OOMD Lab 2022-23

Online Shopping System

Problem Statement

Online shopping is a convenient and popular way of buying products and services. However, online shoppers face many challenges such as finding the best deals, comparing products, ensuring security and privacy, and managing orders and deliveries. An online shopping system is needed to provide a user-friendly and reliable platform that can address these challenges and enhance the customer experience.

Introduction

* Purpose:

The purpose of an online shopping system is to provide a convenient and efficient way for customers to buy products and services from various vendors over the internet. It also aims to offer a variety of features and functions that can help customers find, compare, and purchase the items they need or want. Additionally, it strives to ensure the security and privacy of the customers’ personal and financial information. Furthermore, it seeks to facilitate the order processing and delivery management for both customers and vendors.

* Scope of this document

The core of the system is to get the online registration form (with details such as name, address etc.,) filled by the applicant whose testament is verified for its genuineness by the Online Shopping system with respect to the already existing information in the database. It adopts a comprehensive approach to minimize the manual work and schedule resources, time in a cogent manner.

* Overview

Online shopping is a convenient and popular way of buying products and services. However, online shoppers face many challenges such as finding the best deals, comparing products, ensuring security and privacy, and managing orders and deliveries.

General Description:

An online shopping system is a software application that enables customers to buy products and services from various vendors over the internet. Customers can search, compare, and select the items they want and pay for them using different payment methods. The system also handles the order processing and delivery management for both customers and vendors. The system provides a user-friendly and secure interface that can be accessed from any device with an internet connection.

Functional Requirements:

* The system should allow vendors to add, edit and delete their products and services
* Customer should be able to browse through products
* The system should enable the customers to add, remove, and update their items in their shopping cart
* The system should redirect the user to a payment gate

Interface Requirements

* User Interface
  + UI should be simple, intuitive, responsive and consistent
  + Interface should support different languages and devices as needed
  + UI should display availability and location of books in the library
* Hardware Interface:
  + The system should be compatible with multiple operating systems such as Windows, Linux etc
  + The system should be reliable and secure when communicating with hardware devices
  + The system should use QR codes to scan passports, and to facilitate payments
* Software Interface:
  + A working OS
  + Front-end framework like React/Angular/Vue
  + RDBMS like MySQL, PostgreSQL etc
  + Containers and orchestration services like Kubernetes

Performance Requirements

* The number of pages should be minimized for the user’s convenience
* Page reloads should be fast
* There should be a procedure for when there is loss of data due to failure of storage device or similar reason.
* In case of a transaction failure, user is to be alerted

Design Constraints

* Working with the constraints set by the government
* Respect industry standards and follow best practices of software development

Non-Functional Requirements

* Performance: The system should be fast and accurate. It should handle expected and unexpected errors. It should be able to handle large amounts of data.
* Security: The system should protect the data from unauthorized access and modification. It should use encryption and authentication techniques to ensure data security.
* Scalability: The system should be able to handle an increasing number of users and applications without degrading the performance or functionality.