**Project Report**

**On**

**E-COMMERCE WEBSITE**

**CSC Computer Education**

**FULL STACK PYTHON**

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**SUBMITTED TO**

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**1. Project Overview**

**1.1. Project Title**

**Title:** E-Commerce Website

**1.2. Project Description**

**Description: Welcome to Art Haven**

Explore a curated collection of exquisite drawings at Art Haven,your premier online destination for art enthusiasts and collectors. Whether you’re looking for contemporary pieces, classic sketches, or unique illustrations, our store offers a diverse range of artworks to suit every taste and style.

**Why Choose Us?**

* **Exclusive Collection**: Discover a wide variety of drawings from talented artists around the world.
* **Authenticity Guaranteed**: Each piece is verified for authenticity, ensuring you receive genuine artwork.
* **Secure Transactions**: Shop with confidence using our secure payment methods and data protection measures.
* **Fast Delivery**: Enjoy prompt and reliable shipping to get your artwork delivered safely to your doorstep.
* **Customer Support**: Our dedicated team is here to assist you with any questions or concerns.

**How It Works**

1. **Browse**: Navigate through our user-friendly website to explore our extensive collection of drawings.
2. **Select**: Choose your favorite pieces and add them to your cart.
3. **Purchase**: Proceed to checkout, provide your shipping details, and select your preferred payment method.
4. **Receive**: Sit back and relax while we carefully package and ship your artwork to you.

Join our community of art lovers and start building your collection with Art Haven. Happy shopping!

**1.3. Objectives**

* To develop a user-friendly web application using Flask.
* To implement user authentication and authorization.
* To provide functionalities for task management, including creation, updating, and deletion of tasks.
* To integrate a database for persistent storage of user data and tasks.

**1.4. Target Audience**

**Audience:** Individuals who need an efficient way to manage personal tasks, such as students, professionals, or anyone looking for a task management tool.

**2. Requirements**

**2.1. Functional Requirements**

* User registration and login functionality.
* Task creation, editing, and deletion.
* Task categorization and filtering.
* Email notifications or reminders for upcoming tasks.

**2.2. Non-Functional Requirements**

* Performance: The application should handle up to 1000 simultaneous users.
* Security: User data must be protected, and password hashing should be implemented.
* Usability: The application should be intuitive and user-friendly.

**2.3. Technical Requirements**

* Programming Language: <Detailed Description about your Programming Language>
* Framework: Flask/ <web Framework Description>
* Database: <database Description>
* Frontend: HTML, CSS, JavaScript

**3. System Architecture**

**3.1. High-Level Architecture**

A diagram or description of the system architecture, including:

* **Client-side:** The user interface in the browser.
* **Server-side:** Flask application handling requests and responses.
* **Database:** Storage for user data and tasks.
* **APIs:** Any external services or APIs used.

**3.2. Components**

* **Frontend:** HTML/CSS/JavaScript templates for user interaction.
* **Backend:** Flask routes and handlers for business logic.
* **Database:** Schema and models for user data and tasks.

**4. Design**

**4.1. Database Design**

* **Tables:** Users, Tasks, etc.
* **Relationships:** How tables relate to one another (e.g., one-to-many relationship between users and tasks).
* **Schema:** Detailed schema definition for each table.

**4.2. Application Flow**

* **User Flow:** Diagram or description of how users interact with the application.
* **Request-Response Flow:** How the application processes requests and sends responses.

**5. Implementation**

**5.1. Project Setup**

* **Dependencies:** List of required libraries and tools (e.g., Flask, SQLAlchemy).
* **Installation Instructions:** Steps to set up the development environment.

**5.2. Code Structure**

* **File Organization:** Description of the file structure and organization.
* **Key Modules:** Explanation of important modules and their responsibilities.

**5.3. Example Code**

Provide snippets of critical code for key functionalities, such as user authentication or task management.

**6. Testing**

**6.1. Testing Strategy**

* **Unit Testing:** Tests for individual components or functions.
* **Integration Testing:** Tests for interactions between components.
* **End-to-End Testing:** Tests for complete workflows from start to finish.

**6.2. Tools**

* **Testing Frameworks:** pytest, unittest, etc.
* **Mocking:** Use of mock objects or services for testing.

**7. References**

List any resources, libraries, frameworks, or tools that were used or referenced during the project.