SOFTWARE DESIGN & ARCHITECTURE

LAB REPORT # 3

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Q1. Consider following scenario and identify at least 5 use cases. Among 5 use cases two of the use cases should be described by using the fully-dressed format and the casual format can be used for the rest of the use cases

Online Bookstore System on a Cloud Platform

This project aims to develop an online bookstore system that acts as a central database containing various books in stock along with their title, author's name, published date, and cost. This project, basically a website, will get a large amount of online visitors. The system should be hosted on a cloud platform in order to avoid site crash. The project can be developed using Java (front end support) and SQL (back-end support). The online bookstore stores various book related details. Microsoft Azure can be used for cloud-based infrastructure. The user will be able to login, view a wide range of books arranged in respective categories, select desired book and view its price, Check the availability of the book, Search for specific books on the website, reserve a book by filling-in a form, See the due date (25 days from the date of issuance.), Get a reminder once they cross the due date of submission of a book.

Answer:

Use cases:

1. Login
2. Select book
3. Check availability of books
4. Reserve book
5. Get reminder of due date.

System	Online Bookstore
Use case name	UC4: reserve a book
Brief Description	In online bookstore customer reserve a book of his choice by providing necessary information asked by system.
scope	People are facilitated to buy book of their interest and get it at place where they want
actor	Primary: customer, secondary: book store

Pre-condition	Customer registered himself by providing necessary information which is asked by website to login into online bookshop system.
Post condition	Book is selected. Customer purchased or reserve it for few days.
Main success scenario	1. Customer login to website of online bookshop 2. he views categories where books of different subjects are placed. 3. He selects category where many books on one subject or topic are placed. 4. Customer may search book by book name or author name or both 5. Customer provide author or book name to search out book of interest. 6. Customer see price and select book. and reserve book among various books. 7. Book details are recorded by system. 8. If customer purchase book then he may pay amount using recommended ways (using credit card, debit card, easy paisa on cash on delivery).
Alternative1a scenario	1. If customer forget password, system should provide facility of re-entering password. 2. Or he may asked by system to reset password to get access to bookstore.
Alternative2a scenario	1. If list of categories not shown on portal, then user may ask to system to show books of his interest.
Alternative4-5	1. If customer forget author name, then he can only enter book name to get book and if he forgets book name then he may get book by author name. 2. If he forgets both then he should be given facility by system to randomly select and reserve book from given categories of books.
Alternative6a	1. If price is not shown on portal, then customer is given facility to ask about price before reserving book.
Assumption	User want to reserve book in online bookshop.

Special requirement	The personal information provided by customer for registration should be encrypted. The system should show efficient response and not get slow when many customers join simultaneously.

System	**Online Bookstore**
Use case name	UC3: Check availability of books
Brief Description	In online book store system customer login to view a wide range of books and Check the availability of book of interest.
Scope	The System has a great future scope, Customer can visit and check his book of interest it reliable and easy to visit book store from home.
actor	Primary actor : Customer Secondary actor : Book store
Pre-condition	Customer enters the ID and password to login and proceeded to check availability of book on online store
Post condition	Book has been found and customer purchased it
Main success scenario	1. Customer visit book store and view books 2. Search a book of interest 3. Purchased it and leave a store
Alternative scenario 1a-2a	1. website not working properly due to lack of resources and send message to customer that he will not able to access website 2. if customer is entering wrong password send a message invalid login
Alternative scenario 2a	1. if customer not find a book then send message to customer book is not available
Alternative scenario 3a	1. if customer is not able to pay a bill send message to customer payment failure
Assumption	Customer want to Check the availability of book
Special requirement	The personal information provided by customer for registration should be encrypted.

Casual format of use cases:

UC-01:

Name	Login
(Main success scenario)	A customer or user can register by providing necessary information which includes user name, password, email id and email id password. All the information is taken again in same login page for confirmation and security purpose i.e., in order to check correct person wants access. If a new user wants access to system, he has to form account to get access. By providing correct information system allow user to access its command.
Alternative 1	In any case if user fails to login in system by providing incorrect data, system will give another chance of re-entering data.
Alternative 2	If user forget password, the system allow user to select option of 'forget password' and then he can form new password.

UC-02:

Name	Select a book
Main success scenario	User or customer vies list of all categories of book. then user select category related to book which he wants to purchase. In that category he views book. user can search book by writing book name in search bar. user select book of interest and will write book detail to keep record for system.

Alternative 1	If lists are not shown then user will have to choose book placed randomly.
Alternative 2	User must be given option either search book by book name or author name for ease.

UC-05:

Name	Give reminder of due date
Main success scenario	User reserve book by filling a form which includes detail about book which includes book name, author name, book id, book category, user name, email, phone number, date of issuance and due date of returning book. if user not return book on due date or he forgets to return then system send message for resubmission of book on email or phone number. User must pay fine if book is not returned on due date.
Alternative 1	Message of returning book must be sent two days before due date for remaindering.

Q2:
Consider an automated student registration system which requires student to login as well as provides registration to students. It also enables student to enroll in courses. The student can enroll in only those classes that are part of their degree fully dressed use case in two column formats for following use case **"Enroll in a course"**
Answer:

UC-01	Enroll in a course
Actor	student

Goal	Student will get enrolled in courses which are related to degree
Pre-requisite	student must be login to system by providing necessary detail and should be registered one.

	User action	System response
	• Student search courses	• System shows various course list and allows student to search from list
	• Student select courses which are related to degree.	• System shows those courses which are selected by student
	• Student perform registration to get enrollment in selected courses	• System register student and enroll student in selected courses.

alternate	If student cannot find courses of interest, then he may ask to system about courses.