

Web Application Project Progress

CSE309
Section-05
Autumn 2025

| Student ID | Student Name | Email | Contact |
|------------|----------------------|--------------------|-------------|
| 2211595 | Shahla Sarmin Raisha | 2211595@iub.edu.bd | 01978223201 |

| Project Supervisor | Email | Contact |
|----------------------|------------------------------|---------|
| Shanjita Akter Prome | sanjitatpromesets@iub.edu.bd | |

Project Title: FoodSaver: Leftover Food Rescue System

Abstract: Meanwhile, the rapid surge in food waste juxtaposed with persistent food insecurity in underprivileged communities underlines the critical break in the systems of food redistribution. While a vast amount is wasted each day from households, restaurants, institutions, and various corporate events, the absence of a structured, technology-driven platform stands in the way of surplus food reaching the most needy. Food is shared through informal calls, social media posting, and personal networks that are not transparent, consistent, safe, or scalable. Such uncoordinated interactions result in delayed pickups of food, miscommunication among donors, volunteers, and receivers, duplication of requests, lack of accountability, and finally, unnecessary food waste.

Addressing these challenges, the FoodSaver web application puts forward a centralized digital platform to connect donors, receivers, volunteers, and administrators within one ecosystem. It allows the system to enable donors in creating verified food donation posts, receivers to request approved items, and volunteers to claim the delivery tasks with real-time status updates. The administrators ensure that food is safe and authentic through reviews of submissions and system activity monitoring. With integrated tracking, structured workflows, transparent communication, and a database-driven framework, FoodSaver converts the informal process of food sharing into a trustworthy and effective digital service.

The system yields considerable social and operational impact: minimizing food waste, extending reach to surplus food for the most vulnerable communities, driving active community involvement through volunteerism, and offering safety and traceability throughout the donation life cycle. By digitizing the donation and delivery process, FoodSaver secures

trust, speeds up response time, and delivers food safely and on time to intended recipients.

On the other hand, this development process contains a number of challenges: ensuring safety and hygiene for the donated food, real-time logistics management, scalability of the system if users increase, integration of tracking for delivery, and misuse/fraudulent request prevention. Future enhancement may include AI-based demand forecasting, automatic matching algorithms, IoT temperature monitoring, and mobile app integration that may help improve usability and system intelligence. In short, FoodSaver is a technological, socially impactful, and scalable response to the need of bridging food surplus with food scarcity, transforming community-driven food sharing into a modern, trustworthy, highly efficient digital service.

Tentative Task List for the Project:

| Sl | Task Name | Start Date | End Date | Comment |
|----|--|------------|------------|-----------|
| 01 | Select Domain and Finalize Project Topic | 21/09/2025 | 27/09/2025 | Completed |
| 02 | Conduct Problem Analysis & Stakeholder Study | 21/09/2025 | 27/09/2025 | Completed |
| 03 | Draft Initial Problem Statement | 21/09/2025 | 27/09/2025 | Completed |
| 04 | Requirement Gathering & Feature Brainstorming | 05/10/2025 | 11/10/2025 | Completed |
| 05 | Identify Core Actors (Admin, Donor, Receiver, Volunteer) | 05/10/2025 | 11/10/2025 | Completed |

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| 06 | Write Detailed Problem Statement | 05/10/2025 | 11/10/2025 | Completed |
| 07 | Prepare Motivation with Literature Review (5 Papers) | 05/10/2025 | 11/10/2025 | Completed |
| 08 | Create Use Case Diagram | 12/10/2025 | 18/10/2025 | Completed |
| 09 | Write Complete Use Case Narrations | 12/10/2025 | 18/10/2025 | Completed |
| 10 | Design ERD | 12/10/2025 | 18/10/2025 | Completed |
| 11 | Design Class Diagram | 12/10/2025 | 18/10/2025 | Completed |
| 12 | Prepare Sequence Diagrams | 19/10/2025 | 25/10/2025 | Completed |
| 13 | Frontend Setup (Folder Structure + CSS/JS Setup) | 19/10/2025 | 25/10/2025 | Completed |
| 14 | Design Login & Registration UI | 19/10/2025 | 25/10/2025 | Completed |
| 15 | Develop Login & Registration Backend | 19/10/2025 | 25/10/2025 | Completed |

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|-----------|---|------------|------------|-----------|
| 16 | Build Donor Dashboard UI | 26/10/2025 | 01/11/2025 | Completed |
| 17 | Create Donation Post Module (UI + Backend) | 26/10/2025 | 01/11/2025 | Completed |
| 18 | Implement Admin Verification System | 26/10/2025 | 01/11/2025 | Completed |
| 19 | Build Receiver Request System | 26/10/2025 | 01/11/2025 | Completed |
| 20 | Build Volunteer Claim Task Feature | 09/11/2025 | 15/11/2025 | Completed |
| 21 | Implement Delivery Status Updates | 09/11/2025 | 15/11/2025 | Completed |
| 22 | Build Tracking Pages (Donor, Receiver, Volunteer) | 09/11/2025 | 15/11/2025 | Completed |
| 23 | Conduct Full System Testing | 16/11/2025 | 22/11/2025 | Completed |
| 24 | Write SRS Final Draft | 23/11/2025 | 29/11/2025 | Completed |
| 25 | Prepare Final Documentation & Report | 30/11/2025 | 07/12/2025 | Completed |

Project Resources:

HTML/CSS/JavaScript – For frontend design and interactivity

PHP – For backend scripting and logic

phpMyAdmin – For designing and managing the database

XAMPP / Localhost Server – For local development and testing

Task Progress & Evaluation for Week No. 1 :

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|------------|------------|----------|------------|
| From Date: | 21/09/2025 | To Date: | 27/09/2025 |
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| Progress Details | | | | |
|------------------|---|--|--------|------------------------|
| SI | Task Breakdown List | Challenges Faced | Status | Comment |
| 1.1 | Shortlisted 5 possible domains | Hard to select between meaningful topics | Done | Domains listed |
| 1.2 | Compared feasibility & social impact | Hard to compare social value | Done | Narrowed to 2 options |
| 1.3 | Selected FoodSaver domain | Final decision took time | Done | Topic finalized |
| 2.1 | Identified main stakeholders | Difficulty ranking priority stakeholders | Done | Stakeholder list ready |
| 2.2 | Researched real-world food waste issues | Too many external sources | Done | Research summarized |
| 2.3 | Defined stakeholder roles | Overlapping responsibilities | Done | Roles clarified |
| 3.1 | Wrote background of the problem | Hard to reduce length | Done | Background completed |
| 3.2 | Defined core issues | Needed multiple revisions | Done | Issues finalized |

| Progress Details | | | | |
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| 3.3 | Drafted concise problem statement | Avoiding scope expansion | Done | Final statement ready |

| Evaluation of Project Progress: | |
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| Self-Evaluation | Project Supervisor Evaluation |
| Successfully completed topic selection, stakeholder study, and problem statement drafting. | |

Task Progress & Evaluation for Week No. 2 :

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| From Date: | 05/10/2025 | To Date: | 11/10/2025 |
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| Progress Details | | | | |
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| SI | Task Breakdown List | Challenges Faced | Status | Comment |
| 4.1 | Interviewed sample users for requirements | Scheduling interviews | Done | Users interviewed |
| 4.2 | Listed functional requirements | Too many optional features | Done | Functional list ready |
| 4.3 | Shortlisted features for MVP | Needed to limit project scope | Done | MVP features finalized |

| Progress Details | | | | |
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| 5.1 | Reviewed system roles for all actors | Confusion between Receiver types | Done | Roles reviewed |
| 5.2 | Listed permissions for each actor | Ensuring no overlapping rights | Done | Permissions defined |
| 5.3 | Finalized 3 primary actors | Decision took discussion | Done | Actors finalized |
| 6.1 | Expanded problem description | Avoid repetition | Done | Extended description done |
| 6.2 | Added evidence from reports | Finding credible sources | Done | Evidence included |
| 6.3 | Polished final problem statement | Writing concise version | Done | Detailed statement ready |
| 7.1 | Collected research papers | Some papers behind paywalls | Done | 5 papers collected |
| 7.2 | Summarized findings | Integrating references | Done | Summaries completed |
| 7.3 | Connected literature to project scope | Hard to relate to system directly | Done | Literature review done |

| Evaluation of Project Progress: | |
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| Self-Evaluation | Project Supervisor Evaluation |
| Requirements fully gathered, actors and permissions clarified, literature review strengthened project justification. | (Supervisor will fill) |

Task Progress & Evaluation for Week No. 3 :

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| From Date: | 12/10/2025 | To Date: | 18/10/2025 |
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| Progress Details | | | | |
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| SI | Task Breakdown List | Challenges Faced | Status | Comment |
| 8.1 | Identified all use cases | Diagram crowding | Done | Core use cases identified |
| 8.2 | Connected actors to actions | Some overlaps | Done | Actor-action mapping done |
| 8.3 | Designed final use case structure | Complexity in layout | Done | UC diagram finalized |
| 9.1 | Defined main flow for each use case | Maintaining consistency | Done | Main flows documented |
| 9.2 | Added alternate flows | Ensuring completeness | Done | Alternate flows included |
| 9.3 | Ensured alignment with UC diagram | Synchronizing diagrams | Done | Narrations complete |
| 10.1 | Identified all entities | Confusing relationships | Done | Entities listed |
| 10.2 | Mapped relationships (1:1, 1:N, N:M) | Circular dependencies | Done | Relationships mapped |
| 10.3 | Assigned PK-FK properly | Some confusion initially | Done | ERD finalized |
| 11.1 | Converted ERD to classes | Attribute allocation tricky | Done | Classes created |
| 11.2 | Added attributes and methods | Ensuring proper OOP mapping | Done | Attributes/methods added |
| 11.3 | Ensured all OOP principles applied | Avoiding redundancy | Done | Class diagram complete |

Evaluation of Project Progress:

| Self-Evaluation | Project Supervisor Evaluation |
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| All core system diagrams completed on time with good consistency. | |

Task Progress & Evaluation for Week No. 4 :

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| From Date: | 19/10/2025 | To Date: | 25/10/2025 |
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| Progress Details | | | | |
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| SI | Task Breakdown List | Challenges Faced | Status | Comment |
| 12.1 | Defined actor interactions for sequence diagrams | Parallel flows confusing | Done | Interactions mapped |
| 12.2 | Created message flows for all use cases | Complex communication | Done | Flows drafted |
| 12.3 | Finalized 5 sequence diagrams | Diagram readability | Done | Sequence diagrams ready |
| 13.1 | Created project folder structure | Initial setup errors | Done | Structure ready |
| 13.2 | Added CSS/JS directories | Linking issues | Done | Assets added |
| 13.3 | Linked assets properly | Path errors | Done | Frontend skeleton complete |
| 14.1 | Designed login & registration form | Manual design took time | Done | UI layout ready |
| 14.2 | Added responsive CSS | CSS conflicts | Done | Responsive UI done |
| 14.3 | Improved user-friendly design | Styling consistency | Done | UI finalized |
| 15.1 | Implemented form validation | Validation logic errors | Done | Validation fixed |

| Progress Details | | | | |
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| 15.2 | Added session handling | Session mismanagement | Done | Sessions working |
| 15.3 | Connected backend DB authentication | DB errors initially | Done | Backend ready |

| Evaluation of Project Progress: | |
|---|--------------------------------------|
| Self-Evaluation | Project Supervisor Evaluation |
| Completed sequence diagrams and authentication module successfully. | |

Task Progress & Evaluation for Week No. 5 :

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|------------|------------|----------|------------|
| From Date: | 26/10/2025 | To Date: | 01/11/2025 |
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| Progress Details | | | | |
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| SI | Task Breakdown List | Challenges Faced | Status | Comment |
| 16.1 | Created donor dashboard sidebar | Sidebar overlapping | Done | Sidebar completed |
| 16.2 | Built dashboard cards | Responsive issues | Done | Cards functional |
| 16.3 | Linked navigation between pages | Some links broke | Done | Navigation stable |
| 17.1 | Created donation posting form | Form validation issues | Done | Form ready |

| Progress Details | | | | |
|------------------|--------------------------------------|----------------------------|------|-------------------------|
| 17.2 | Implemented image upload | File path errors | Done | Image upload functional |
| 17.3 | Inserted data into DB | Missing NOT NULL fields | Done | DB insertion fixed |
| 18.1 | Admin sees pending posts | Conditional mismatch | Done | Admin can view pending |
| 18.2 | Added approve/reject logic | Conflicting status update | Done | Logic corrected |
| 18.3 | Updated DB status after verification | Transaction safety needed | Done | Verification flow fixed |
| 19.1 | Created receiver request form | Multiple submissions | Done | Request form stable |
| 19.2 | Prevented duplicate requests | Handling duplicates tricky | Done | System stable |
| 19.3 | Updated request DB | Sync issues with volunteer | Done | DB updated properly |

| Evaluation of Project Progress: | |
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| Self-Evaluation | Project Supervisor Evaluation |
| All donor, admin, and receiver modules completed and integrated successfully. | |

Task Progress & Evaluation for Week No. 6 :

| | | | |
|------------|------------|----------|------------|
| From Date: | 09/10/2025 | To Date: | 15/11/2025 |
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| Progress Details | | | | |
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| SI | Task Breakdown List | Challenges Faced | Status | Comment |
| 20.1 | Display available tasks for volunteers | Ensuring atomic updates | Done | Task list ready |
| 20.2 | Add claim button to volunteer UI | Race condition issues | Done | Claim button secure |
| 20.3 | Update claim status in DB | Transaction-safe updates | Done | Status updates functional |
| 21.1 | Add pickup confirmation for delivery | Timestamp conflicts | Done | Pickup status logged |
| 21.2 | Add delivery completion status | Syncing with volunteer tasks | Done | Delivery status stable |
| 21.3 | Timestamp each delivery action | Multiple actions in same time | Done | Correct timestamps stored |
| 22.1 | Donor tracking page | Complex multi-table joins | Done | Donor view functional |
| 22.2 | Receiver tracking page | Dynamic status messages | Done | Receiver view functional |
| 22.3 | Volunteer tracking page | Filtering tasks | Done | Volunteer view mostly done |

| Evaluation of Project Progress: | |
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| Self-Evaluation | Project Supervisor Evaluation |
| Volunteer and delivery workflows fully integrated; tracking pages functional. | |

Task Progress & Evaluation for Week No. 7:

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|------------|------------|----------|------------|
| From Date: | 16/11/2025 | To Date: | 22/11/2025 |
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| Progress Details | | | | |
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| SI | Task Breakdown List | Challenges Faced | Status | Comment |
| 23.1 | Performed functional tests | Hidden FK mismatches | Done | Functional tests complete |
| 23.2 | Checked all user flows | Edge cases causing errors | Done | Flows tested |
| 23.3 | Debugged database errors | Duplicate rows & constraints | Done | Major bugs resolved |

Evaluation of Project Progress:

| Self-Evaluation | Project Supervisor Evaluation |
|--|-------------------------------|
| System testing completed; all major bugs fixed; system now stable. | |

Task Progress & Evaluation for Week No. 8:

| | | | |
|------------|------------|----------|------------|
| From Date: | 23/11/2025 | To Date: | 29/11/2025 |
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| Progress Details | | | | |
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| SI | Task Breakdown List | Challenges Faced | Status | Comment |

| Progress Details | | | | |
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| 24.1 | Added system diagrams (UC, ERD, Class, Sequence) | Formatting diagrams in final document | Done | Diagrams included |
| 24.2 | Wrote functional requirements | Lengthy sections | Done | Functional requirements done |
| 24.3 | Formatted final 50-page SRS | Page balancing & formatting | Done | SRS finalized |
| 24.4 | Added SWOT, feasibility, risk analysis | Hard to find real-world risks | Done | Analysis included |

| Evaluation of Project Progress: | |
|---|--------------------------------------|
| Self-Evaluation | Project Supervisor Evaluation |
| SRS is well-organized, complete with diagrams and analysis. | |

Task Progress & Evaluation for Week No. 9 :

| | | | |
|------------|------------|----------|------------|
| From Date: | 30/11/2025 | To Date: | 06/12/2025 |
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| Progress Details | | | | |
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| SI | Task Breakdown List | Challenges Faced | Status | Comment |
| 25.1 | Compiled all chapters of final report | Ensuring content consistency | Done | Chapters compiled |

| Progress Details | | | | |
|-------------------------|--|------------------------------------|------|-----------------------|
| 25.2 | Inserted screenshots, tables, and diagrams | Some screenshots missing | Done | Evidence included |
| 25.3 | Performed final proofreading | Minor formatting errors | Done | Final report complete |
| 25.4 | Prepared appendix with SRS & screenshots | Organizing appendices consistently | Done | Appendix ready |

| Evaluation of Project Progress: | |
|---|--------------------------------------|
| Self-Evaluation | Project Supervisor Evaluation |
| Final report and documentation completed with consistent formatting, all evidence included. | |