

**Rule: Test cases is following by order, if failing any test case then the scoring process will be terminated, score is evaluated by percentage of correct test cases after finishing.**

Warning: You must output the same test case to pass. **DON'T ACCEPT HARD CODE**

/menu

```
1 -- Load data from file
2 -- Add new employee
3 -- Display list of employee
4 -- Show employee details
5 -- Update employee information
6 -- Delete employee
7 -- Increase salary of employee
8 -- Decrease salary of employee
9 -- Show total employee a month
10 -- Show total salary a month
11 -- Show average of salary a month
12 -- Show average of age
13 -- Show maximum age
14 -- Sort list of employee according to salary by ascending
15 -- Draw salary according to age
16 -- Draw average salary chart by age group
17 -- Draw percentage of salary by age group
18 -- Draw percentage of total employee by age group
19 -- Store data to file
Others -- Exit program
Input choice:
```

---

### **Case-01**

/menu

1

/menu

3

code: e001, name: an, age: 21, salary: 750.00, income: 8100.00  
code: e002, name: binh, age: 20, salary: 500.00, income: 5400.00  
code: e003, name: cuong, age: 25, salary: 800.00, income: 8640.00  
code: e004, name: duy, age: 22, salary: 550.00, income: 5940.00  
code: e005, name: phu, age: 27, salary: 500.00, income: 5400.00  
code: e006, name: phung, age: 37, salary: 1000.00, income: 10800.00  
code: e007, name: nhung, age: 27, salary: 1000.00, income: 10800.00

## Case-02

/menu

2

Input choice: 2  
Input code: e008  
Input name: long  
Input age: 32  
Input salary: 800

/menu

3

code: e001, name: an, age: 21, salary: 750.00, income: 8100.00  
code: e002, name: binh, age: 20, salary: 500.00, income: 5400.00  
code: e003, name: cuong, age: 25, salary: 800.00, income: 8640.00  
code: e004, name: duy, age: 22, salary: 550.00, income: 5940.00  
code: e005, name: phu, age: 27, salary: 500.00, income: 5400.00  
code: e006, name: phung, age: 37, salary: 1000.00, income: 10800.00  
code: e007, name: nhung, age: 27, salary: 1000.00, income: 10800.00  
code: e008, name: long, age: 32, salary: 800.00, income: 8640.00

### Case-03

/menu

4

Input code: e006

```
code: e006, name: phung, age: 37, salary: 1000.00, income: 10800.00
```

/menu

4

Input code: e010

Nothing here

### Case-04

/menu

5

Input code: e020

Nothing here

/menu

5

Input code: e006

Input name: loan

Input age: 40

Input salary: 550

/menu

4

Input code: e006

```
code: e006, name: loan, age: 40, salary: 550.00, income: 5940.00
```

/menu

5

Input code: e006

Input name: phung

Input age: 37

Input salary: 1000

/menu

3

code: e001, name: an, age: 21, salary: 750.00, income: 8100.00

code: e002, name: binh, age: 20, salary: 500.00, income: 5400.00

code: e003, name: cuong, age: 25, salary: 800.00, income: 8640.00

code: e004, name: duy, age: 22, salary: 550.00, income: 5940.00

code: e005, name: phu, age: 27, salary: 500.00, income: 5400.00

code: e006, name: phung, age: 37, salary: 1000.00, income: 10800.00

code: e007, name: nhung, age: 27, salary: 1000.00, income: 10800.00

code: e008, name: long, age: 32, salary: 800.00, income: 8640.00

#### **Case-05**

/menu

6

Input code: e010

Nothing here

/menu

6

Input code: e008

/menu

3

code: e001, name: an, age: 21, salary: 750.00, income: 8100.00  
code: e002, name: binh, age: 20, salary: 500.00, income: 5400.00  
code: e003, name: cuong, age: 25, salary: 800.00, income: 8640.00  
code: e004, name: duy, age: 22, salary: 550.00, income: 5940.00  
code: e005, name: phu, age: 27, salary: 500.00, income: 5400.00  
code: e006, name: phung, age: 37, salary: 1000.00, income: 10800.00  
code: e007, name: nhung, age: 27, salary: 1000.00, income: 10800.00

#### **Case-06**

/menu

7

Input code: e008

Nothing here

/menu

7

Input code: e007

Input amount: 1000

/menu

3

code: e001, name: an, age: 21, salary: 750.00, income: 8100.00

code: e002, name: binh, age: 20, salary: 500.00, income: 5400.00

code: e003, name: cuong, age: 25, salary: 800.00, income: 8640.00

code: e004, name: duy, age: 22, salary: 550.00, income: 5940.00

code: e005, name: phu, age: 27, salary: 500.00, income: 5400.00

code: e006, name: phung, age: 37, salary: 1000.00, income: 10800.00

code: e007, name: nhung, age: 27, salary: 2000.00, income: 21600.00

### Case-07

/menu

8

Input code: e008

Nothing here

/menu

8

Input code: e007

Input amount: 1000

/menu

3

code: e001, name: an, age: 21, salary: 750.00, income: 8100.00  
code: e002, name: binh, age: 20, salary: 500.00, income: 5400.00  
code: e003, name: cuong, age: 25, salary: 800.00, income: 8640.00  
code: e004, name: duy, age: 22, salary: 550.00, income: 5940.00  
code: e005, name: phu, age: 27, salary: 500.00, income: 5400.00  
code: e006, name: phung, age: 37, salary: 1000.00, income: 10800.00  
code: e007, name: nhung, age: 27, salary: 1000.00, income: 10800.00

#### **Case-08**

/menu

9

Number of employees: 7

/menu

10

Total salary a month: 5100.00

/menu

11

Average of salary: 728.57

/menu

12

Average of age: 25.57

#### **Case-09**

/menu

13

Maximum age: 37

/menu

14

/menu

3

code: e002, name: binh, age: 20, salary: 500.00, income: 5400.00

code: e005, name: phu, age: 27, salary: 500.00, income: 5400.00

code: e004, name: duy, age: 22, salary: 550.00, income: 5940.00

code: e001, name: an, age: 21, salary: 750.00, income: 8100.00

code: e003, name: cuong, age: 25, salary: 800.00, income: 8640.00

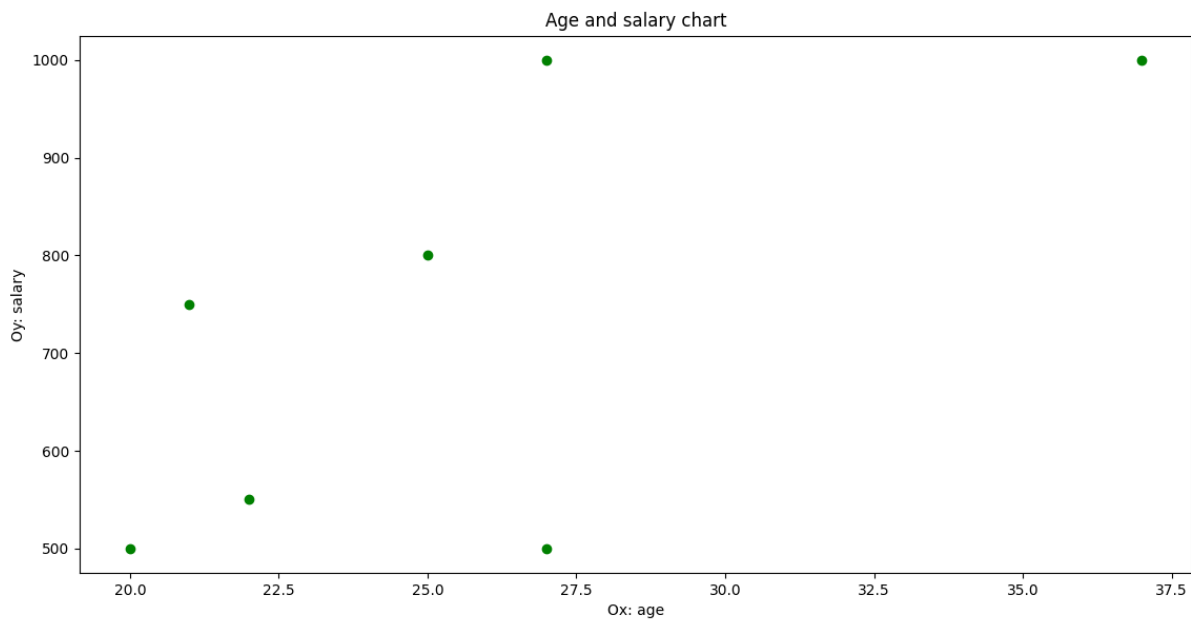
code: e006, name: phung, age: 37, salary: 1000.00, income: 10800.00

code: e007, name: nhung, age: 27, salary: 1000.00, income: 10800.00

### Case-10

/menu

15



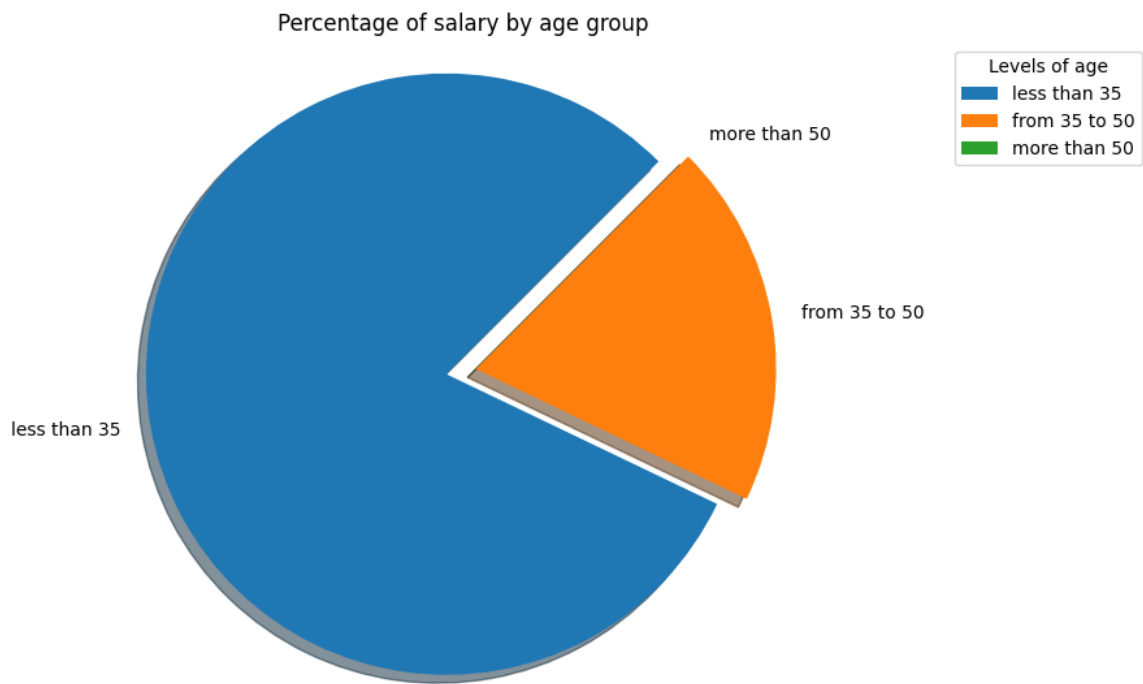
### Case-11

/menu



**Case-12**

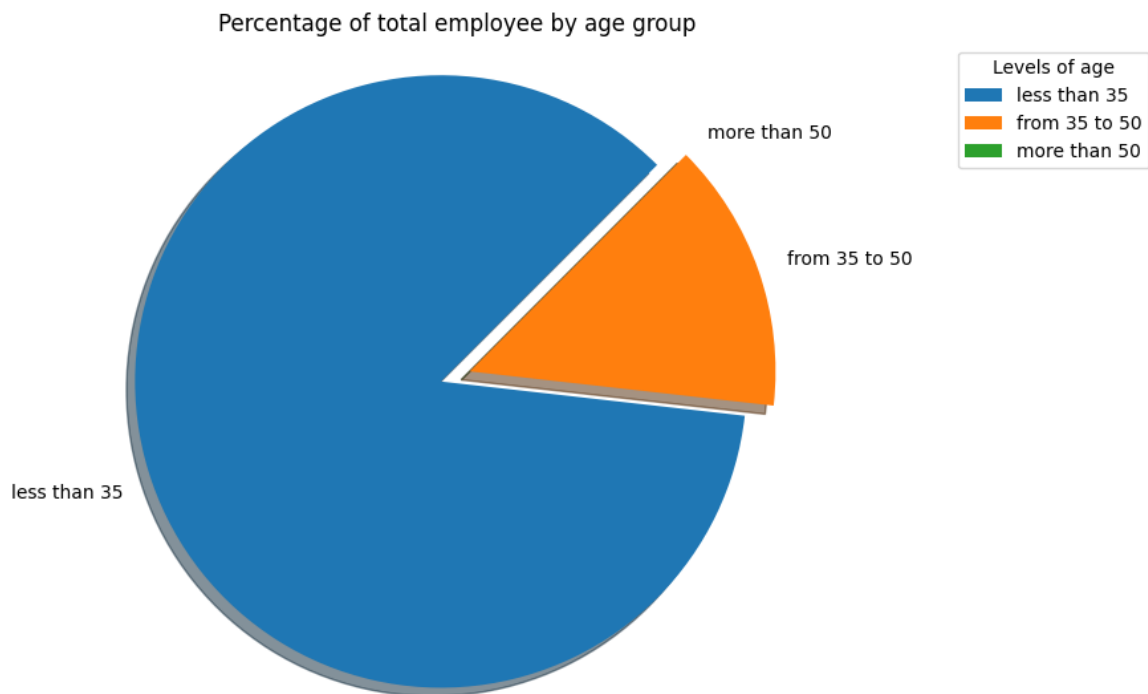
/menu



### Case-13

/menu

18



#### Case-14

/menu

19

Store file successfully

// results

```
e002,binh,20,500  
e005,phu,27,500  
e004,duy,22,550  
e001,an,21,750  
e003,cuong,25,800  
e006,phung,37,1000  
e007,nhung,27,1000
```

#### Case-15

/menu

20

BYE BYE

// Exit program