
Project Planning

Project Title: ReCircle – The Waste Reduction App

Objective:

To develop a smart, user-friendly web application that minimizes waste and supports vulnerable communities by connecting donors (restaurants and households) with recipients (charities, NGOs, and individuals) efficiently using technology.

Project Phases & Timeline:

1. Research & Analysis (Week 1–2)

- Understand the waste management problem and community needs.
- Identify target users: donors, recipients, volunteers.
- Study existing apps to identify gaps and opportunities for innovation.

2. Visual Identity (Week 3)

- Design logo, color palette, and typography reflecting sustainability and community.
- Finalize brand identity to maintain consistency across designs.

3. Main Designs (Week 4)

- Create promotional poster introducing the app's purpose and features.
- Prepare presentation visuals for outreach and stakeholder communication.

4. Complementary Products (Week 5)

- Develop social media templates, infographics, and brochures.
- Increase awareness and engagement with potential users.

5. Development & Integration (Week 6–8)

- **Frontend (Sarah Shaban):** Build responsive web interface with React.
- **Backend (Mai Mahmoud):** Create server, database, and API integration.
- **UI/UX Design (Salma Waleed):** Create and refine mockups for user flow.
- **Testing & Deployment (Norhan Ashry):** Ensure quality, security, and smooth deployment on platforms like Vercel/Netlify.

6. Review & Finalization (Week 9)

- Team review of all materials and features.
- Make necessary revisions and improvements.

7. Final Presentation (Week 10)

- Present concept, development process, and impact to instructors and peers.
- Demonstrate working prototype and summarize KPIs achieved.

Tools & Technologies:

- **Frontend:** React.js, HTML, CSS
- **Backend:** Node.js, Express.js
- **Database:** MongoDB / MySQL
- **Design:** Figma, Canva, Adobe Illustrator
- **Hosting:** Vercel / Netlify
- **Version Control:** GitHub

Success Metrics (KPIs):

- 100% core feature completion.
- $\geq 99\%$ uptime.
- Response time < 3 seconds.
- ≥ 50 active pilot users.
- ≥ 100 donation items processed.
- User satisfaction $\geq 4/5$.

Stakeholder Analysis

Stakeholder	Role / Interest	Responsibilities / Expectations	Impact on Project
Team Members (pentaRae)			
• Sarah Shaban • Mai Mahmoud • Salma Waleed • Norhan Ashry	Project creators and implementers	Plan, design, develop, test, and present the ReCircle app.	High – directly responsible for project success.

Stakeholder	Role / Interest	Responsibilities / Expectations	Impact on Project
Instructor (Eng. Hesham Mohamed)	Academic supervisor and evaluator	Provide guidance, review progress, and evaluate final outcomes.	High – provides feedback and assessment.
Donors (Restaurants & Households)	Provide surplus food and clothing	Use the app to list donations efficiently and safely.	High – main source of donations; app's success depends on adoption.
Recipients (Charities, NGOs, Individuals in Need)	Receive donated items	Register, request, and track received donations.	High – primary beneficiaries of the platform.
Volunteers	Support logistics and delivery	Help collect and deliver donations to recipients.	Medium – improve efficiency and outreach.
Developers & Designers (Future)	Future maintainers and contributors	Ensure scalability, code quality, and design continuity.	Medium – sustain project beyond initial phase.
Community / Society	Indirect beneficiaries	Benefit from reduced waste and improved resource distribution.	Medium – social and environmental impact.
Hosting & Tech Providers (e.g., GitHub, Vercel)	Provide development and deployment infrastructure	Ensure smooth hosting, integration, and uptime.	Low – support technical reliability.

UI/UX Design

Figma Link

<https://www.figma.com/design/g64uFZ6aG2K5fls9slG0MT/Recircle?node-id=12-11&t=35A6sJHnnFMOyb07-1>