## HACETTEPE UNIVERSITY

DEPARTMENT OF COMPUTER ENGINEERING BBM104



Name :

Surname :

Number :

Subject : Inheritence and Polymorphism

Programming Language : Java

### Problem Definition

Develop a system to hospital management system with using the java inheritance and polymorphism

### Problem Solving

Firstly, the output.txt file is created with FileWriter() object The reader object is created to read the files. Patient.txt (database) is read using the read\_patient () function in the reader object. Patient objects are created and added to the arraylist using PatientDAO. Using the read\_admission () function in the reader object, admission.txt (database) is read. admission objects are created and added into the arraylist using AdmissionDAO. Then the readfile () function is used from the reader object. Argument0 is sent to the readfile () function. The function reads the argument0 (input.txt) file, places the lines in the array and returns the array. input.txt lines are processed using the read\_input () function in the Reader object. The lines are split () in the read\_input () function and processed according to the first element of the array.

If the first element of the array is "AddPatient", the new patient object is created and added to the database (arraylist in PatientDAO).

If the first element of the array is “RemovePatient”, the patient object is deleted from the database according to the given id and the admission of the patient object is deleted from the admission database.

If the first element of the array is "CreateAdmission", the new admission object is created and added to the database (arraylist in AdmissionDAO).

If the first element of the array is "AddExamination", the new examination object is created and operations are added with the addoperation () function.

Then, with the given admission id, it is added to the examination arraylist of the compatible admission in the database.

If the first element of the array is "TotalCost", it is first found according to the id given to the admission. The values of all examinations in the matching admission are calculated.

If the first element of the array is "ListPatients", all Patients are taken from the Patientdao with the getAll () function.

Then it is printed individually to output.txt. After the operations are completed, the entire database is saved. Patient database with writer\_ patient () function and admission database with writer\_ admission () function are saved in files. The program ends with the last writer.close ().

### UML Class Diagram

