Python Programming

Project: Employees System

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Teaching, Training and Coaching since more than a decade!

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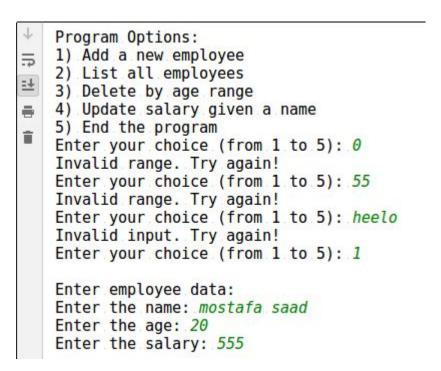Ex-(Software Engineer / ICPC World Finalist)

Project: Employees System

- Help our factory in managing the employees.
- Create a program that provides the following operations:
    - Enter your choice:
    - 1) Add new employee
    - 2) Print all employees
    - 3) Delete by age
    - 4) Update Salary by name
    - 5) End the program
- You will keep the program running forever.
    - Display the choices and user input from 1 to 5

Enter employee data

- Print this menu of 5 choices
- Validate the input
  - It should be int from 1 to 5
  - Keep asking tell user enter valid choice
- Employee information
  - Name (including spaces)
  - Age and Salary: integers

```
Program Options:
1) Add a new employee
2) List all employees
3) Delete by age range
4) Update salary given a name
5) End the program
Enter your choice (from 1 to 5): 0
Invalid range. Try again!
Enter your choice (from 1 to 5): 55
Invalid range. Try again!
Enter your choice (from 1 to 5): heelo
Invalid input. Try again!
Enter your choice (from 1 to 5): 1

Enter employee data:
Enter the name: mostafa saad
Enter the age: 20
Enter the salary: 555
```

Let's enter more data

```
Program Options:
1) Add a new employee
2) List all employees
3) Delete by age range
4) Update salary given a name
5) End the program
Enter your choice (from 1 to 5): 1

Enter employee data:
Enter the name: Ziad
Enter the age: 32
Enter the salary: 320
```

```
Program Options:
1) Add a new employee
2) List all employees
3) Delete by age range
4) Update salary given a name
5) End the program
Enter your choice (from 1 to 5): 1

Enter employee data:
Enter the name: Asmaa
Enter the age: 25
Enter the salary: 1000

Program Options:
1) Add a new employee
2) List all employees
3) Delete by age range
4) Update salary given a name
5) End the program
Enter your choice (from 1 to 5): 1

Enter employee data:
Enter the name: Belal Mostafa
Enter the age: 30
Enter the salary: 3000
```

Print the employees

- Option 2: Print the employees
- If No employees print: No employees at the moment!

```
Program Options:
1) Add a new employee
2) List all employees
3) Delete by age range
4) Update salary given a name
5) End the program
Enter your choice (from 1 to 5): 2

**Employees list**
Employee: mostafa saad has age 20 and salary 555
Employee: Asmaa has age 25 and salary 1000
Employee: Belal Mostafa has age 30 and salary 3000
Employee: Ziad has age 32 and salary 320
```

Delete by age

- Option 3
- The user enter start and end
- All employees within this age will be deleted

```
Program Options:
1) Add a new employee
2) List all employees
3) Delete by age range
4) Update salary given a name
5) End the program
Enter your choice (from 1 to 5): 3
Enter age from: 25
Enter age to: 31
         →Deleting Belal Mostafa
         →Deleting Asmaa

Program Options:
1) Add a new employee
2) List all employees
3) Delete by age range
4) Update salary given a name
5) End the program
Enter your choice (from 1 to 5): 2

**Employees list**
Employee: mostafa saad has age 20 and salary 555
Employee: Ziad has age 32 and salary 320
```

Update a salary

- Option 4: Given a name and salary, find and update the salary of a given person
- Option 5: exit

```
Enter your choice (from 1 to 5): 4
Enter name: mostafa
Enter new salary: 1
Error: No employee with such a name

Program Options:
1) Add a new employee
2) List all employees
3) Delete by age range
4) Update salary given a name
5) End the program
Enter your choice (from 1 to 5): 4
Enter name: mostafa saad
Enter new salary: 222

Program Options:
1) Add a new employee
2) List all employees
3) Delete by age range
4) Update salary given a name
5) End the program
Enter your choice (from 1 to 5): 2

**Employees list**
Employee: mostafa saad has age 20 and salary 222
Employee: Ziad has age 32 and salary 320
```

Design

- Give a trial as you like
- If you want to take a step toward **OOP**
- Think in terms **objects**
- There are 3 classes that one can design
- **Employee** Class
  - Just holds the data and basic function for it
- **EmployeesManager** Class
  - Holds a list of employees and has implementation for the menu options
- **FrontendManager** Class
  - Print the menu, get a choice and call the employees manager

"Acquire knowledge and impart it to the people."

"Seek knowledge from the Cradle to the Grave."