**Project Details:**

Creating a robust e-commerce website for selling products involves a comprehensive database design to efficiently manage product listings, customer data, and transaction history. To achieve this, we plan to develop a PostgreSQL database comprising six essential tables: "Products," "Customers," "Orders," "Order\_items," "Categories," and "Catalog." The "Products" table will store product information, including name, price, and availability. The "Customers" table will manage user profiles, while "Orders" and "Order\_items" will track purchase history. Additionally, a "Categories" table will categorize products. The heart of our system lies in the "Recommendations" table, where we'll employ advanced algorithms to analyse a customer's previous purchases history to generate personalized product recommendations.

Our recommendation system in PostgreSQL will employ collaborative filtering and data analysis techniques. It will analyse customer behaviours, such as purchase history and ratings, to generate personalized recommendations. By constantly updating and refining the recommendations, we aim to enhance user satisfaction, increase sales, and foster customer loyalty. This database-driven approach will empower our e-commerce platform to not only efficiently manage product data but also offer a dynamic and personalized shopping experience that keeps customers engaged and returning for more.

|  |  |  |
| --- | --- | --- |
| Table name | Description | Owner |
| Products | records the details of products, review and cost details | Prudhvi |
| Orders | records the details of order, customer and status of order | Chaitanya |
| Order\_items | Records the item details of order and item details | Pragnya |
| catalog | Records the catalog name and catalog\_ID | Kiran |
| Categories | Records the details of the category\_id, name | Kiran |
| Customer | Records the details of customer | Chaitanya |
| Recommendation | Records the list of products recommended for a customer | Prudhvi |
| Payment | Records different types of payment methods | Pragnya |

Tentative schedule for the project:

|  |  |  |
| --- | --- | --- |
| **Mile stone** | **Schedule date** | **Person responsible** |
| **1.** DatabaseSchema Design | 10/1/2023 | Prudhvi,chaitanya |
| 2. Data import | 10/8/2023 | Pragnya,kiran |
| 3. indexing and performance | 10/8/2023 | Kiran, chaitanya |
| 4.Stored Procedures and Functions | 10/15/2023 | Prudhvi, kiran |
| 5. Recommendation algorithm | 10/22/2023 | Pragnya, chaitanya |
| 6.Backend integration for API | 10/26/2023 | Prudhvi, chaitanya |
| 7.Front end integration | 11/1/2023 | Pragnya, prudhvi |

ERD diagram:

