

Learning outcomes & covered topics

Learning Outcomes

Category	Learning Outcome	Description
Full-Stack Development	Build a full web application using Blazor HTML, CSS, Bootstrap	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 (GIT & GitHub)
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 (ASP.NET). Working with monolith architecture and three-tier model (MVP)
Interactive media	Designing intuitive and effective dashboard
Business IT & data analytics	Aligning IT with nonprofit goals, Implementing data visualization

Table 2: Covered topics