PROJECT CHARTER

Project Name: Cartwise (E-Commerce Database System)	**Project Gr Number: 1**
Date: 03/01/2025	**Version Number:1.0**

1. PROJECT GOALS

Cartwise is an emerging e-commerce start-up company that aims to provide a frictionless shopping experience. We envision becoming one of the leading e-commerce platforms that delivers a seamless and data-driven shopping experience. Our strategy includes a phased approach, where the initial Minimum Viable Product (MVP) focuses on building the core functions essential for an online store – product listings, customer accounts, shopping carts, order management, and payment processing. These foundational capabilities will ensure a stable and scalable platform, setting the stage for future growth.

As Cartwise evolves, future initiatives (not in scope) will address critical challenges in online retail, such as cart abandonment, inefficient inventory management, and fragmented customer data. Long-term, our vision includes leveraging customer interactions for personalized & rewarding shopping experiences, implementing real-time inventory optimization, enhancing the checkout process to reduce drop-offs, and using advanced analytics for data-driven decision-making. By establishing a robust database infrastructure, Cartwise aims to support these innovations, ensuring long-term scalability, operational efficiency, and enhanced customer engagement.

2. DELIVERABLES

- Create Database Schema: Create the following tables and define schema - Customers, Products, Discounts, ProductCategories, Inventory, OrderSummary, OrderDetails, Payments, ShoppingCart, ProductReviews, Shipping, ReturnsRefunds, CustomerComplaints.
- Research other necessary tables for the MVP.
- Develop Entity-Relationship Diagram
- Define and Implement Core Tables and Views (Research views that could be relevant)
- Develop Complex Queries – Write and optimize complex SQL queries to handle business operations, such as order processing, inventory management, returns and refunds. Provide documentation for each query's goal and functionality.
- Design and implement Stored Procedures (add documentation for the choice and use of the SPs): E.g., adding a new order, updating inventory, processing a return/refund.
- Design and implement Functions: E.g., calculating total order value, applying discounts
- Create indexes
- Create Triggers: Explain the reasoning behind choosing triggers and their intended functionality. E.g., maintaining stock levels or updating order statuses.
- Update project charter
- Prepare project write-up.
- Create and upload video pitch for the project.
- Create and upload the final project presentation, write-up and video content.

3. SCOPE DEFINITION

The scope of the Cartwise DBMS project focuses on designing and implementing the database layer for an e-commerce platform, ensuring that it supports core business operations. This includes creating the foundational database schema with

essential tables namely Customers, Products, Orders, Payments, Inventory, and ShoppingCart etc. The database will handle essential tasks like customer management, product tracking, order processing, and payment handling, providing the backend infrastructure needed for the platform's day-to-day functionality. The project will also define views, complex queries, and stored procedures to automate and optimize business functions, Triggers will be implemented to automate critical tasks like maintaining stock levels and updating order statuses.

The scope excludes the development of the UI/UX and business logic layers, which will be handled separately in future phases. Also, the long-term vision of evolving as a data-driven e-commerce platform is out of scope.

4. PROJECT MILESTONES

DATE	DELIVERABLES
March 4	Initial Database Schema design and table creation (Customers, Products, etc.)
March 11	Entity-Relationship Diagram (ERD) completed and reviewed; Core Tables implemented
March 18	Views and Complex Queries (first set) developed and tested
March 25	Stored Procedures (first set) and Functions (first set) implemented
April 1	Triggers (first set) implemented and documented; Begin drafting project write-up
April 8	Internal Review: All database components (tables, views, queries, procedures, functions, triggers) finalized
April 15	Final review of project write-up; Begin final testing and adjustments of DB components
April 17	Submit project write-up draft for internal feedback
April 22	Project Write-up**;** Finalize and submit all DB components (tables, queries, procedures, functions, triggers)
April 29	Project Write-up Due; Finalize and submit all DB components (tables, queries, procedures, functions, triggers)
May 6	Finalize Project Video and Presentation; Final Project Review and Adjustments
May 13	Final Project Submission Due **and** Final Project Video Submission Due

5. INDIVIDUAL CONTRIBUTION CHAPTERS (ENCLOSED IN THE LAST PAGE)

TEAM MEMBER	INDIVIDUAL CONTRIBUTION
Priyadarshan Parida	- Overall database schema (initial design) - Design and implement the Customers and Products tables. - Develop complex SQL queries, Stored Procedures, Function, and triggers. - Create the project presentation. - Contribute to the project write-up and video pitch. - Perform integration testing.
Sunayana Jana	- Work on Discounts, ProductCategories, and ReturnsRefunds tables. - Develop complex SQL queries, Stored Procedures, Function, and triggers. - Create the project write-up. - Contribute to the project presentation and video pitch. - Perform integration testing.
Soniya Rajappan	- Develop ShoppingCart and ProductReviews tables. - Develop complex SQL queries, Stored Procedures, Function, and triggers. - Create the video pitch. - Contribute to the project presentation, and write-up. - Perform integration testing.
Winnie Manyara	- Work on Inventory and Shipping tables. - Create views to optimize report generation. - Develop complex SQL queries, Stored Procedures, Function, and triggers. - Contribute to the project presentation, write-up and video pitch. - Perform integration testing.
Qurrat Ul Ain Lnu	- Develop the Entity-Relationship Diagram (ERD). - Develop complex SQL queries, Stored Procedures, Function, and triggers. - Contribute to the project presentation, write-up and video pitch.

	- Perform integration testing.
Sai Vishnu Malladi	- Work on Payments and OrderSummary tables. - Develop complex SQL queries, Stored Procedures, Function, and triggers. - Contribute to the project presentation, write-up and video pitch. - Perform integration testing.

** The repeating tasks are shared between multiple team members.

6. TEAM MEETING SCHEDULED TIME EACH WEEK. (Every member should commit to this time and attend each meeting to contribute to the project.)

Every Saturday at 10 AM CT

7. PROJECT TEAM STRUCTURE

Function	**Name**	**Role**
Submission Coordination	Priyadarshan Parida	Consolidate and submit project artifacts in a timely manner.
Meeting Documentation	Sunayana Jana	Document key discussion points, decisions, and assign tasks and deadlines.
Timeline Coordination	Soniya Rajappan	Coordinate the overall project execution, ensuring that deadlines are met, and team members are aligned.
Meeting Facilitation	Winnie Manyara	Organize and facilitate team meetings, ensuring clear agendas and efficient discussion.
Conflict Resolution	Qurrat Ul Ain Lnu	Resolve difference in opinion and conflicts within the group.
Quality Assurance	Sai Vishnu Malladi	Ensure quality of all deliverables.