SIT725 9.2P

SPRINT 1REVIEW

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Student Id:

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1. Introduction

The following report summarizes the progress made in Sprint 1 for the Group QR Attendance System. The classroom management process will be made easier with this web-based application, as the old-fashioned paper-based tracking system will be replaced with a digital one. The primary aim of this sprint was to be in a position to develop a working Minimum Viable Product (MVP) with Node.js, Express, and EJS architecture. We have been able to implement the essential backend and frontend infrastructure, which enables us to authenticate users before gaining entry into the system, either as a teacher or a student, via secure sessions. This will enable the dynamic development of sessions and also authenticate attendance by using unique identifiers. This report expounds on our technical implementation, sprint backlog, and our respective collective work towards creating a strong foundation of the advanced functionality that will be adopted in Sprint 2.

2. Project Timeline

QR Attendance System development was based on Agile-style incremental development, and it was developed through Sprint 1 in the initial discussions and requirement analysis. The project roadmap below shows the entire project journey starting at its inception through the present sprint.

Week 6 - Project Preparation and Planning.

- Creation of the team and the preliminary distribution of functions.
- Idea brainstorming and the finalisation of the project concept: QR-based Attendance Management System.
- Preliminary debate on system viability, technology stack, and basic features.

Week 7 Requirement Analysis and Planning.

- Developing and delivering Software Requirements Specification (SRS) (Task 7.3P).
- User role identification (Teacher and Student), system workflow identification.
- Development of a Trello board to plan sprints and monitor the tasks.

Week 8 - Architecture and Environment Installation.

- Branching strategy definition and creation of a repository on GitHub.
- User, Class, Session, and Attendance collection database schema design.
- Planning of a Backend MVC architecture based on Node.js, Expression and MongoDB

Week 9 – Sprint 1 Development

- User authentication (Login/Register).
- Teacher Dashboard development of class and session manager.
- Attendance marking development of the Student Dashboard.
- Installing the logic of attendance validation and a duplicate check.

- The preparation of the Sprint 1 review, documentation, and MVP demonstration.

This schedule shows a systematic and cyclical development process to a working Minimum Viable Product (MVP) at the end of Sprint 1.

2. SRS Review

Our SRS is the same as in task 7.3P.

After the last examination of our Sprint 1 development and Minimum Viable Product (MVP) that was developed, we have decided that the initial Software Requirements Specification (SRS) provided in Task 7.3P remains valid and correct. The planning phase was good, and the items developed during this spring, such as user authentication of the users, class creation of classes, and database control, are consistent with the functional requirements that were initially outlined. We had no scope creep or technical roadblock that would force us to make any changes since we did not face any of that, hence the reason we did not need to make any changes, and the initial document is the blueprint that will guide us towards the project.

3. Sprint Backlog Review

Planned Sprint 1 Tasks	Completed	In Progress	Cancelled/Moved to Sprint 2
Project Setup & Trello Board Configuration	Completed		
GitHub Repository Setup & Branching	Completed		
Database Design (User, Class, Session Schemas)	Completed		
Backend API: User Authentication (Login/Register)	Completed		
Backend API: Class & Session Management	Completed		
Backend API: Attendance Logic & Duplicate Check	Completed		
Login & Registration Pages	Completed		
Teacher Dashboard (Create Class/Session)	Completed		
Student Dashboard (View Classes/Mark Attendance)	Completed		
Frontend Integration: Materialize CSS & Vanilla JS DOM Logic	Completed		
Live Camera QR Code Scanner			Moved to Sprint 2
Password Encryption (Bcrypt)			Moved to Sprint 2

Unit Testing & Automated CI/CD			Moved to Sprint 2

b. Application Screenshots

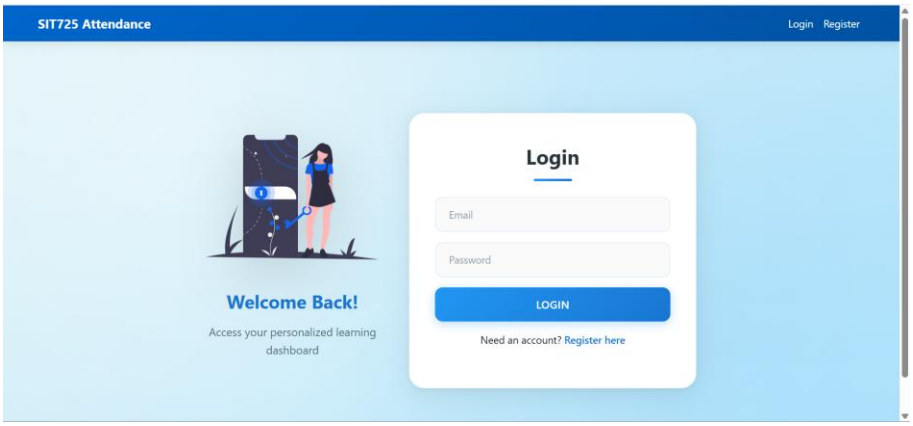

Figure 1: Login page

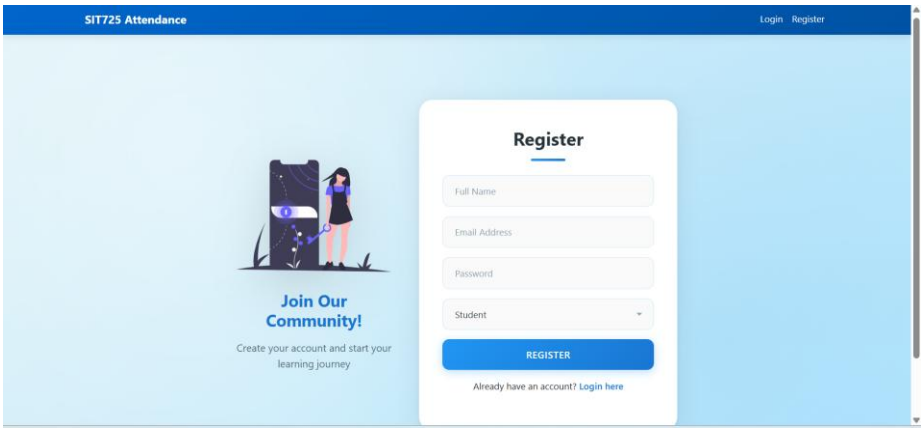

Figure 2: Register Page

This demonstrates the fully functional Login/Register interface, corresponding to the tasks "Implement Backend Authentication" and "Develop Login & Register Views".

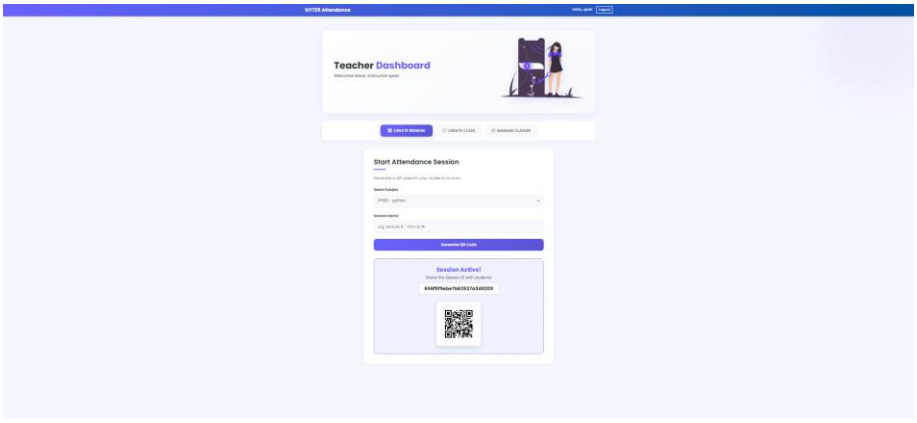

Figure 3: Teacher Dashboard & Class Management

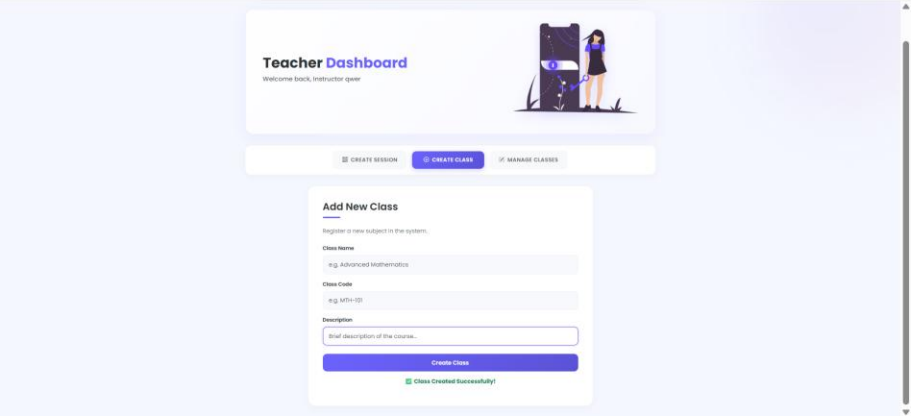

Figure 4: create class

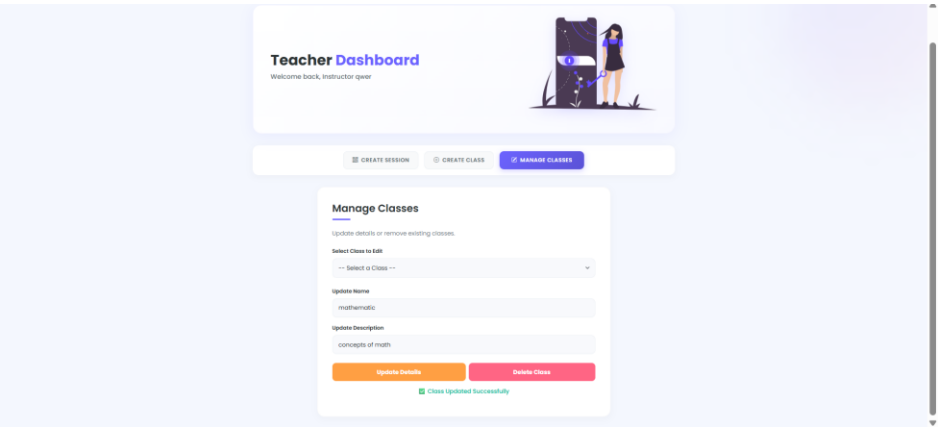

Figure 5: update class

The Teacher Dashboard allows users to create new subjects and generate unique session QR codes. This corresponds to the task "Develop Teacher Dashboard" and "Backend API for Class & Session Creation".

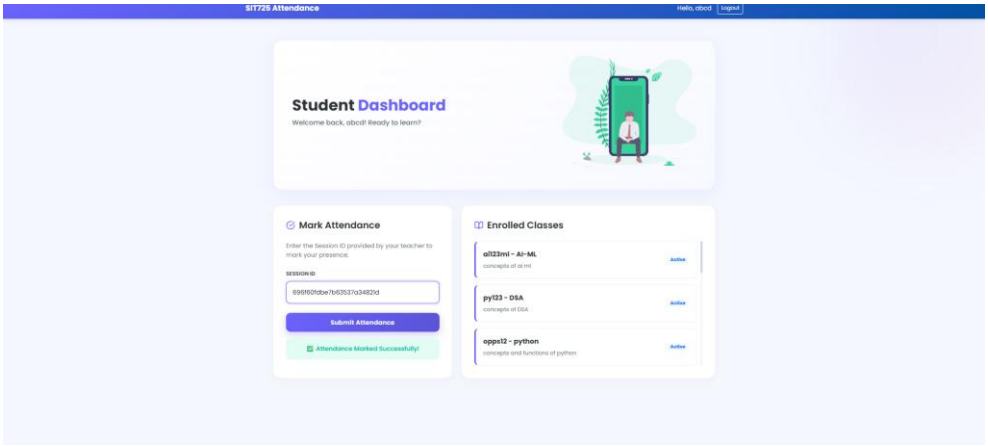

Figure 6: Student Dashboard & Attendance Marking

The Student Dashboard displays available classes and allows students to input Session IDs. This relates to the task "Develop Student Dashboard ".

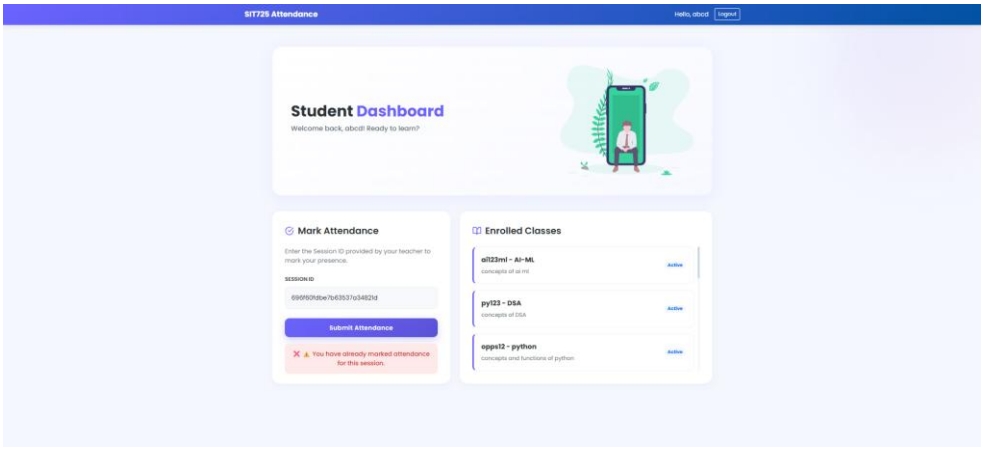

Figure 7: Duplicate Attendance Validation

This demonstrates the system preventing a student from marking attendance twice for the same session, corresponding to the task "Implement Duplicate Attendance Validation Logic".

c. Trello Board Screenshot (End of Week 9)

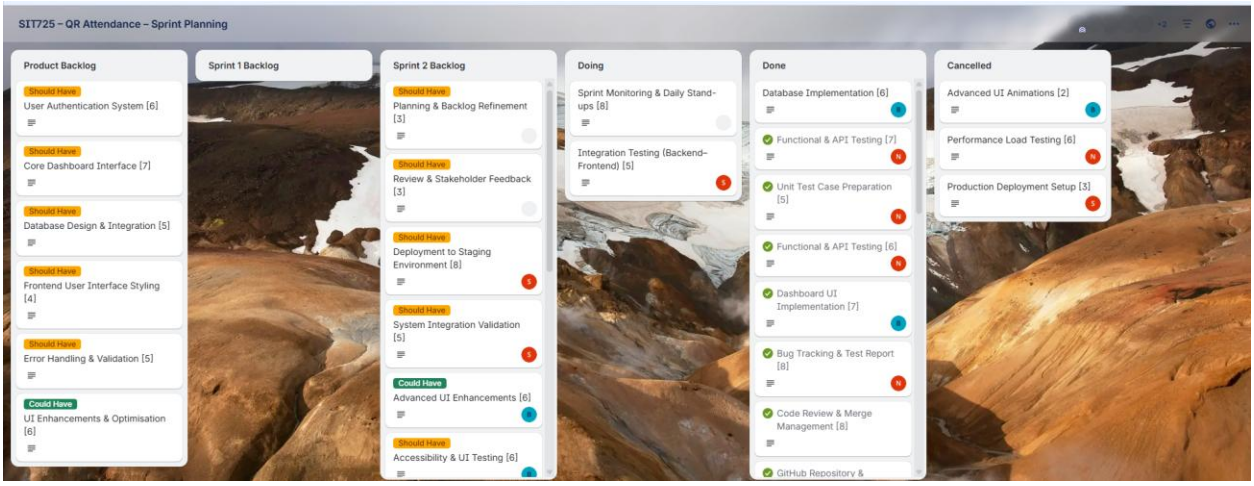

Figure 8: TRELLO BOARD (sprint 1)

d. Link to Live Board

Trello Link: https://trello.com/b/L0tqwI4m/sit725-qr-attendance-sprint-planning

4. Team Contribution Breakdown

4.1 Overview of Team Contributions

Name	Student ID	Main Role/s
Januth	S225644509	Project Manager & Scrum Master
Bright	S225500276	Frontend Dev & Database
Bhargavi	S225530971	Frontend Developer
Karthik	S225785682	Fullstack Dev & GitHub Master

Nandini	S225726299	Fullstack Dev & Testing
Sathwik	S226037595	DevOps & Integration

4.2 Individual Contributions

1. Januth (Project Manager & Scrum Master)

Criterion	Description of Contribution (Sprint 1)	
Specific Contributions (Sprint 1)	• Implemented backend logic for class creation and session management using Express controllers. • Developed REST APIs for creating, updating, and retrieving class and session data. • Defined User–Class–Session relationships and coordinated sprint activities using Trello.	
Files Implemented	BACKEND/controllers/classController.js BACKEND/controllers/sessionController.js BACKEND/routes/classRoutes.js BACKEND/routes/sessionRoutes.js BACKEND/server.js	
Outcome	Delivered a stable backend foundation enabling teachers to create classes and sessions within the MVP.	
Github Branch link	https://github.com/makkapati832-wq/Project-BBNJKS/tree/januth	
	doc folder commit	https://github.com/makkapati832-wq/Project-BBNJKS/commit/810b536f4f1f4c588ce44518970e058559200e9d
	project folder structure commit	https://github.com/makkapati832-wq/Project-BBNJKS/commit/165137e9f80a4f27003015748373b7b94b73a43d
	test commit	https://github.com/makkapati832-wq/Project-BBNJKS/commit/456ab9224269b91518749892631d226f16898f2b
	Initial commit	https://github.com/makkapati832-wq/Project-BBNJKS/commit/f48f545ea0f44ab70388756301cc4f0a5024a5a3

2. Bright (Frontend Dev & Database)

Criterion	Description of Contribution (Sprint 1)	
Specific Contributions (Sprint 1)	• Designed MongoDB schemas for User, Class, and Session collections. • Built teacher-side interface for class/session management. • Connected frontend forms to backend APIs, ensuring correct data flow.	
Files Implemented	BACKEND/models/User.js BACKEND/models/Class.js BACKEND/models/Session.js FRONTEND/teacher-dashboard.html FRONTEND/app.js	
Outcome	Delivered project database model and full teacher dashboard interface integrated with the backend.	
Github Branch link	https://github.com/makkapati832-wq/Project-BBNJKS/tree/bright	
Github Commits	Commit message	Commit link
	project folder structure commit	https://github.com/makkapati832-wq/Project-BBNJKS/commit/165137e9f80a4f27003015748373b7b94b73a43d
	test commit	https://github.com/makkapati832-wq/Project-BBNJKS/commit/456ab9224269b91518749892631d226f16898f2b
	Initial commit	https://github.com/makkapati832-wq/Project-BBNJKS/commit/f48f545ea0f44ab70388756301cc4f0a5024a5a3

3. Bhargavi (Frontend Dev)

Criterion	Description of Contribution (Sprint 1)
Specific Contributions (Sprint 1)	• Developed Login and Registration pages using HTML + Materialize CSS. • Implemented Student Dashboard UI for attendance marking. • Ensured responsive layouts for all frontend screens
Files Implemented	FRONTEND/login.html FRONTEND/register.html FRONTEND/student-dashboard.html FRONTEND/style.css

Outcome	Delivered responsive and user-friendly UI for student and teacher workflows.	
Github Branch link	https://github.com/makkapati832-wq/Project-BBNJKS/tree/bhargavi	
Github Commits	**Commit message**	**Commit link**
	project folder structure commit	https://github.com/makkapati832-wq/Project-BBNJKS/commit/165137e9f80a4f27003015748373b7b94b73a43d
	test commit	https://github.com/makkapati832-wq/Project-BBNJKS/commit/456ab9224269b91518749892631d226f16898f2b
	Initial commit	https://github.com/makkapati832-wq/Project-BBNJKS/commit/f48f545ea0f44ab70388756301cc4f0a5024a5a3

4. Karthik (Fullstack Dev & GitHub Master)

Criterion	**Description of Contribution (Sprint 1)**	
Specific Contributions (Sprint 1)	• Set up backend server architecture using Node.js and Express. • Implemented authentication routes/controllers for login and registration. • Configured database connection and maintained repository structure.	
Files Implemented	BACKEND/server.js BACKEND/routes/authRoutes.js BACKEND/controllers/authController.js BACKEND/config/db.js	
Outcome	Enabled secure authentication flow and ensured the backend was structured properly	
Github Branch link		
Github Commits	**Commit message**	**Commit link**

5. Nandini (Fullstack Dev & Testing)

Criterion	**Description of Contribution (Sprint 1)**

Specific Contributions (Sprint 1)	• Implemented attendance marking logic with duplicate validation. • Developed APIs to validate session ID and student entry. • Created a Postman collection for testing key endpoints.	
Files Implemented	BACKEND/controllers/attendanceController.js BACKEND/routes/attendanceRoutes.js BACKEND/models/Attendance.js tests/postman_collection.json FRONTEND/student-dashboard.html	
Outcome	Ensured reliable attendance workflow with testing, proof, and validation checks.	
Github Branch link	https://github.com/makkapati832-wq/Project-BBNJKS/tree/NANDINI-BRANCH	
Github Commits	**Commit message**	**Commit link**
	Created SIT725.postman_collection.json	https://github.com/makkapati832-wq/Project-BBNJKS/commit/71660cb53b247902b60b23f2241b48e545ab6d34
	Created student-dashboard.html	https://github.com/makkapati832-wq/Project-BBNJKS/commit/950ec8b53066d478a169fafa302566f9464a56dc
	Created attendanceRoutes.js	https://github.com/makkapati832-wq/Project-BBNJKS/commit/9e434d0c0ff3d7cb54fb5f1965d91386ad98a0a3
	Created Attendance.js	https://github.com/makkapati832-wq/Project-BBNJKS/commit/631284872ce6c70294ecc9d2467a817e104f4856
	Created attendanceController.js	https://github.com/makkapati832-wq/Project-BBNJKS/commit/ea8231a76e14d7301000ec93a7d022674f9739a1

6. Sathwik (DevOps & Integration)

Criterion	Description of Contribution (Sprint 1)

Specific Contributions (Sprint 1)	• Managed dependency setup and environment configuration. • Created .env.example and ensured consistent local setup. • Authored README and supported MVP demo with narration video.	
Files Implemented	BACKEND/package.json BACKEND/package-lock.json BACKEND/.env.example README.md MVP narration video	
Outcome	Ensured portability, documentation clarity, and successful MVP presentation support.	
Github Branch link		
Github Commits	**Commit message**	**Commit link**

5. Tech Stack

Technology	Purpose / Description
MongoDB	NoSQL database used to store user, class, and session data.
Express.js	Backend framework for handling RESTful API requests
HTML, CSS, and JavaScript	Frontend Technologies
Node.js	JavaScript runtime environment for executing backend logic
Git & GitHub	Version control and collaborative source code management
Trello	Agile project management and sprint tracking tool
Bcrypt	Library for secure password hashing and encryption (planned for Sprint 2)
html5-qrcode	Library for live QR code scanning via browser camera (planned for Sprint 2)
Automated Testing & CI/CD	Tools for continuous integration, testing, and deployment automation (planned for Sprint 2)

6. GitHub

Repo link: https://github.com/makkapati832-wq/Project-BBNJKS/

7. Project Timeline

Sr No.	Date Range	Stage	Key Activities & Outcomes
1	5 Nov – 15 Nov 2025	Project Initiation & Ideation	Team formation and role allocation; brainstorming and finalisation of the QR Attendance System idea; initial discussions on feasibility, goals, and system scope; agreement on Agile sprint-based approach.
2	16 Nov – 30 Nov 2025	Requirement Analysis & Planning	Development of Software Requirements Specification (SRS – Task 7.3P); identification of user roles (Teacher, Student); definition of system workflows and core features; creation of Trello board for sprint planning and tracking.
3	1 Dec – 14 Dec 2025	Architecture Design & Environment Setup	GitHub repository creation and branching strategy; database schema design (User, Class, Session, Attendance); selection of tech stack (Node.js, Express, MongoDB, EJS, Materialize CSS); planning of MVC-based backend architecture.
4	15 Dec 2025 – 10 Jan 2026	Sprint 1 – MVP Development	Implementation of authentication (Login/Register); development of Teacher Dashboard (class and session management); development of Student Dashboard (attendance marking); backend attendance validation and duplicate prevention; frontend–backend integration; Sprint 1 review and MVP demonstration.
5	11 Jan – 30 Jan 2026 *(Planned)*	Sprint 2 – Advanced Features & Finalisation	Integration of live QR scanning (html5-qrcode); password encryption using Bcrypt; unit testing and CI/CD setup; UI refinement and performance optimisation; final testing, documentation, and project submission.