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Shahjalal University of Science And Technology

Course Title: Introduction to software engineering

Submitted to:

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■ **Librarian's expectations from the product:**

The librarian of IICT library MD. Sohel Ahmed stated that the online library system would supposed to have the following features:

1. The product will provide the members with online booking of books capabilities and online system is up and running all day.
2. The system will provide login facility to the users.
3. The system will provide the members with the option to check their account and change their options like password of the account during library hours.
4. The system will provide the members the opportunity to book the books 24 hours a day and all through the semester.
5. The system will let the library stuff to check which all members have booked the books and whether they can borrow any more books or not.
6. The system will allow the librarian to create the books catalog, add/delete books and maintain the catalog.
7. The system will update the billing system as and when the members borrow or return the books.
8. The members should be provided with updated information about the books catalog.

■ **Operating Environment:**

1. Operating System: Windows 7/8/10, Mac, Linux, Android
2. Database: MySQL
3. Language: PHP, Java

■ **Hardware Requirement:**

512 MB ram, 300 MB Hard Disk

■ **System Features:**

◆ Functional Requirements:

1. The user can search book and see his/her account information.
2. He will be able to get the records in any format.
3. There will be a reminder and digital diary through this he can go to know about its important date like his book submission date.
4. Admin can add new record and see all record of any student as well as library.

■ **Module Description:**

◆ Type of user:

1. Administrator
2. Head of all department
3. Student
4. Faculty
5. Staff

◆ Administrator module:

- 1) Budget for all department
- 2) Stock verification
- 3) Create user
- 4) Accept/reject user
- 5) Change password
- 6) Book inventory
- 7) User information
- 8) Report generation
- 9) Search Book

◆ Complain: All user can send their Complain.

◆ User module:

1. Change password
2. Book Search
3. See account information

- ♦ Fine information:
  1. All user check their fine
  2. Fine by date and month
- ♦ Book inventory:
  1. Purchasing book information
  2. Maintain book inventory
- ♦ Book search:
  1. Normal search by Alphabet
  2. Quick search by type/Author/publication
- ♦ Order charge:
  1. Book binding
  2. Journals
  3. Newspaper
- **External Interface Requirements:**
  - ♦ User Interfaces:
    1. The design or layout of every form will be very clear and very interactive to the user. When the user open the software the welcome window will appear.
    2. In the login window, the user can easily enter the desired password and username. Then it will give login successful message.
    3. From each and every window the user can easily go to any desired window that is there will be a absolute and relative linking.
    4. In every window there is help and support option is present for the each of user.
    5. The background color is very light and the graphics and font style will be well organized.
    6. The user will be able to search any data from the record by using proper guideline shown in the window.
    7. In the opening of the software there will be a menu window where the overall table contents of the software will be present through which the user can move to any desired window.
    8. User can easily save his/her data into the database and keep track of the records of purchase.
    9. The software will be easily understandable and operable by user.
  - ♦ Software Interface: A firewall will be used with the server to prevent unauthorized access to the system. The online library system will be connected to the World Wide Web.
- **Other Non-function Requirements:**
  1. This software will not breakdown suddenly in any disaster like power failure.
  2. The development of the software will be based on object orient model.
  3. The performance of the functions and every module must be well.
  4. For individual function the performance will be well.
  5. For login the username and the password will be matched to the password and username saved in the database and thus only authenticated users are allowed to login.
  6. There will be various ways of retrieving data and it takes less time.
  7. The software will be well supported to the other embedded software such as digital dairy.
  8. The overall performance of the software will be reliable and enable the users to work efficiently.
- **Security Requirements:**
  1. There will be proper security regarding to the accessing of data.
  2. The external security can be provided by given the login authentication.
  3. The data that are stored in the database must be private.
  4. There is also required an user authentication.
  5. There is also the faculty that the admin can look his private date that will not be accessed by anyone.
  6. The whole software is secured from outside accessing.