Project Charter Document – EcoFinds Marketplace

1. Project Title

EcoFinds – Sustainable Second-Hand Marketplace

2. Project Vision

EcoFinds aims to promote sustainable consumption by providing a platform where users can easily buy and sell second-hand items. The platform reduces waste by extending product lifecycles while fostering a responsible and conscious community of buyers and sellers.

3. Objectives

- Develop a functional web-based MVP within 8 hours.
- Implement CRUD functionality for product listings.
- Provide a smooth user authentication system using JWT.
- Enable search and filtering to help users browse items efficiently.
- Allow cart and previous purchases management to simulate a real marketplace.

4. Scope (In Scope)

- Authentication: User registration and login with JWT.
- User Profile/Dashboard: Edit profile fields, view user info.
- Product Listings: Create, Read, Update, Delete products.
- Browsing & Search: Search by keyword, filter by category.
- Product Detail Page.
- Cart and Previous Purchases.

Scope (Out of Scope)

- Payment integration.
- Real image uploads (use placeholders).
- Mobile application (focus on responsive web).

5. Deliverables

- Functional Web Application (React + Node.js + MongoDB).
- Demo-ready CRUD features implemented and tested.
- GitHub repository with documentation.

6. Technology Stack

- Frontend: React, Tailwind CSS
- Backend: Node.js, Express.js
- Database: MongoDB
- Authentication: JWT
- Version Control: Git & GitHub

7. Team Roles (2-Person)

Person 1 (Backend Lead): Node/Express, JWT, Product APIs, Cart APIs.
Person 2 (Frontend Lead): React UI, integration, Cart/Previous Purchases, UI polish.

8. Risks & Mitigation

- Time constraint (8 hours): focus on MVP.
- Integration issues: test APIs in Postman early.
- Authentication bugs: implement minimal JWT flow.

9. Timeline (8-Hour Plan)

Hour 1: Setup (React, Node, MongoDB, GitHub).
Hour 2: Backend – Auth APIs with JWT; Frontend – Login/Signup UI.
Hour 3: Backend – Product CRUD APIs; Frontend – Dashboard + Product List UI.
Hour 4: Integrate Auth APIs.
Hour 5: Backend – Cart & Purchases; Frontend – Product Detail + Add Product.
Hour 6: Secure routes & debug; Frontend – integrate CRUD.
Hour 7: Backend assists; Frontend builds Cart & Purchases.
Hour 8: Testing, bug fixes, demo polish.

10. Success Criteria

- Working prototype with login/signup.
- CRUD for products.
- Search & filter functionality.
- Cart and Previous Purchases visible.
- Judges can test CRUD operations in demo.