Detectives v2.2

Town of Huntington police department needs a program that will help them assign new cases they receive to the right detectives of the department. Your application will use a data file to read the information on department detectives.

Each detective has a name, specialty (Homicide, Fraud, Theft, Traffic or Gangs) and experience (the number of years in the department). Here are the features of the program:

1- Add Detective [40]
Allows user to add new detectives to the system. Program should ask for the name, specialty and the experience (number of years) of the detective and add to the list of detectives.

If there is a detective with the provided name already in the system, then inform the user that the department already has a detective with this name and do not add the detective. No detectives with the same name allowed! :-)

2- Search Detective [50]
Allows user to search for a detective based on specialty and experience.

User will enter the specialty (Homicide, Fraud, Theft, Traffic or Gangs) and the *minimum* experience (in years) required for the case. The program will output the name of the detective who has the given specialty and has more than or equal to the minimum years of experience required.

The chances are more than one detective may fit the criteria above. If more than one detective fits the criteria, than the detective with the **most experience** should be chosen. Here is an example:

```
Welcome to Detective v2.2
1- Add a Detective
2- Search a Detective
3- Report
0- Exit
2
What speacialty do you need? [Homicide, Fraud, Theft, Traffic or Gangs]
Fraud
What is the minimum years of experience required? 1
Detective Sarah is the perfect fit for the job.
```

3- Report Detectives by Department [40]
This is a report that display each detective grouped by the specialty. For example, the report should display "Homicide" and then list all detectives with that specialty under it. then the report should display "Fraud" as title and list all detectives whose specialty is Fraud. Continue to do the same for Theft, Traffic and Gangs.

Make sure that you have a function that takes a specialty and couts the detectives that belongs to that specialty. Then you can call this function 5 times, one for each specialty.
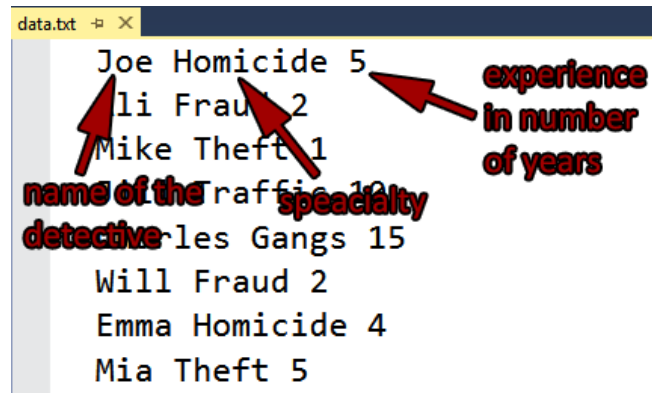
0- Exit [10]
Exit the program

Other Tasks:
File input/output **[30].**
Declaration of the class and the array that holds the list of detectives **[30]**.

Penalties:
- I will deduct up to 30 points for indentation problem and/or not properly commenting your code,
- I will deduct up to 40 points if your program have some usability problems. Ex. you must cout what user is supposed to enter before collecting an input with cin. Properly and neatly format the main menu of the program.
- I will deduct up to 50 points if your program does not compile. Make sure that you are submitting a program that compiles.
- I will deduct up to 30 points if your program has runtime error (crashing while running).
- You should expect that I will deduct the maximum points specified if you stumble upon these penalties.
- If you implement the code properly, your program will obviously output correct information. However, your program outputting correct information does not mean that you implemented the program correctly.

File Format:

Report (Feature 3) Output Example:

```
Welcome to Detective v2.2
1- Add a Detective
2- Search a Detective
3- Report
0- Exit
3

Homicide
==================
Detective Joe with 5 years of experience.
Detective Emma with 4 years of experience.
Detective Jake with 6 years of experience.

Fraud
==================
Detective Ali with 2 years of experience.
Detective Will with 2 years of experience.
Detective Alex with 7 years of experience.
Detective Tyler with 1 years of experience.
Detective Sarah with 10 years of experience.

Theft
==================
Detective Mike with 1 years of experience.
Detective Mia with 5 years of experience.
Detective Julian with 10 years of experience.

Traffic
==================
Detective Jill with 10 years of experience.
Detective Madison with 5 years of experience.

Gangs
==================
Detective Charles with 15 years of experience.
Detective Sophia with 2 years of experience.
```