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Department of Computer Science & Engineering

UE17CS355 – Web Tech II Laboratory

Project Evaluation

Project Title : E-COMMERCE WEBSITE

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Project Description

The project aims to implement an e-commerce website with the usage of certain front-end and backend frameworks and intelligent components. The website can be used by two types of users – customers to buy the products and sellers to sell their products. The website has different categories from which the customers can select a product, like it, submit reviews, rate the product, view recommended products or add the product to the cart to eventually buy it with the money from their wallet. The customers can add money to their wallet to maintain a sufficient balance to buy products of their choice The sellers when logged in to the website can manage the products they are selling by updating the stocks of each of their products, modify discounts offered or modify the price of the product. They can also view the products that have been sold and analyze the sales for their products to predict future sales and manage stocks accordingly.

Technologies Used

- Front-end frame work –
- Angular JS- which is a component-based JavaScript library used for building user interfaces.
- Jinja – is a Flask web framework , which is a is a modern and designer-friendly templating language for Python.

- Backend frame work – Flask- Flask is a lightweight microframework in Python commonly used as the backend server for web applications
- Stats models, Pandas And NumPy - Python libraries used for Recommending and Forecasting.
- Other front-end technologies used include HTML, CSS, Bootstrap and jQuery.

Techniques Implemented

- Submission Throttling - In this Ajax model, the user interacts with the site or application without additional requests being generated for each click. This technique is used in the search of our website to autosuggest product names.
- Flask-RESTful - An extension for Flask that adds support for quickly building REST APIs. It is a lightweight abstraction that works with existing ORM/libraries. Flask-RESTful encourages best practices with minimal setup. This API is used in our project for server communication.
- Periodic Refresh with exponential back off – Periodic refresh is the process for checking new server information in specific intervals and notify users the updated information. The idea behind exponential back off is that instead of retrying after waiting for a fixed amount of time, we increase the waiting time between retries after each retry failure. This technique is implemented to refresh the reviews and likes to continuously update it in the product page.

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Intelligent Functionality

- We are using **Recommendation System** for recommending products for the user based on the products he/she liked or added to the cart. We have used Collaborative filtering to implement this functionality.

- We have also added **Statistics for sellers**. We are forecasting the future sales by using data from the past 15 days. It implemented to predict sales for the next 15 days. We are using Double Exponential Smoothing technique.

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Thank You