Project plan: FoodBridge

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Introduction

This document presents the project's objectives and goals by giving a scope of realization. It also contains the project's plan phase, illustrating the allocated time for the different phases and the planned deadline as well. Moreover, the document imposes questions on how the application could come up with good management of goods.

Project overview

FoodBridge is inventory system with dashboard integrated, trying to enhance the coordination of volunteers and the management of food donations. Food banks will be able to handle better the process of managing both food donors (suppliers) and volunteers. The dashboard will serve as an insight, providing relevant data on the topics of scheduling volunteers and food inventory.

Objectives

Designing and implementing a working version of the dashboard-inventory system within four weeks, covering at least three ICT topics, for in-depth analysis, design, and implementation.

Points for the project

- *A Unified Dashboard System:* A single dashboard that combines GRUD operations for managing volunteers, inventory, donations, and schedules, data visualization for analytics and insights and administrative control.
- *Analytics and insights:* Real-time visualization of volunteer schedules, inventory levels, donation trends. The visuals will consist of charts and metrics that update automatically as operational data changes and provide relevant KPIs.

Main Questions

1) What digital solution could help food banks to manage their suppliers (donors), volunteers, goods, quantity, sales?
2) How data could be used for business decision-making.
3) Managing resources allocation and budgeting?.

Learning outcomes & covered topics

Learning Outcomes

Category	Learning Outcome	Description
Full-Stack Development	Build and deploy a full web application using React and ASP.NET Core	Gain skills in frontend/backend integration
Real-Time Systems	Implement real-time data updates	Learn to enable bi-directional server-client communication for live synchronization
Database & ORM	Design relational databases	Understand data modeling, migrations, and effective database access
Data Visualization	Create interactive charts and dashboards with React libraries.	Translate business data into actionable visual insights
Software Architecture	Architect monolith, maintainable, layered web application	Apply best practices for separation of concerns and scalability

Requirement Analysis	Translate real-world nonprofit needs into software requirements and user stories	Develop skill in gathering and documenting clear, actionable software requirements
Agile Development	Apply continuous integration and iterative development processes	Practice agile workflows with version control
Problem Solving	Diagnose and fix concurrency, synchronization, and integration issues	Develop debugging and critical thinking skills in complex systems
Domain Knowledge	Understand nonprofit operations and how digital tools improve efficiency	Gain insight into volunteer coordination, inventory tracking, and resource management

Table 1: Learning outcomes from realizing the project

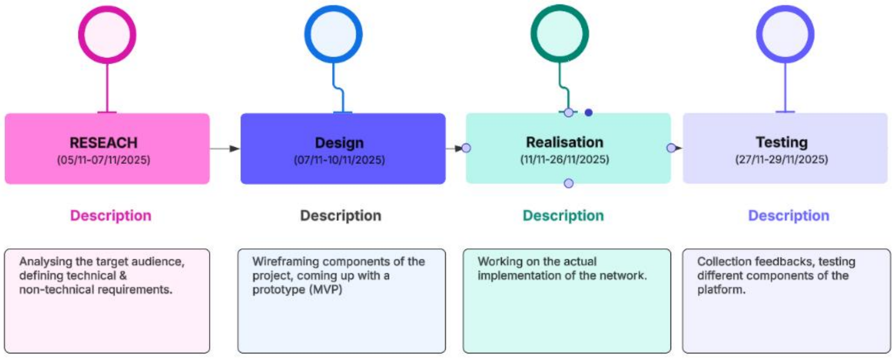
Covered Topics

ICT Topic	Description
Software design & engineering	Building frontend, incorporating backend API. Working with monolith architecture and three-tier model
Interactive media	Designing intuitive and effective dashboard
Business IT & data analytics	Aligning IT with nonprofit goals, Implementing data visualization

Table 2: Covered topics

Planning

LucidChart software for creating the timetable was used.



Analysing the target audience, defining technical & non-technical requirements.

Wireframing components of the project, coming up with a prototype (MVP)

Working on the actual implementation of the network.

Collection feedbacks, testing different components of the platform.

Figure 1: Timetable illustrating the different phases

Breakdown:

(05/11-07/11): Analyzing stakeholders, user stories, coming with suitable functional, technical, non-technical requirements concerning the project.

(07/11-10/11): Writing the design document, design planning, wireframing of components and coming up with a working prototype.

(11/11-26/11): Implementing app’s major functionalities like authentication, dashboard UI and GRUD operations.

(27/11-29/11): Gathering feedback from potential users, monitoring queries execution time, unit testing on code segments.