**QUESTION ONE:**

**Use case diagram for Jaarir Bookstore**

In this part of the assignment, we are going to build a use case diagram or the above bookstore:

A typical USE CASE scenario would consist of the following entities:

*-Books*

*-Staff*

*-Students*

*-Computers*

*-Catalogue*

*-Fees*

*-Block*

*-Shelf*

*-Library location*

*-Library bus*

The USE CASE diagram (attached on PDF) shows the relationship between the staff, students and other entities:

**QUESTION TWO**

The below is the full description of the use case scenario of screen login situation with the library

|  |  |  |
| --- | --- | --- |
| **Index** | **Use case** | **Description** |
| 1 | **User**   * **Student** * **Lecturer** * **Library Staff** | * The manipulator/actor |
| 2. | **Precondition/action**  **-Login** | * The user gathers enough details i.e. username and password to enable them login in to the library system |
| 3. | **Main Flow**   1. Enter username 2. Enter password 3. Accept terms and conditions 4. Login success message | * The users inputs login details into the system to enable authorisation check |
| 4. | **Validation**   1. Username and password are compared against main DB details 2. If user name is correct, validation proceeds to password 3. If password is correct, password validation rules are passed for check 4. If password validation rules are correct, user is shown a to accept TERMS & CONDITIONS 5. If terms are correct, user proceeds to main URL 6. If login attempts have been exceeded, user to contact SYS-ADMIN | * At this level, user has passed parameters and these parameters are checked against the database to check for validation, validation rules are looked up and counter responses given |
| 5. | **Post validation**   1. Record user session and store login in browser cache 2. Once user activity is stopped, exit and return to login screen | * The browser will store user login cookies and destroy them as soon as user activity is done |
|  |  |  |

**QUESTION THREE**

The activity diagram (attached) depicts the process of borrowing a book from the library:

**QUESTION FOUR**

Domain model class is attached

**QUESTION FIVE**

System sequence diagram is attached