Report of Assignment 3

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May 19, 2020

1 Problem

In this assignment we are expected design a hospital management system to monitor or manipulate patient information and changing of admissions according to given input text. My design has decorator design pattern and Data Access Object.

2 Algorithm

My algorithm in this solution has decorator design pattern and object management classes. First of all, I read the inputs given from admission file and patient information file and saved them in objects and arraylist with the help of decorator pattern and DAO. Then I read input file and made changes in admission and patient files according to given orders. Finally, I wrote all results and changes in output file; update admission file and patient file.

3 UML Diagram

IExamination «interface»
- getDescription() String
- cost() int

Main
- main(String[]) void

Operations
- main(String) void
- decoratorCheck(String[], IExamination, int) IExamination

AdditionalOperations
- tempExamination : IExamination
- AdditionalOperations(IExamination)
- getDescription() String
- cost() int

OutpatientExamination
- getDescription() String
- cost() int

InpatientExamination
- getDescription() String
- cost() int

DoctorVisit
- DoctorVisit(IExamination)
- getDescription() String
- cost() int

Imaging
- Imaging(IExamination)
- getDescription() String
- cost() int

Measurements
- Measurements(IExamination)
- getDescription() String
- cost() int

Tests
- Tests(IExamination)
- getDescription() String
- cost() int

Patient
- patientID : int
- patientName : String
- patientSurname : String
- PhoneNumber : String
- adress : String
- Patient(int, String, String, String, String)
- getPatientID() int
- setPatientID(int) void
- getPatientName() String
- setPatientName(String) void
- getPatientSurname() String
- setPatientSurname(String) void
- getPhoneNumber() String
- setPhoneNumber(String) void
- getAdress() String
- setAdress(String) void

IPatientDAO «interface»
- getAllPatients() List<Patient>
- getPatient(int) Patient
- updatePatient(Patient) void
- deletePatient(Patient) void

PatientDAOImpl
- patients : List<Patient>
- PatientDAOImpl()
- deletePatient(Patient) void
- getAllPatients() List<Patient>
- getPatient(int) Patient
- updatePatient(Patient) void

Admission
- admissionID : int
- patientID : int
- inpatientExaminations : ArrayList<IExamination>
- outpatientExaminations : ArrayList<IExamination>
- Admission(int, int)
- getAdmissionID() int
- getPatientID() int
- getInpatientExaminations() ArrayList<IExamination>
- getOutpatientExaminations() ArrayList<IExamination>
- setAdmissionID(int) void
- setPatientID(int) void

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