



Institute of Universal Higher Studies

Diploma in Information Technology

Mini Project

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Marking Rubric	Error! Bookmark not defined.

Project Group:

Form four (05-member group within your lab group. No individual projects are allowed.

Project Topic:

Select a topic from the given topic list.

Project Overview:

Assume that you have been assigned to lead a Software Project Team and you need to deliver this Software Project to a real client following Agile Practices as well as prototyping method.

Task one –

Create a Software Requirements Specification (SRS) document after gathering and analyzing the requirements (both functional and non-functional). The SRS document will contain some part(s) from the Software design stage (class diagram and prototyping).

Task Two –

Develop a web-based E-commerce System that showcases the integration of front-end technologies (HTML, CSS, JavaScript) and server-side technologies (PHP, MySQL) to implement CRUD operations and search functionality.

Objective:

To evaluate and assess student knowledge on identifying, gathering Software Project requirements, and analyzing. Moreover, how that could be communicated via an SRS document and the knowledge of Software Designing also.

To evaluate students' knowledge of front-end technologies (HTML, CSS, JavaScript), server-side technologies (PHP, MySQL, e-commerce), and the Best practices in web design and development through the development of a simple e-commerce website that implements CRUD operations and search operations.

Requirements for Task One:

- Produce an SRS document following the SRS template that was discussed during the class.



- In the Functional Requirements section of the SRS, the following need to be provided:
 - Mention at least 30 to 40 user stories that summarize the key functional requirements (including CRUD operations) of the identified system. You can look at the features suggested in task two also.
 - Draw a UML Use-Case diagram showing which actors are involved in each function of the system. You can use Draw.io or any free tool available online.
 - Write Use Case scenarios for at least 5 Use Cases identified. You are required to follow Cockburn's template.
- In the Non-Functional Requirements section of the SRS, the following need to be provided:
 - At least 3 performance requirements, 3 usability requirements, 2 reliability requirements, and 2 any other NFRs that may apply. These must be specific to the system you are proposing.
- As a part of the system design, create a class diagram for your proposed system. This may have only the necessary high-level classes and only the important attributes and methods that you think of implementing in the system later.

- Create some initial UIs as a simple prototyping technique and include those in the SRS document. You may use a tool like Figma (a free tool) to create interesting user interfaces. (Some resources are <https://www.figma.com/resource-library/design-basics/> or <https://www.youtube.com/watch?v=JGLfyTDgfDc> – and there are many more on the internet)
- Under the verification section you may need to include possible test cases and test scenarios (minimum 20 test cases) covering different aspects of the software. These test cases should be aligned with the functional or non-functional requirements you had identified earlier.

Resources

- Writing an SRS Document
 - <https://www.geeksforgeeks.org/how-to-write-a-good-srs-for-your-project/>
 - https://www.youtube.com/watch?v=zKUet_lcuUU
- Draw.io - <https://drawio-app.com/examples/>
- Figma tutorial - https://www.youtube.com/watch?v=6t_dYhXyYjl
- IEEE Referencing - https://www.youtube.com/watch?v=Mmj_pc4lkZQ or <https://www.bath.ac.uk/publications/library-guides-to-citing-referencing/attachments/ieee-style-guide.pdf>

Deadline and Submission Requirements:

- The SRS document deadline will be at 11.59 pm on 13th Saturday, January 2024
- Each group submits only ONE SRS document in the LMS
- Students must submit their SRS document in one PDF document with the following
 - A cover page with the title of the project and team details
 - A table of contents to see the structure and sections of the SRS document
 - At the end of the SRS you can mention all the references used when preparing the SRS document. You can use the IEEE referencing format when providing references

Requirements for Task Two:

The web-based E-commerce system must be developed using HTML, CSS, JavaScript, PHP, and MySQL only.

Features:

- User management
 - Create user accounts.
 - Implement user registration and login functionality.
 - Authenticate users before allowing access to CRUD operations.
- Product Management:
 - Create, Read, Update, and Delete (CRUD) operations for products.
 - Each product should have attributes like name, description, price, and image.
- Category Management:
 - Implement CRUD operations for product categories.
 - Associate products with specific categories.
- Search Functionality:
 - Implement a search feature to allow users to search for products based on name, category, or price range.
- Shopping Cart:
 - Enable users to add products to a shopping cart.
 - Implement basic shopping cart functionalities like updating quantities and removing items.
- Checkout Process:
 - Create a simple checkout process with a summary of selected items and a total cost.
- Order Management:
 - Implement a basic order management system, including order history for logged-in users.
- Security:
 - Implement measures to prevent common security vulnerabilities (e.g., SQL injection, XSS).
- Responsive Design:
 - Ensure the application is responsive and works well on various devices and screen sizes.
- Database Design:
 - Design a normalized database schema to store product information, user details, and order history

Implementation Requirements:

- The E-commerce system must implement CRUD operations (Create, Read, Update, and Delete) for the following entities:
 - Products
 - Users
 - Orders
- Manage different user roles
- The E-commerce system must implement a search operation that allows users to search for products by name, category, or other criteria.
- The E-commerce system must be hosted on a web server.
- Use ONLY copyright-free materials.

Technologies Used:

- Front-end:
 - HTML5
 - CSS3
 - JavaScript (and any relevant frameworks/libraries like jQuery)
- Back-end:
 - PHP (7.0 or higher)
 - MySQL (or any other relational database)

Submission Requirements:

- Students must submit their project in a zip file containing the following:
 - All the website's code files (HTML, CSS, JavaScript, PHP, and MySQL).
 - A database backup file.
 - A README file explaining how to install and run the website.

Topic list:

1. Online Pharmacy Portal
2. Online Job Portal
3. Online Fashion Store
4. Online Medical Portal
5. Online Property Sales System
6. Vehicle Rental System
7. Safari Trip Management System
8. Online Auction System
9. Online Recipe Management System
10. Train Ticket Booking System
11. Library Management System
12. Online Book Store
13. Bus Scheduling & Booking System
14. Hotel Reservation System
15. Blood Donation System
16. Diet Planning & Health Check-up System
17. Movie Booking System
18. Online Banking
19. Online Vaccination Portal
20. Online Pet Care System
21. Online Tools Rental System