | 45672319790121167 | 2 92.4 | Beijing | 4620 | 0 |
| 6 | 4 | Stu 4 | 50 | 350 | Senior High | 55116419681129216 | 8 75 | Beijing | 2625 | 0 |
| 7 | 5 | Stu 5 | 21 | 8 600 | Bachelor | 12364219901219331 | 5 85 | Beijing | 5100 | 0 |
| 8 | 6 | Stu 6 | 4 | 2 500 | College | 54378419760508152 | \$ 84.6 | Beijing | 4230 | 0 |
| 9 | 1 | Stu 7 | 43 | 2 800 | Master | 51619519760611054 | 65.6 | Beijing | 5248 | 0 |
| 10 | 8 | Stu 8 | 5 | 1 600 | Bachelor | 12378419670630456 | 7 63 | Beijing | 3780 | 0 |
| 11 | 9 | Stu 9 | 50 | 500 | College | 15497819681028923 | \$ 78.1 | Beijing | 3905 | 0 |
| 2 | 10 | Stu 10 | 55 | 350 | Senior High | 45678919590508494 | 5 86 | Beijing | 3010 | 0 |
| 3 | 11 | Stu 11 | 30 | 8 800 | Master | 45671319800714552 | 2 92.5 | Beijing | 7400 | 0.3 |
| 4 | 12 | Stu 12 | 35 | 9 600 | Bachelor | 15479519790503167 | 9 75 | Shanghai | 4500 | 0 |
| 5 | 13 | Stu 13 | 5 | 1 500 | College | 15716419670317575 | 5 51.4 | Shanghai | 2570 | 0 |
| 6 | 14 | Stu 14 | 54 | 8 350 | Senior High | 15945619600806091 | 7 33.2 | Shanghai | 1162 | 0 |
| 7 | 15 | Tom | 30 | 0 600 | Master | 13220419881001882 | 2 85.5 | Shanghai | 5130 | 0 |
| 8 | 16 | Stu 15 | 30 | 600 | Bachelor | 13220419881001882 | 2 88 | Shanghai | 5280 | 0 |
| 9 | 17 | Stu 17 | 5 | 1 800 |) Master | 12345619670216456 | 7 80.5 | Shanghai | 6440 | 0 |
| 0 | 18 | Stu 18 | 30 | 5 600 | Bachelor | 18734119821130465 | 5 91 | Shanghai | 5460 | 0 |
| 1 | 19 | Stu 19 | 4. | 2 500 | College | 35671519760715349 | 7 38 | Shanghai | 1900 | 0 |
| 2 | 20 | Stu 20 | 3 | \$ 350 | Senior High | 18716719800716871 | 5 60 | Shanghai | 2100 | 0 |
| 3 | | | - | - | | | - | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | _ | - | | | _ | | | |
| 27 | - | | - | - | | | - | | | |
| 8 | | | - | | - | | | | | |

Figure 3-31 Design for title and the second row

| Pas | ie K te board | Home In Calibri B I H * | sert Pa - 1 <u><u><u><u></u></u></u> - 1 <u><u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u></u></u> | ge Layout 4 → X A → → | Formulas | Data Review Vie General Vie State State Number State | yles | dd-Ins 1 Insert • Delete • Format Cells | Team Δ Σ · A · Z · Fill · Z · Fill Ed | T & Find ter * Sele diting |
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| | А | 1 | • (= | fx | Doublesc | lick alary of the D | ahua (| Company | | |
| .d. | A | В | С | D | Double-c | F | G | н | 1 | J |
| 1 | | a: | | Informat | ion and Sala | ry of the Dahua Co | mpan | iy | | |
| 2 | Index | Name | Age | Salary | Diploma | ID card | Score | Location | Total Salary | Tax Rate |
| 3 | 1 | Stu 1 | 31 | 8000 | Master | 200921198712260546 | 95.3 | Beijing | 7624 | 0.3 |
| 4 | 2 | Stu 2 | 39 | 6000 | Bachelor | 110501197905031267 | 88.2 | Beijing | 5292 | 0 |
| 5 | 3 | Stu 3 | 39 | 5000 | College | 456723197901211672 | 92.4 | Beijing | 4620 | 0 |
| 6 | 4 | Stu 4 | 50 | 3500 | Senior High | 551164196811292168 | 75 | Beijing | 2625 | 0 |
| 7 | 5 | Stu 5 | 28 | 6000 | Bachelor | 123642199012193315 | 85 | Beijing | 5100 | 0 |
| 8 | 6 | Stu 6 | 42 | 5000 | College | 543784197605081524 | 84.6 | Beijing | 4230 | 0 |
| 9 | 7 | Stu 7 | 42 | 8000 | Master | 516195197606110549 | 65.6 | Beijing | 5248 | 0 |
| 10 | 8 | Stu 8 | 51 | 6000 | Bachelor | 123784196706304567 | 63 | Beijing | 3780 | 0 |
| 11 | 9 | Stu 9 | 50 | 5000 | College | 154978196810289234 | 78.1 | Beijing | 3905 | 0 |
| 12 | 10 | Stu 10 | 59 | 3500 | Senior High | 456789195905084945 | 86 | Beijing | 3010 | 0 |
| 13 | 11 | Stu 11 | 38 | 8000 | Master | 456713198007145522 | 92.5 | Beijing | 7400 | 0.3 |
| 14 | 12 | Stu 12 | 39 | 6000 | Bachelor | 154795197905031679 | 75 | Shanghai | 4500 | 0 |
| 15 | 13 | Stu 13 | 51 | 5000 | College | 157164196703175756 | 51.4 | Shanghai | 2570 | 0 |
| 16 | 14 | Stu 14 | 58 | 3500 | Senior High | 159456196008060917 | 33.2 | Shanghai | 1162 | 0 |
| 17 | 15 | Tom | 30 | 6000 | Master | 132204198810018822 | 85.5 | Shanghai | 5130 | 0 |
| 18 | 16 | Stu 15 | 30 | 6000 | Bachelor | 132204198810018822 | 88 | Shanghai | 5280 | 0 |
| 19 | 17 | Stu 17 | 51 | 8000 | Master | 123456196702164567 | 80.5 | Shanghai | 6440 | 0 |
| 20 | 18 | Stu 18 | 36 | 6000 | Bachelor | 187341198211304655 | 91 | Shanghai | 5460 | 0 |
| 21 | 19 | Stu 19 | 42 | 5000 | College | 356715197607153497 | 38 | Shanghai | 1900 | 0 |
| 22 | 20 | Stu 20 | 38 | 3500 | Senior High | 187167198007168713 | 60 | Shanghai | 2100 | 0 |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 10. | | | | | | | | 1 | | - |

Figure 3-32 Finish the basic design of the table

3.2.3.4 Charts

(1) To insert a chart of 2D Clustered Column, Select B2:C22. Find "Charts" on the Insert tab. Click it. It will show a list of all kinds of charts. Select "Column" and the first chart type under "2-D Column" (Shown in Figure 3-33).

(2) The resulting chart will be shown in Figure 3-34. You can try some other charts and other settings if you like.

3.2.4 Self test practice

1. Practice 1

Open "Excel Data. xlsx" and copy the table in worksheet 2 and paste it onto a new Excel. Save it as "Excel Data-practice 1. xlsx".

- Insert a chart of 2D Clustered Column by using the table in worksheet 2 according to Figure 3-35.
- Set the gridlines to "Dash Dot".

| Pivo | J L | | | | all Charts 5 | | | ew vie | A | Header | | 2 abols |
|------|--------|---------|------------|--------|-----------------|-------------|--------|---------|--------|-----------|---------------------|------------|
| PIVU | * | able Pi | Arl | | * | * | SILCEI | пуреппк | Box | * & Foote | r 🌆 | * |
| | Tables | | Illustrati | ons | | | Filter | Links | | Text | - | |
| _ | В | 2 | • (* | | | XX • | | 1 | | O | | |
| 4 | A | В | C | D | Column | Line P | e Bar | Area | Scatte | Other | 1 | J |
| 1 | | - | - | Inform | * | | | + | * | Charts * | | |
| 2 | Index | Name | Age | Sala | 2-D Col | umn | | | | G | Total Salary | Tax Rate |
| 3 | 1 | Stu 1 | 31 | 800 | | | | 1 | 5.3 | Beijing | 7624 | 0.3 |
| \$ | 2 | Stu 2 | 39 | 600 | - dia | ll a B I | | | 3.2 | Beijing | 5292 | 0 |
| | 3 | Stu 3 | 39 | 500 | | Lall | | | 2.4 | Beijing | 4620 | 0 |
| | 4 | Stu 4 | 50 | 350 | 2.0.6ek | | | - | 5 | Beijing | 2625 | 0 |
| 7 | 5 | Stu 5 | 28 | 600 | 3-0 CO | | | | 15 | Beijing | 5100 | 0 |
| 5 | 6 | Stu 6 | 42 | 500 | 1 AR | all | 190 | L A | 1.6 | Beijing | 4230 | 0 |
| | 7 | Stu 7 | 42 | 800 | | | AA | | 5.6 | Beijing | 5248 | 0 |
| D | 8 | Stu 8 | 51 | 600 | | | | | - j3 | Beijing | 3780 | 0 |
| 1 | 9 | Stu 9 | 50 | 500 | Cylinde | r | | | 8.1 | Beijing | 3905 | 0 |
| 2 | 10 | Stu 10 | 59 | 350 | | 1.8 | 188 | lei | 6 | Beijing | 3010 | 0 |
| 3 | 11 | Stu 11 | 38 | 800 | | | | I A A | 2.5 | Beijing | 7400 | 0.3 |
| 4 | 12 | Stu 12 | 39 | 600 | | 1 100- | 100 | 100 | 5 | Shanghai | 4500 | 0 |
| 5 | 13 | Stu 13 | 51 | 500 | Cone | | | | 1.4 | Shanghai | 2570 | 0 |
| 6 | 14 | Stu 14 | 58 | 350 | 2 | 1 | | 1 | 3.2 | Shanghai | 1162 | 0 |
| 7 | 15 | Tom | 30 | 600 | D . A . | A | AA | AN | 5.5 | Shanghai | 5130 | 0 |
| 8 | 16 | Stu 15 | 30 | 600 | | 100- | 100 | - 00 | 8 | Shanghai | 5280 | 0 |
| 9 | 17 | Stu 17 | 51 | 800 |) Decomic | | | | 0.5 | Shanghai | 6440 | 0 |
| 0 | 18 | Stu 18 | 36 | 600 |) Fyramic | | | | 1 | Shanghai | 5460 | 0 |
| 1 | 19 | Stu 19 | 42 | 500 | | | AA | A.1 | 18 | Shanghai | 1900 | 0 |
| 2 | 20 | Stu 20 | 38 | 350 | | A | 100 | | 0 | Shanghai | 2100 | 0 |
| 3 | | | | | | | | | - | | | |
| 4 | | - | | | | Chart Type: | *** | | | | | |
| 5 | | | - | - | | | | | - | | | |
| 6 | | _ | _ | _ | _ | | | | | | | |
| 7 | | | _ | - | | | | | | | | |
| 8 | | _ | | | | | | | | | | |
| 9 | | | | | | | | | | | | |

Figure 3-33 Insert a chart of 2D Clustered Column



Figure 3-34 The resulting chart

- Set the "Maximum" of y-axis to 800 with the "Major Unit" of 200.
- Set the y-axis to "No Border".
- Set the Chart Title to "Printers are more popular than projectors".
- Set the Shape Color to Green and Dark Blue respectively.



• Set the table size to 12 * 10 (Height 12, Width 10).

Figure 3-35 The resulting chart for practice 1

2. Practice 2

Open "Excel Data. xlsx" and copy the table in worksheet 3 and paste it onto a new Excel. Save it as "Excel Data-practice 2. xlsx".

- Insert a chart of 2D Clustered Column by using the table in worksheet 3 according to Figure 3-36.
- Put "Rate of Paid Users" to the Secondary Axis, and change its type to "Line".



Figure 3-36 The resulting chart for practice 2

3. Practice 3

Open "Excel Data. xlsx" and copy the table in worksheet 4 and paste it onto a new Excel. Save it as "Excel Data-practice 3. xlsx".

• Add the table named "Sales Figure for Fenghua Market", and set it to Calibra, size 18,

bold, italic according to Figure 3-37.

- Fill the Index column with 01001 to 01007.
- Calculate the Total Sale by multiplying "Price" and "Sale".
- Merge and Center A10 : D10, and calculate "Total" on E10.
- Set the "Format Cells" of the two columns "Price" and "Sale" to "Number" with 2 Decimal places.
- Add solid blue Outside Borders to the table.
- On D12, Calculate the amount of goods which has more than 300 Sales(Hint: Use the formula = COUNTIF(D3:D9), ">"&300).

| 1 | A | В | С | D | E |
|------|-------|--------------------|----------|--------|------------|
| 1 | Sale | s Figure f | or Feng | hua M | arket |
| 2 | Index | Name | Price | Sale | Total Sale |
| 3 | 01001 | TV | 12150.00 | 185.00 | 2247750.00 |
| 4 | 01002 | Camera | 6500.00 | 103.00 | 669500.00 |
| 5 | 01003 | Fridge | 3880.00 | 268.00 | 1039840.00 |
| 6 | 01004 | Computer | 4888.00 | 500.00 | 2444000.00 |
| 7 | 01005 | Speaker | 8588.00 | 88.00 | 755744.00 |
| 8 | 01006 | Washing Machine | 1950.00 | 311.00 | 606450.00 |
| 9 | 01007 | Air Conditioner | 3190.00 | 458.00 | 1461020.00 |
| 10 | | Tot | ما | | 9224304.00 |
| 11 | | | | | |
| 12 | | | | 3 | |
| 1222 | | | | | |

Figure 3-37 The resulting chart for the Practice 3

3.3 Experiment 2: Advanced Excel

3.3.1 Experiment purpose

The purpose of this experiment is to master other advanced operations of Excel, including sorting, filter, and subtotal. There are more advanced tools that you should study by yourself on the practice part. After finishing this manual, you will have the capability to handle many practical problems by using Excel.

3.3.2 Experiment contents

This part of experiment should be finished in worksheet named "Data 2" of "Excel Data 2. xlsx". Copy the worksheet and paste to a new Excel. Save it as "Excel Data 2-practice 0. xlsx".

- Filter all staff whose gender is Female (Shown in Figure 3-38).
- Clear the filter.
- To find out which person gets the highest salary, or which gets the lowest, sort by the column "Salary" from largest to smallest first, then sort by the column "Name" from A to

Z (Multi-level sort) (Shown in Figure 3-39).

• To calculate the average salary of different diploma, you can use the "Subtotal" tool (Shown in Figure 3-40).

① Sort by the column "Diploma" from A to Z.

2 Add subtotal to "Salary" at each change in "Diploma" by using average function.

| | | | | | | 1.1 | A | 8 | C | D | E |
|----|----------|-------------|----------------------|----------|---------|-----|----------|------------|-------------|--------|--------|
| | | | | | | 1 | Ine | Bepartment | Diploma | Gender | Salary |
| | | | | | | 2 | Staff 1 | Market | Master | Female | 8000 |
| | | | | | | 3 | Staff 11 | XR | Master | Female | 8000 |
| | | | | | | 4 | Staff 17 | Finance | Master | Fenale | 8000 |
| | | | | | | 5 | Staff 7 | Market | Master | Female | 8000 |
| | | | | | | 6 | Staff 12 | Finance | Bachelor | Male | 6000 |
| | | | | | | 7 | Staff 15 | Product | Bachelor | Male | 6000 |
| | | | | | | 8 | Staff 18 | Market | Bachelor | Male | 6000 |
| _ | | | | | | 9 | Staff 2 | Sales | Bachelor | Female | 6000 |
| Å | A | B | С | D | E | 10 | Staff 5 | HR. | Bachelor | Male | 6000 |
| 1 | Xune - | Departmen - | Diploma - | Gende .T | Salar - | 11 | Staff 8 | Sales | Bachelor | Fenale | 6000 |
| 2 | Staff 1 | Market | Master | Fenale | 8000 | 12 | Staff 13 | Market | College | Male | 5000 |
| 3 | Staff 11 | HR | Master | Fenale | 8000 | 13 | Staff 16 | XR | College | Male | 5000 |
| 4 | Staff 17 | Finance | Master | Fenale | 8000 | 14 | Staff 19 | Sales | College | Male | 5000 |
| 5 | Staff 7 | Market | Master | Fenale | 8000 | 15 | Staff 3 | Product | College | Male | 5000 |
| 9 | St. 66 2 | Salar | Rashalar | Female | 6000 | 16 | Staff 6 | Finance | College | Fenale | 5000 |
| | 01411 c | C.l.s | Duchelor D. J. J. | P | 0000 | 17 | Staff 9 | Product | College | Male | 5000 |
| - | Staff 8 | Dales | Bachelor | Zenale | 6000 | 18 | Staff 10 | Product | Senior Migh | Female | 3500 |
| 10 | Staff 6 | Finance | College | Fenale | 5000 | 19 | Staff 14 | Sales | Senior Migh | Male | 3500 |
| 18 | Staff 10 | Product | Senior High | Fenale | 3500 | 20 | Staff 20 | Product | Senior Migh | Male | 3500 |
| 21 | Staff 4 | Product | Senior High | Fenale | 3500 | 21 | Staff 4 | Product | Senior High | Female | 3500 |

Figure 3-38 The resulting table after filtering Figure 3-39 The resulting table after sorting

| 23 | 1.4 | A | B | С | D | E |
|------|-----|----------|------------|-----------------|--------|--------|
| | 1 | Name | Department | Diploma | Gender | Salary |
| [·] | 2 | Staff 12 | Finance | Bachelor | Male | 6000 |
| | 3 | Staff 15 | Product | Bachelor | Male | 6000 |
| • | 4 | Staff 18 | Market | Bachelor | Male | 6000 |
| • | 5 | Staff 2 | Sales | Bachelor | Female | 6000 |
| 1.4 | 6 | Staff 5 | 國 | Bachelor | Male | 6000 |
| | 7 | Staff 8 | Sales | Bachelor | Female | 6000 |
| | 8 | | | Bachelor Avera | ge . | 6000 |
| Γ· ٦ | 9 | Staff 13 | Market | College | Male | 5000 |
| | 10 | Staff 16 | 民 | College | Male | 5000 |
| • | 11 | Staff 19 | Sales | College | Male | 5000 |
| | 12 | Staff 3 | Product | College | Male | 5000 |
| • | 13 | Staff 6 | Finance | College | Fenale | 5000 |
| | 14 | Staff 9 | Product | College | Male | 5000 |
| Ē. | 15 | | | College Average | | 5000 |
| [·] | 16 | Staff 1 | Market | Master | Female | 8000 |
| 1.0 | 17 | Staff 11 | HR | Master | Female | 8000 |
| | 18 | Staff 17 | Finance | Master | Female | 8000 |
| | 19 | Staff 7 | Market | Master | Female | 8000 |
| | 20 | | | Master Average | | 8000 |
| [·] | 21 | Staff 10 | Product | Senior High | Female | 3500 |
| | 22 | Staff 14 | Sales | Senior High | Male | 3500 |
| | 23 | Staff 20 | Product | Senior High | Male | 3500 |
| | 24 | Staff 4 | Product | Senior High | Female | 3500 |
| | 25 | | | Senior High Av | erage | 3500 |
| | 26 | | | Grand Average | | 5600 |

Figure 3-40 The resulting table after subtotal

3.3.3 Experiment procedures

3.3.3.1 Filter

(1) Open the worksheet 2 named "Data 2" in "Excel Data 2. xlsx". Copy the table and paste it to a new Excel. Save it as "Excel Data 2-practice 0. xlsx".

(2) Select A1, and then click the "Filter" button on the "Data" tab. The filter is now available by simply clicking the list button on each item in row 1 (Shown in Figure 3-41).

| X | 0.9. | (°* - = | | Practice or | n Excel Data | 2.xlsx - M | icrosoft Exce | el | | - 0 | × |
|-----|----------------------|----------------------------|--|-------------|----------------------------------|---------------------|------------------------------|---------------------------------------|---|--|----------|
| 1 | File H | ome Insert | Page Layout | Formulas | Data | Review | View | Add-Ins | Team | a 🕜 🗆 | <u>م</u> |
| Get | External R Data * | efresh All • Connection | ections $2\downarrow$ $\underline{2}\downarrow$ enties $\overline{2}\downarrow$ Sort inks is | Filter | k Clear & Reapply Advances | d Text to Column | Remove by Duplicate Da | Data Pa Cons S What ta Tools | Validation * olidate -If Analysis * | Group * ♥∃ Ungroup * ■∃ Subtotal Outline ™ | |
| | D1 | - (| f _x Ger | nder | | | | | | | |
| 104 | A | В | с | D | E | F | G | н | | 1 | L. |
| 1 | Hune - | Departmen | Diploma | Gende - | Salar | - | | | | | Í |
| 2 | Staff 1 | Market | Master | Female | 8000 | | | | | | |
| 3 | Staff 11 | HR | Master | Female | 8000 | | | | | | |
| 4 | Staff 17 | Finance | Master | Fenale | 8000 | | | | | | |
| 5 | Staff 7 | Market | Master | Fenale | 8000 | | | | | | |
| б | Staff 12 | Finance | Bachelor | Hale | 6000 | | | | | | |
| 7 | Staff 15 | Product | Bachelor | Male | 6000 | | | | | | |
| 8 | Staff 18 | Market | Bachelor | Hale | 6000 | | | | | | - |
| 9 | Staff 2 | Sales | Bachelor | Fenale | 6000 | | | | | | |
| 10 | Staff 5 | HR | Bachelor | Hale | 6000 | | | | | | |
| 11 | Staff 8 | Sales | Bachelor | Fenale | 6000 | | | | | | |
| 12 | Staff 13 | Market | College | Male | 5000 | | | | | | |
| 13 | Staff 16 | HR | College | Hale | 5000 | | | | | | |
| 14 | Staff 19 | Sales | College | Hale | 5000 | | | | | | |
| 15 | Staff 3 | Product | College | Hale | 5000 | | | | | | 1 |
| 16 | Staff 6 | Finance | College | Female | 5000 | | | | | | |
| 17 | Staff 9 | Product | College | Hale | 5000 | | | | | | |
| 18 | Staff 10 | Product | Senior Migh | Female | 3500 | | | | | | |
| 19 | Staff 14 | Sales | Senior High | Hale | 3500 | | | | | | |
| 20 | Staff 20 | Product | Senior High | Hale | 3500 | | | | | | |
| 21 | Staff 4 | Product | Senior High | Female | 3500 | | | | | | |
| 22 | | | | - | | | | | | | |
| H | + H D | ata 1 / Pivot 1 | Table Data 2 | Sheet3 2 | 2/ | | 14 | | | | • |
| Re | ady | | | | | | | | 1009 | 6 🖂 – Ū – – – | • |

Figure 3-41 Click the button "Filter" to enable filtering

(3) Click the list button on D1, and you can see the list for both sorting and filtering. Click the checkbox "Male" to cancel the selection. It means we want to filter all female staff but not all male staff (Shown in Figure 3-42). Click "OK".

| File H | (° ^µ - - Iome Insert | Page Layout | Practice or Formulas | n Excel Data 2 Data I | adsx - | Microsoft I | xcel Add-In | s | Team | | × a a s |
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| D1 | - (* | fx Ge | ender | | | | | | | | * |
| A | В | С | D | E | | F | G | н | | 1 | - |
| 1 Hune | Departmen - | Diploma | - Gende - | Salar - | 1 | | | | | | 1 |
| 2 Staff 1 | 21 Sort A to Z | | | 0000 | 1 | | | | | | |
| 3 Staff 11 | ZI Sort Z to A | | | 8000 | 1 | | | | | | |
| 4 Staff 17 | Sort by Color | | + | 8000 | 1 | | | | | | |
| 5 Staff 7 | W Class Elltar Ero | m 'Candar' | | 8000 | 1 | | | | | | |
| 6 Staff 12 | Tilles by Color | in deliger | | 6000 | 1 | | | | | | - |
| 7 Staff 15 | Fjiter by Color | | | 6000 | 1 | | | | | | |
| 8 Staff 18 | text Finters | | | 6000 | 1 | | | | | | |
| 9 Staff 2 | Search | | Q | 6000 | 1 | | | | | | |
| 10 Staff 5 | (Select / | AII) | | 6000 | 1 | | | | | | |
| 11 Staff 8 | Female Male | | | 6000 | 1 | | | | | | |
| 12 Staff 13 | EL/Marc | | | 5000 | 1 | | | | | | |
| 13 Staff 16 | | | | 5000 | 1 | | | | | | |
| 14 Staff 19 | | | | 5000 | 1 | | | | | | |
| 15 Staff 3 | | | | 5000 | 1 | | | | | | |
| 16 Staff 6 | | | | 5000 | 1 | | | | | | |
| 17 Staff 9 | | | | 5000 | 1 | | | | | | |
| 18 Staff 10 | | | | 3500 | 1 | | | | | | |
| 19 Staff 14 | | OK | Cancel | 3500 | 1 | | | | | | |
| 20 Staff 20 | freduct [3 | enior fligh | Inste | 3500 | 1 | | | | | | |
| 21 Staff 4 | Product S | enior High | Female | 3500 | | | | | | | |
| 22 | | | | | | | | | | | |
| | ata 1 / Pivot Tab | e Data 2 | Sheet3 2 | 2/ | | 14 | | | | | • |
| Ready | | | | | | | | | 100% - |) | + |

Figure 3-42 Click the list button on D1 and set the filter

(4) The resulting table is shown in Figure 3-43. You can notice the list button on D1 is different from others.

| X | - 0- I | (H - T Incart | Page Laugust | Practice on | Excel Data 2.xls | x - Micr | osoft Excel | d loc | Team | - 0 • 0 - 1 | X |
|----|-----------|---|-------------------------------|-------------------------------|--|----------------------|---|-----------|---|--|----------|
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| A | A | В | С | D | E | F | G | н | | 1 | 5 |
| 1 | June - | Departmen - | Diploma | Gende .T | Salar - | | | | | | - î |
| 2 | Staff 1 | Market | Master | Fenale | 8000 | | | | | | |
| 3 | Staff 11 | HR | Master | Fenale | 8000 | | | | | | |
| 4 | Staff 17 | Finance | Master | Fenale | 8000 | | | | | | |
| 5 | Staff 7 | Market | Master | Fenale | 8000 | | | | | | |
| 9 | Staff 2 | Salez | Bachelor | Fenale | 6000 | | | | | | |
| 11 | Staff 8 | Salez | Bachelor | Fenale | 6000 | | | | | | |
| 16 | Staff 6 | Finance | College | Fenale | 5000 | | | | | | |
| 8 | Staff 10 | Freduct | Senior High | Fenale | 3500 | | | | | | |
| 21 | Staff 4 | Freduct | Senior High | Fenale | 3500 | | | | | | l |
| 22 | | | | 1 | 1 | | | | | | |
| 13 | | | | | | | | | | | |
| 24 | | | | _ | | | | | | | _ |
| 25 | | | | | | | | | | | _ |
| 6 | | | | | | | | | | | _ |
| 1 | - | | | | | | | | | | - |
| 8 | - | | | | | | | | - | | - |
| 2 | | | | | | | | | - | | - |
| 21 | | | | | | | | | | | - |
| 12 | - | | | - | | | - | | - | | - |
| 13 | | | | - | | | | | | | |
| 24 | | | 1 | | | | 2002 | | | 22 | |
| 1 | I P PI Da | ata 1 / Pivot T | able Data 2 | Sheet3 / C | 1/ | | 4 | 10000 | | | • |

Figure 3-43 The resulting table after filtering all female staff

(5) You should cancel the filter before you want to do other works on Excel. To cancel it, you can simply click the "Filter" button on the "Data" tab again. The button is not selected after doing that. The table will go back to the original one (Shown in Figure 3-44).

| K | 29-1 | (× - ∓ | | Practice on | Excel Data 2. | adsx - Micro | soft Exce | | - 0 × | < |
|-----|-------------|----------------------|-------------------------------------|-------------|--------------------------------|----------------------|-----------------------------|-------------------|--|---|
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| 1 | A | В | С | D | E | F | G | н | 1 | E |
| 1 | Jane - | Bepartmen 7 | Diploma - | Gende .T | Salar - | | | | | ĩ |
| 2 | Staff 1 | Market | Master | Fenale | 8000 | | | | | 1 |
| 3 | Staff 11 | HR | Master | Fenale | 8000 | | | | | 1 |
| 4 | Staff 17 | Finance | Master | Fenale | 8000 | | | | | 1 |
| 5 | Staff 7 | Market | Master | Fenale | 8000 | | | | | 1 |
| 9 | Staff 2 | Salez | Bachelor | Fenale | 6000 | | | | | |
| 11 | Staff 8 | Sales | Bachelor | Fenale | 6000 | | | | | 1 |
| 16 | Staff 6 | Finance | College | Fenale | 5000 | | | | | 1 |
| 18 | Staff 10 | Product | Senior High | Fenale | 3500 | | | | | 1 |
| 21 | Staff 4 | Product | Senior High | Fenale | 3500 | | | | | 1 |
| 22 | | | A | ľ. | | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | 4 |
| 27 | - | | | | | | | | | |
| 85 | | | - | | | | | | | - |
| 0 | | | | | | | | | | 1 |
| 21 | | | | | | | | | | 1 |
| 22 | | | | | | | | | | 1 |
| 33 | | | | | | | | | | 1 |
| 24 | | | | | | | | | 21 02 | 3 |
| 4 | + > > Da | ta 1 / Pivot T | able Data 2 S | heet3 / C | 1/ | | 4 | |) | 4 |

Figure 3-44 The way to cancel the filter

Chapter 3 Microsoft Excel 2010

3.3.3.2 Multi-level Sort

(1) Click the "Sort" button on the "Data" tab. The sort dialog will be open as shown in Figure 3-45.

| X | B 19. | (?= ∓ | | Practice or | n Excel Data 2 | xlsx - Micro | osoft Excel | | - | | × |
|-----|----------------------|-------------------------------|------------------------------|---------------|----------------------------------|--------------------|------------------------------|---|--|-----------------------|------|
| 1 | ile H | ome Inse | rt Page Layout | Formulas | Data F | Review | View A | dd-Ins Tea | m a | 0 - | e 3 |
| Get | External R Data * | efresh All - Ed Connect | operties it Links ions | ort Filter | & Clear & Reapply Advanced | Text to Columns | Remove Duplicates Data | Data Valida De Consolidate What-If Ana Tools | tion * 🗣 Group * 💠 Ungrou Nysis * 🏭 Subtoti Outline | • •] ip • =] al | |
| | E2 | • | - fx 8 | 3000 | | | | | | | ~ |
| 4 | A | В | С | D | E | F | G | н | | 1 | 5 |
| 1 | Nune | Departme | nt Diploma | Gender | Salary | | | | | | 1 |
| 2 | Staff 1 | Market | Master | Fenals | 8000 | | | | | | _ |
| 3 | Staff 2 | Sales | Bachelor | Fenale | 6000 | | | | | | |
| 4 | Staff 3 | Product | College | Hale | 5000 | | | | | | |
| 5 | Staff 4 | Product | Senior High | Fenale | 3500 | | | | | | |
| 6 | Staff 5 | HR | Bachalor | Hale | 6000 | | | | | | _ |
| 7 | Staff 6 | Finance | College | Fenale | 5000 | | | | | | |
| 8 | Staff 7 | Market | Cont | | | | | | 2 4 | _ | _ |
| 9 | Staff 8 | Sales | son | | | | | | 1 ^ | | _ |
| 10 | Staff 9 | Freduct | Add Level | Qelete Level | Ca Copy Lev | el a 1 | · Option | s 🖂 | My data has heade | rs | _ |
| 11 | Staff 10 | Product | Column | | Sort On | | and harden | Order | | | _ |
| 12 | Staff 11 | HR | Sort by | | Values | | | A to 7 | 13 | | - |
| 13 | Staff 12 | Finance | 000015 | | 10000 | | 1.00 | | | - 11 | - |
| 14 | Staff 13 | Market | | | | | | | | | |
| 15 | Staff 14 | Salex | | | | | | | | | |
| 16 | Staff 15 | Product | | | | | | | | | - |
| 1/ | Staff 16 | HK. | | | | | | | | | -1 |
| 18 | Staff 17 | Finance | | | | | | | | | - |
| 19 | Start 18 | Market . | | | | | | OK | Cancel | 1 | -1 |
| 20 | Staff 19 | Product | Sector W.A | ht-1- | Lacon . | | | | | | - |
| 21 | Statt 20 | troduct | Sensor Aigh | here | 10000 | 1 | | | | | -8 |
| 14 | | ata 1 Divis | t Table Data 2 | Sheat? 19 | 1/ | | EL AL | | - | | ani. |
| Pa | | | tota z | A. 900000 200 | e | | | i finders (T | 1 1000 | | - |

Figure 3-45 Click the "Sort" button

(2) Select the value for each field: Sort by "Salary", Sort on "Values", and Order from "Largest to Smallest" (Shown in Figure 3-46).

| Data | E2 A Tune taff 1 | All - Edit I Connection - (B Department | ections 2 + erties X + inks X + = fr C | Sort & Filter 8000 | & Clear & Reapply Advanced | Text to Columns | Remove Duplicates Dat | Data Val Pe Consoli P What-If a Tools | idation * Jate Analysis * | Group Group Ungroup Subtotal Outline | •1 • •1 | |
|-------------|---------------------------|--|--|-----------------------|----------------------------------|--------------------|-----------------------------|--|---------------------------------|--------------------------------------|------------|-----|
| 4 | E2 A Nune taff 1 | + (B Department | fr C Diala | 8000 D | | | | | | | | |
| 1 | A Fane taff 1 | B Department | C | D | | | | | | | | |
| 1 | Tame taff 1 | Department | Binle | | F | F | G | н | | | 1 | Ē |
| Statistics. | taff 1 | Warkat | pipto | Gender | Salary | | | | | | | - ř |
| 2 St | taff 2 | PRIME N. R. C. | Master | Fenale | 8000 | 1 | | | | | | |
| 3 5 | | Sales | Bachelor | Fenale | 6000 | | | | | | | |
| 4 51 | taff 3 | Product | College | Hale | 5000 | | | | | | | |
| 5 St | taff 4 | Product | Senior High | Female | 3500 | | | | | | | |
| 6 St | taff 5 | HR | Bachelor | Hale | 6000 | | | | | | | |
| 7 51 | taff 6 | Finance | College | Female | 5000 | | | | | | | |
| 8 5: | taff 7 | Market | | | 10000 | | | | | 3 | 1 | 1 |
| 9 51 | taff 8 | Sales So | ort | | | | | | | ? X | | |
| 10 51 | taff 9 | Freduct C | hi Addi and | X Dalata Laural | Ch Constant | | - Onlin | - | D Muda | ta has handers | | _ |
| 11 5: | taff 10 | Product | 11 Hou nevel | V Foore reve | -71 Pobly rev | res in the | · Shee | | M My Ca | ita nas geaders | | |
| 12 S: | taff 11 | HR C | olumn | - | Sort On | | | Order | | | | |
| 13 5 | taff 12 | Finance | st by Salary | ~ | Values | | Ŷ | Largest to | Smallest | ~ | | |
| 14 St | taff 13 | Market | Depart | ment | | | | _ | | | 1 | |
| 15 St | taff 14 | Salex | Diploma | | | | | | | | | |
| 16 5: | taff 15 | Product | Salary | | | | | | | | | |
| 17 5: | taff 16 | HR | | | | | | | | | | |
| 18 51 | taff 17 | Finance | | | | | | | | | | |
| 19 51 | taff 18 | Market | | | | | | _ | | | | |
| 20 St | taff 19 | Sales | | | | | | | OK | Cancel | | |
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Figure 3-46 Select the value for each field

(3) If you click "OK" right now, it can only implement a one-level sort. To implement the multi-level sort, Click the "Add Level" button to add the second level for the sort (Shown in Figure 3-47).

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| 2 | Staff 1 | Market | Mast | ter | Female | 8000 | | | | | | | | |
| 3 | Staff 2 | Sales | Back | helor | Femile | 6000 | | | | | | | | |
| 4 | Staff 3 | Product | Coll | lege | Male | 5000 | | | | | | | | |
| 5 | Staff 4 | Product | Seni | ior High | Fenale | 3500 | | | | | | | | |
| 6 | Staff 5 | HR | Back | helor | Male | 6000 | | | | | | | | _ |
| 7 | Staff 6 | Finance | Coll | loge | Female | 5000 | | | | | | | | _ |
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| 15 | Staff 14 | Sales | | | | | | | | | | | | - |
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Figure 3-47 Add a new level for the sort

(4) Select the value for each field (Shown in Figure 3-48). Click "OK".

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| 2 | Staff 1 | Market | Master | Female | 8000 | | | | | |
| 3 | Staff 2 | Sales | Bachelor | Femile | 6000 | | | | | |
| 4 | Staff 3 | Product | College | Male | 5000 | | | | | |
| 5 | Staff 4 | Product | Senior High | Fenale | 3500 | | | | | |
| 6 | Staff 5 | HR | Bachelor | Male | 6000 | | | | | _ |
| 7 | Staff 6 | Finance | College | Female | 5000 | | | | | |
| 8 | Staff 7 | Market So | rt. | 1. | Longe Lange | | | | 7 X | |
| 9 | Staff 8 | Sales | NR 0 | | | | | | | |
| 10 | Staff 9 | Freduct o | Add Level X0 | elete Level | Copy Leve | 1 🔺 💌 | Options | i 🗹 N | ty data has headers | _ |
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| 16 | Staff 15 | Product | | | | | | | | _ |
| 17 | Staff 16 | 108 | | | | | | | | - 1 |
| 18 | Staff 17 | Finance | | | | | | | | - 1 |
| 19 | Staff 18 | Market | | | | | | | | |
| 20 | Staff 19 | Sales | | | | | | OK | Cancel | |
| 21 | Staff 20 | Product | Senior High | Male | 3500 | - | | | | - 1 |
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Figure 3-48 Select the value for the second level of sort

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| 2 | Staff 1 | Market | Master | Female | 8000 | | | | | |
| 3 | Staff 11 | HR | Master | Fenale | 8000 | | | | | _ |
| 4 | Staff 17 | Finance | Master | Fenale | 8000 | | | | | |
| 5 | Staff 7 | Market | Master | Fenale | 8000 | | | | | |
| 6 | Staff 12 | Finance | Bachelor | Male | 6000 | | | | | |
| 7 | Staff 15 | Product | Bachelor | Male | 6000 | | | | | |
| 8 | Staff 18 | Market | Bachelor | Male | 6000 | | | | | |
| 9 | Staff 2 | Sales | Bachelor | Fenale | 6000 | | | | | |
| 10 | Staff 5 | HR | Bachelor | Male | 6000 | | | | | |
| 11 | Staff 8 | Sales | Bachelor | Fenale | 6000 | | | | | |
| 12 | Staff 13 | Market | College | Male | 5000 | | | | | |
| 13 | Staff 16 | HR | College | Male | 5000 | | | | | |
| 14 | Staff 19 | Sales | College | Male | 5000 | | | | | |
| 15 | Staff 3 | Product | College | Male | 5000 | | | | | |
| 16 | Staff 6 | Finance | College | Fenale | 5000 | | | | | |
| 17 | Staff 9 | Product | College | Male | 5000 | | | | | |
| 18 | Staff 10 | Product | Senior High | Fenale | 3500 | | | | | |
| 19 | Staff 14 | Sales | Senior High | Male | 3500 | | | | | |
| 20 | Staff 20 | Product | Senior High | Male | 3500 | | | | | |
| 21 | Staff 4 | Product | Senior High | Fenale | 3500 | | | | | |
| 22 | · · · · · · · · · · · · · · · · · · · | | | | | | | | | |

(5) The resulting table after multi-level sort is shown in Figure 3-49.

Figure 3-49 The resulting table after multi-level sort

3.3.3.3 Subtotal

(1) Before adding a subtotal, sort by the "Diploma" from "A to Z" first (Shown in Figure 3-50).

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| 1 | Hune | Department | Dipl | | Gender | Salary | | | | | | _ |
| 2 | Staff 12 | Finance | Bachelor | | Male | 6000 | i i | | | | | |
| 3 | Staff 15 | Product | Bachelor | | Male | 6000 | 1 | | | | | |
| 4 | Staff 18 | Market | Bachelor | | Male | 6000 | 1 | | | | | |
| 5 | Staff 2 | Sales | Bachelor | | Fenale | 6000 | | | | | | |
| 5 | Staff 5 | HR | Bachelor | | Male | 6000 | | | | | | |
| 7 | Staff 8 | Sales | Bachs So | rt | | | | | | | 7 × | 8 |
| 3 | Staff 13 | Market | Colle | | the second second | | | the second second | minute procession | | | |
| 9 | Staff 16 | HR | Colle | Add Le | vel X De | iete Level | Copy Le | evel 🗢 | Options | h | My data has heade | rs |
| 0 | Staff 19 | Sales | Coll. Co | lumn | | | Sort On | | | Order | | ٦ |
| 1 | Staff 3 | Product | Coll. Sor | tby C | liploma | ~ | Values | | ~ | A to Z | | ali |
| 2 | Staff 6 | Finance | Colle | | | and the second se | | | Provide State | | | - |
| 3 | Staff 9 | Product | Colle | | | | | | | | | |
| 4 | Staff 1 | Market | Muste | | | | | | | | | |
| 5 | Staff 11 | HR | Maste | | | | | | | | | 11 |
| 6 | Staff 17 | Finance | Muste | | | | | | | | | |
| 7 | Staff 7 | Market | Maste | | | | | | | | | |
| 8 | Staff 10 | Product | Senie | | | | | | | | OK Cancel | T1 |
| 9 | Staff 14 | Sales | Senie | 2.00 | PRAT | In the second | | | | - | | H |
| 0 | Staff 20 | Product | Senior Hi | gh | Male | 3500 | | | | | | |
| 21 | Staff 4 | Product | Senior Hi | ph | Tenale | 3500 | ų. | | | | | |
| 22 | - | | | | | | 1 | | | | | |
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| Re | ady | | | | | | | | | 1009 | 6 - 0 | (+) |

Figure 3-50 Sort by "Diploma" from "A to Z" first

(2) Click the "Subtotal" button on "Online" of the "Data" tab. Then the subtotal dialog will be displayed as shown in Figure 3-51. To add the subtotal to "Salary" at each change in Diploma, select the value for each field according to the Figure 3-51. Click "OK" after finishing.

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| 22 | 21 | Staff 4 | Freduct | Senior High | Fenale | 3500 | | | | | | | |
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Figure 3-51 Open the Subtotal dialog and select the value for each field

(3) The resulting table will be shown in Figure 3-52.

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| et Exter Data - | mal | Refresh All + | Connection Properties Edit Links | ^{IS} Ž↓ <u>Ž Ž</u> Ž↓ Sort S | Filter 5 | ≰ Clear {⊳ Reapply ✔ Advanced r | Text to Column | Remove s Duplicate Da | Dat Dat Cor es Wh ta Tools | a Validation * nsolidate at-If Analysis * | Group Ungrou | - • • • • • • • • | |
| | c | 1 | * (n | f.c | | | | | | | | | |
| 23 | | A | 8 | C | D | E | F | G | H | | 16 | | |
| - | 1 | Name | Department | Diploma | Gender | Salary | | | | | | | |
| F • 1 | 2 | Staff 12 | Finance | Bachelor | Male | 6000 | | | | | | | |
| | 3 | Staff 15 | Product | Bachelor | Male | 6000 | | | | | | | |
| 1.00 | 4 | Staff 15 | Market | Bachelor | Male | 6000 | | | | | | | |
| | 5 | Staff 2 | Sales | Bachelor | Female | 6000 | | | | | | | |
| | 6 | Staff 5 | 88 | Bachelor | Male | 6000 | | | | | | | |
| . • | 7 | Staff 8 | Sales | Bachelor | Female | 6000 | | | | | | | |
| | 8 | | 10000 | Bachelor Avers | ge | 6000 | | | | | | | |
| Г ·] | 9 | Staff 13 | Market | College | Male | 5000 | | | | | | | |
| | 10 | Staff 16 | HR. | College | Male | 5000 | | | | | | | |
| | 11 | Staff 19 | Sales | College | Male | 5000 | | | | | | | |
| • | 12 | Staff 3 | Product | College | Male | 5000 | | | | | | | |
| | 13 | Staff 6 | Finance | College | Female | 5000 | | | | | | | |
| | 14 | Staff 9 | Product | College | Male | 5000 | | | | | | | |
| - | 15 | | | College Averag | :0 | 5000 | | | | | | | |
| ٢. | 16 | Staff 1 | Market | Master | Female | 8000 | | | | | | | |
| | 17 | Staff 11 | 織 | Master | Female | 8000 | | | | | | | |
| | 18 | Staff 17 | Finance | Master | Female | 8000 | | | | | | | |
| | 19 | Staff 7 | Market | Master | Female | 8000 | | | | | | | |
| - | 20 | | | Master Average | | 8000 | | | | | | | |
| F . | 21 | Staff 10 | Product | Senior High | Female | 3500 | | | | | | | |
| | 22 | Staff 14 | Sales | Senior High | Male | 3500 | | | | | | | |
| | 23 | Staff 20 | Product | Senior High | Male | 3500 | | | | | | | |
| | 24 | Staff 4 | Product | Senior High | Female | 3500 | | | | | | | |
| | 25 | | 100000000000000000000000000000000000000 | Senior High Av | erage | 3500 | | | | | | | |
| | 26 | | | Grand Average | | 5600 | | | | | | | |
| | 27 | | | | | | | | | | | | |
| | 28 | | | | | | | | | | | | |
| | H | Data 1 | Pivot Table | Data 2 Sh | eet3 /9 | 1/ | | | | | | - | • |
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Figure 3-52 The resulting table after adding subtotal to "Salary"

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3.3.4 Self test practice

1. Practice 1

Open "Excel Data 2. xlsx" and copy the table in worksheet named "Data 1" and paste it to a new Excel. Save it as "Excel Data 2-practice 1. xlsx". Open a new document and save it as "Screenshots-practice 1. xlsx" to save screenshots.

- Add the column "Total" and "Average" after "Physics", and use the formula or function to calculate the total score and the average score of each student.
- To find out the ranking for total scores, do multi-level sort: first, sort by "Total" from largest to smallest, then by "Student ID" from smallest to largest. Take a screenshot of the resulting table and insert it to the document you have built.
- Add a new column "Rank" after "Average", and input the rank of each student according to the table.
- To find out the ranking for physics scores, do multi-level sort again: first, sort by "Physics" from largest to smallest, and then by "Name" from "Z to A". Take a screenshot of the resulting table and insert it to the document.
- Filter all students whose gender is "Female". Take a screenshot and insert it to the document.
- Clear the filter. Input "Average" in A15, "=SUBTOTAL(1, K2:K10)" in B15, and "=SUBTOTAL(104, J2:J10)" in B16. Take a screenshot and insert it to the document.
- Clear the filter.
- Filter all students whose gender is "Male" and ethnicity is "Han". Take a screenshot and insert it to the document.
- Insert the filter condition in E19:G22 to filter all students who is failed in at least one course (shown in Figure 3-53). In the Figure 3-53, there's a logical relation "and" in the same row, while "or" in the same column. So the Figure means to filter all students whose math is less than 60, or English is less than 60, or physics is less than 60. Take a screenshot of the resulting table and insert it to the document (Hint: the filter condition can be added by selecting the "Advanced" button).
- Change the filter condition to in E19:G21 to filter all students who are failed in both math and English, or failed in physics (shown in Figure 3-54). The Figure 3-54 means to filter all students whose math is less than 60 and English is less than 60, or physics is less than 60. Take the screenshot and insert it to the document.

| Math | English | Physics |
|------|---------|---------|
| <60 | | |
| | <60 | |
| | | <60 |

 Math
 English
 Physics

 <60</td>
 <60</td>
 <60</td>

Figure 3-53 Filter condition(1)

Figure 3-54 Filter condition(2)

- Clear the filter.
- Use the same tool to filter all students whose math and English is greater than 80. Take the screenshot and insert it to the document.
- Clear the filter.
- Add subtotal to A1: K10. Set "At each change in" to "Class", "Use function" to "Average", "Add subtotal to" math, English, physics and average. Take the screenshot and insert it to the document.
- Clear the subtotal. Add another subtotal to the total score of each course according to "Gender". Take the screenshot and insert it to the document.
- Clear the filter.
- After sorting by "Class" from "A to Z", select all students in class 1601 and their three courses' scores. Create a Doughnut chart. Take the screenshot on the chart and insert it to the document (Hint: study how to insert a Doughnut by yourself).
- After sorting by "Class" from "A to Z", select all students in class 1602 and their three courses' scores. Create a Cylinder chart. Take the screenshot on the chart and insert it to the document.

2. Practice 2

Open "Excel Data. xlsx" and copy the table in worksheet 2 named "Data 2" and paste it to a new Excel. Save it as "Excel Data 2-practice 2. xlsx". Study how to insert a "Pivot Table" by yourself.

- Insert a "Pivot Table" and count the total amount of male and female for each department (Hint: Row Label: Department, Column Label: Gender, Value: Name). Take the screenshot and insert it to the document.
- Insert another "Pivot Table" and count the total amount of staff and the average salary for each department. Take the screenshot and insert it to the document.

3.4 Experiment **3**: Excel Project

3.4.1 Project topic

(1) You can select any topic you like to analyze data in Excel. There are some topics you can choose from.

- ① Student grade analysis.
- 2 Sales report.
- ③ Personal consumption statistic.

(2) Suggestions: It will be better if you analyze data related to your major. You can also choose data from your daily life, such as the statistics on the book information, on the consumption in cafeteria, or on the scores for some or all courses.

3.4.2 Experiment requirements

(1) Do data analysis to meet requirements in your chosen topic. For example, the analyses on the students' score are as follows:

- Count the total score, and the total amount of courses a student chooses.
- The average score of each course.
- Sort the data by scores or by classes.
- Insert a pie chart to compare the average score of several courses.
- Any useful statistic methods you can think of...

(2) The attributes should be included in the table, that is, what does each column refer to? For example, if you do analysis on the students' score, the following columns should be contained:

- Student ID.
- Student name.
- Class.
- Course ID.
- Course name.
- Score.
- Any attributes you can think of...
- (3) The table should be in at least 20 rows and 4 columns.