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## Basic of Programming 2

### Checkpoint Report

#### 1. What I have done so far

- I have created a class for person, and class doctor, nurse, patient which inherited from class person. Each class have their appropriate attributes and methods base on my opinion. E.g. A doctor should have an office, while nurse and patient do not have, etc.
- In each class, I have implemented a method which can work with each attribute e.g. for attribute "name" I have a setName() method and getName() method.
- I created a database using a container called multimap from standard library. which allow me to store a person into a database and search for it considerably fast enough, since we store a person with a key corresponding to that person, so we can search for each person using a key (in my case the key is just a name of that person). Multimap also grows dynamically which is what I need in database. And Multimap can store a person with a same key (E.g. two persons with the same name).
- I have implemented an operator overloading for "+", "-", "==", "!=", "<<", ">>", etc. Which I plan to use it later in other function when I need to.  
**For example:** adding a doctor to a list.  
If (doctor in the doctor\_list != doctorA)  
    doctor\_list = doctor\_list + doctorA;
- I also created a class for hospital which has a list of Doctor, Nurse and Patient separately as an attribute in this hospital class. But I might remove this class later since it does not make so much sense to have it because I think I do not really need it. we can load a database (a list of doctor, nurse, patient) from a file and modify this database base on what we want. Later, when we finished, just save it back to a file, so I think it is simpler not to have a class hospital and class hospital does not play a big role here.
- I have created an interface for the user like a menu of a program, which allow user to navigate to each option of the program.  
**For example:**  
Menu:
  1. Show all doctors
  2. Add a doctor to a list

#### 2. What I need to add later

My program should be able load a database from a file and have an interface which allow user to manipulate a database as they want. After done with modifying the program should save a database back to a file. And also modify my previous code to have a polymorphism approach.