

Assignment 2, Fall 2024
CSE471: System Analysis and Design (Sec-07)
Total Marks – 40

USE CASE DIAGRAM

Q1.

[10]

Providers can log in to the system, but the admin must do the registration. After login, providers can switch between chambers if there are multiple providers' chambers. There is an external system named Smile, from which the system gets all the patient information. Providers can view 3 values from that information: the number of newly added patients, due tasks, and daily revenue. For each task, the provider can mark it as Confirm or Pending. The provider can get information about patient appointment requests from the external system. And thus, confirm or cancel the appointment. A provider can also book appointments for the patient directly from the system in a scheduler. However, the provider must check the scheduler for an empty slot. Lastly, the provider can send Follow-up notifications to the patients.

Q2.

[10]

You have been hired to design a course management system. The requirements for the system are as follows:

Two types of students will use this system: BSc and MSc. Students can log in to the system using a username and password. The system will check whether the credentials are valid and give an error message if they are incorrect. Students will be able to select courses they want to complete next semester. The system will check whether the course has remaining seats and if the student has completed all pre-requisite courses to take the course. The system might suggest additional courses to the student when taking a course. After a student has completed selecting courses, they might request advising, and an adviser will approve the advising request. Students can view their routine and grade sheets. BSc students can add project proposals, whereas MSc students can add thesis proposals, which the advisor will approve. Students can also make payments. Payments can be made via card or bank transfer; the system must verify payment.

ACTIVITY DIAGRAM

Q1.

[10]

Amid the increasing dollar price to taka, the Best-Exchange app provides the best deals when buying dollars.

Firstly, the user initiates the app by creating an account. If the user already has an existing account, they can log in. After successful login, the user sends an exchange request to the Exchange section. The Exchange checks whether the requested amount is $\geq 10,000$ dollars. If the amount is $\geq 10,000$ dollars, it asks the user whether it is a premium or a standard account. If the account is premium or the amount is less than the mentioned limit, it asks the user to confirm the request before processing termination. If the user has a regular account, they need approval from the system's admin. If the Admin approves the request for the regular account, the admin updates the database, emails the invoice concurrently and sends a notification to the user afterwards. Subsequently, the admin asks the user to request confirmation before processing termination. If the Admin disapproves, the process terminates.

Q2. [Draw with Swim Lanes]

[10]

You graduated from BRAC University. You will apply for jobs but must collect your academic papers before that. After contacting a friend of yours, he informs you about the complete process of gathering documents, which are as follows:

Initially, you must collect the degree processing form from the admission office. Then you must fill in the form. After that, you will have to submit the form there. The admission office will check whether the form has been correctly filled out. If it is not correctly filled in, you will have to start the process again, and if everything is okay, you will be able to collect the pay slip and go to the accounts office. After submitting the pay slip, you must clear pending academic fees in accounts and transparent pending fees in the library. Accounts will check whether you have any pending academic fees; if there are, you must clear them. In the library, they will first check whether you have a library account. If you have a library account, they will check for any pending library fees; if there are any, you must clear them. After both fees are paid, you must pay the degree processing fees in accounts, collect a token, submit it to the admission office, and finally collect your papers.