

Take-Home Assignment 2: Use Case and Class Diagrams

Generally, OPD is designed to treat outpatients, the people with health issues who come for diagnosis but are not meant to be admitted for overnight care. Modern outpatient departments offer a wide range of treatment services, diagnostic tests, and minor surgical procedures. While considering the viewpoint of patients, their details and required diagnosis information is registered. The patients are informed about the consultant medical practitioner and fees. The necessary information of the hospital, which includes its name, address, and contact number, are to be mentioned and made available to both outpatients and staff (indicating it as the main class). The staff of the hospital includes doctors, nurses, and cleaning staff. Each of them having their identities and salaries. The directors and receptionists are involved in the administration, who know how things are working. The directors, receptionists, and doctors have access to the portal, which has a patient's information. The directors can remove or add staff and modify the salaries and fees. The receptionist registers the personal details of the patient, directs them to the doctor, and adds their fees into the portal. The doctor writes the required diagnosis information of the patient. Laboratories and pharmacy facilities are available. Tests required for the diagnosis, for example, blood test, sugar test, X-ray facility, etc., are performed in the labs. The pharmacy has regular monitoring of the medicines available in the stock.

1. Mention different modules and submodules for developing the system mentioned above?
2. Explain different notations of the UML use case diagram and class diagram?
3. Prepare a use case diagram document for the problem specified. The use case diagram document should contain the following information:
 - Identify actors and use cases. Explain the relevance of each actor and use case.
 - A brief description of the symbols used in the use case diagram explaining the reason for using that particular symbol.
 - Write the use case description of four major use cases.
4. Prepare a class diagram document for the problem specified. The class diagram document should contain the following information:
 - Identify various elements, such as classes, member variables, member functions, etc. of the class diagram.
 - A brief description of the symbols used in the class diagram explaining the reason for using that particular symbol.
 - A brief description of the flow of each event in the class diagram.