

BBM104 Assignment 3 Report

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1 Problem Definition

In this assignment we are asked to develop a Hospital Management System (HMS) using inheritance and polymorphism. In addition we are also expected to use Decorator Pattern and Data Access Object Pattern (DAO).

2 Solution Approach

My design consists of mainly 2 parts. First part is the Data Access Object Pattern this part allows rest of the program to perform CRUD operations on program data. Second part contains the actual logic for receiving and executing the HMS instructions.

3 Algorithm Steps

- 1- Admission and patient data is imported and objects that represent these structures are created.
- 2- Program starts to read instructions from input file one by one.
- 3- Instructions potentially cause a CRUD operation on admission and/or patient. This operation is performed via their corresponding DAO's.
- 4- Result of this instruction is logged to output file.

These steps take place until all instructions are performed and just before program termination updated versions of admission file and patient file are printed to 'admission.txt' and 'patient.txt' respectively.

UML Class Diagram

