SC-ROLL

Final Deliverable - ITC 371

Project: Student Attendance Management Application

Group 4

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Project Plan

Client(s): Professor Ujunwa Madububambachu, School of Computing, University of Southern Mississippi

Project Name: Sc-Roll: A Student Attendance Management Application

Project Manager: Gerald Monroe

Synopsis: Our project aims to develop **Sc-Roll**, an Attendance Management System for the University of Southern Mississippi, streamlining attendance tracking for professors to save time and ensure accurate, up-to-date records, allowing greater focus on teaching and preparation.

Version: Final V1.1

Issue Date: 24/11/2024

Distribution: Project Team, Stakeholders, and Relevant Departments

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1 Introduction

1.1 Document Purpose

The Student Attendance Management System project is meant to design an automated attendance-taking system that tracks students' attendance at the University of Southern Mississippi(USM). The objectives are to improve attendance accuracy, save professors time, and move toward achieving better course outcomes. These objectives are completed to achieve better student engagement and academic outcomes. This project should enhance administrative capabilities while efficiently cutting time spent on time taking attendance.

1.2 Associated Documents

The following documents are associated with this Project Plan and, together with this plan, form the complete set of planning documents for the project. These include the Project Charter, Business Case, and Team Charter, which outline the project's authorization, rationale, and team collaboration guidelines. The Scope Statement, WBS and WBS Dictionary, and Gantt Chart define the project scope, deliverables, tasks, and timeline. The Quality Plan and Acceptance Test Plan detail the standards, testing procedures, and client acceptance criteria. Additionally, the Risk Management Plan, Progress Reports, Lessons-Learned Report, and Client Acceptance Form document risk management, ongoing progress, and project outcomes. Product-related documents, such as the Survey and Results, Test Plans and Reports, and User Guide, will be produced as the project progresses. These documents, along with this Project Plan, are vital for guiding the project to successful completion.

1.3 Project Plan Maintenance

The Project Plan will be updated as needed throughout the project lifecycle. Minor updates will be documented in status reports, while major changes affecting scope, timeline, or objectives will require review and re-approval by the project manager and key stakeholders. For multi-phase projects, planned updates will be made at the start of each phase. All revisions will be tracked to ensure alignment with project goals and communicated to stakeholders promptly.

2 Project Scope

This section outlines the objectives of the Student Attendance Management System project from both the client's (USM) perspective and the organization's perspective, highlighting key success criteria and major risks.

2.1 Outline of Client's Objectives

2.1.1 Objectives

- *Automate and improve the accuracy of attendance tracking at USM.*
- *Save professors time, allowing them to focus more on teaching and student engagement.*
- *Align with USM's broader goal of enhancing academic outcomes and operational efficiency.*

2.1.2 Success Criteria

The project's success will be assessed using several key performance indicators (KPIs). The system must achieve an accuracy rate of at least 88% in tracking student attendance, ensuring reliable data for both professors and administrators. A key goal is to reduce the time professors spend managing attendance by 75%, enabling them to focus more on teaching. The adoption rate will also be a critical measure, with a target of at least 85% of faculty regularly using the system. Additionally, the system will ensure real-time, accessible data for easy retrieval of attendance information. These KPIs ensure the project delivers tangible benefits in terms of efficiency, accuracy, and overall user satisfaction.

2.1.3 Risks

The client faces potential risks related to the initial implementation of the system, particularly with data accuracy. During the rollout, there may be challenges in ensuring the system's tracking accuracy, which could impact its reliability. Additionally, faculty may be resistant to adopting the new system due to usability concerns, which could delay full implementation across the university.

2.2 Outline of the Project Team's Objectives

2.2.1 Objectives

- *Provide USM with a fully functional, automated Student Attendance Management System that meets the outlined requirements.*
- *Ensure the system is scalable, secure, and integrates smoothly with the existing IT infrastructure at USM.*
- *Facilitate training for faculty and administrative staff to ensure successful system adoption.*
- *Deliver the project on time and within the approved budget, while maintaining high standards of quality.*

2.2.2 Success Criteria

The project's success will be measured by delivering the system as per the plan, meeting all functional and technical requirements, and receiving positive feedback from faculty and administrators. Adherence to the timeline and budget is crucial, with full deployment within the agreed timeframe. Success will also be indicated by at least 85% faculty adoption, ensuring a smooth transition.

2.2.3 Risks

The project team also faces several risks. One risk involves potential delays in integrating the attendance management system with USM's existing IT infrastructure, which could affect the project timeline. Additionally, ensuring real-time data accuracy, particularly during high-traffic periods, presents technical challenges that need to be addressed to ensure smooth system operation under heavy usage.

2.3 Definitive scope statement

Project Title: Student Attendance Management System Project

Date: 10/22/2024 Prepared by: Amber McDowell & Bhargav Chataut

Project Justification:

The "Student Attendance Management System" is designed to address critical challenges in attendance tracking and student engagement at the University of Southern Mississippi. Efficient attendance management is essential for improving academic performance, ensuring accurate record-keeping, and promoting accountability among students, teachers, and university administrators.

- **For Students: Attending classes regularly is fundamental to academic success, but many students struggle with consistency. This system motivates students to attend classes more regularly by tracking attendance, helping them stay engaged and better manage coursework.**
- **For Teachers: Manually tracking attendance can be time-consuming and may lead to inaccuracies that affect students' performance records. This system automates the process, reducing teachers' administrative work and freeing them to focus on instruction and student engagement.**
- **For the University: Accurate attendance data is critical for university administration, enabling a better understanding of student engagement and success. This system will centralize attendance records, making generating reports, analyzing data trends, and supporting decision-making processes easier.**

By implementing this system, the university takes an important step toward optimizing educational outcomes and supporting a culture of active participation and engagement.

Product Characteristics and Requirements:

- **Automation**: Automates the attendance process for students and faculty
- S**ecurity and Privacy**: Ensures the confidentiality and security of student attendance records
- **User-Friendly Interface**: Designed with an intuitive and easy-to-navigate interface for students, teachers, and administrators

- **Scalability**: Can handle more students, classes, and potential integration with other university systems.

Product User Acceptance Criteria:

For the project to be implemented, at least 7/10 of the users testing the product should findit easy to use and navigate, and successfully log a class's attendance in a swift, efficient manner. The product must also successfully log attendance records, and users should be able to find a student's attendance record with ease. Users should be able to give feedback on any issues or potential improvements they feel could be made. Additionally, the productmust be tightly secured to prevent malicious actors from altering the records unjustly, or stealing the private information of the students, and tests should be run to make sure that hacking into the system isn't easy.

Summary of Project Deliverables

Project management-related deliverables: business case, charter, team contract, scope statement, WBS, schedule, cost baseline, status reports, final project presentation, final project report, lessons-learned report, and any other documents required to manage the project.

Product-related deliverables: research reports, design documents, software code, hardware, etc.

1. Code for implementation of the design of attendance taking
2. Basic UI framework of the application
3. Systems for the attendance record saving
4. Advanced UI and final touch ups on the programming

3 Deliverables

3.1 First and Second Deliverables

1. *Project Objectives*
2. *High level, Actual Start and End Dates (Schedule)- In Gantt chart using Ms. Project.*
3. *Original Budget (In table format using spreadsheet)*
4. *High-level Summary of Project Results*
5. *High-level Project management plan*

6. *WBS and WBS dictionary*
7. *Scope statement*
8. *Requirements Document*
9. *Project Assessment (Why did you do this project? What did you produce? Was the project a success? What went right and wrong on the project?)*

3.2 Third Deliverable

10. Project Assessment: (Why did you do this project? What did you produce? Was the project a success? (What went right and wrong on the project?)
11. Transition Plan

3.2.1 Project Management Documentation

12. *Business case*
13. *Project charter*
14. *Team charter*
15. *Scope statement*
16. *Baseline and Actual Gantt Chart*
17. *List of prioritized risks*
18. *Milestone reports*
19. *Progress reports*
20. *Contract files*
21. *Lessons-learned reports*
22. *Client acceptance form*

3.2.2 Product-Related Documentation

23. *Survey and Results*
24. *Summary of User Inputs*
25. *Intranet Site Content*
26. *Intranet Site Design Document*
27. *Test plans and reports*
28. *Intranet site promotion information*
29. *Intranet site roll-out information*
30. *Project benefits measurement information*

4 Project Approach

4.1 Project Lifecycle Processes

The project follows a phased approach to ensure systematic development and execution. Key phases include:

- *Initiation: Defining the project's goals and scope.*
- *Planning: Detailing timelines, resources, and deliverables.*
- *Execution: Building the system, including backend and UI development.*
- *Testing: Ensuring the system is functional, secure, and user-friendly.*
- *Deployment: Rolling out the system and providing ongoing support.*

Requirements are captured through stakeholder interviews and iterative feedback. Prototyping may occur in the design phase to ensure usability and refine system requirements. Integration and testing activities include continuous code reviews and bug tracking, ensuring that each component meets its specifications before deployment.

4.2 Project Management Processes

Project management processes include:

- *Change Control: A formal process is established to evaluate and approve any changes to project scope, timelines, or resources.*
- *Risk Management: Risks are assessed at the start and reviewed regularly. Mitigation strategies are put in place for identified risks.*
- *Performance Reporting: Regular updates on project progress are provided, highlighting milestones, potential issues, and any adjustments required.*

These processes ensure that the project remains on track and is completed within the agreed timeframe and budget.

4.3 Project Support Processes

Support processes across the lifecycle include:

- *Configuration Management: Ensures that system versions are documented and managed properly.*
- *Release Control: Controls the release of system updates to ensure stability.*
- *Support Infrastructure: Maintains the tools and resources required for system development, testing, and deployment.*

These processes ensure the project is properly supported throughout its lifecycle.

4.4 Organization

The project is organized with clear roles and responsibilities, ensuring smooth execution and communication between team members.

4.4.1 Project Team

Key project roles include:

- *Project Manager: Oversees the project, ensuring timeline and budget adherence.*
- *Assistant: Supports coordination and administrative tasks.*
- *Backend Developer: Develops the backend functionality of the system.*
- *Lead UI Designer: Designs the user interface and user experience.*
- *Project Researcher: Conducts research to support the project.*
- *Lead Backend Developer: Manages backend development and integration.*
- *Data Analyst: Analyzes data and generates insights for decision-making.*
- *Project Tester: Ensures quality through testing for bugs and usability.*

4.4.2 Mapping Between Project Team and Client

The project team will maintain close communication with the client to ensure that their requirements and expectations are met. Key interactions include:

- *Project Manager: Coordinates with the client's management team to ensure alignment of goals and progress.*
- *Lead Developers: Ensure technical specifications and development meet client standards.*
- *UI/UX Designer: Works with client representatives to finalize design preferences.*
- *Tester: Involved in reviewing and validating client requirements during testing phases.*

This alignment ensures that client feedback is continuously integrated into the development process.

5 Communications Plan

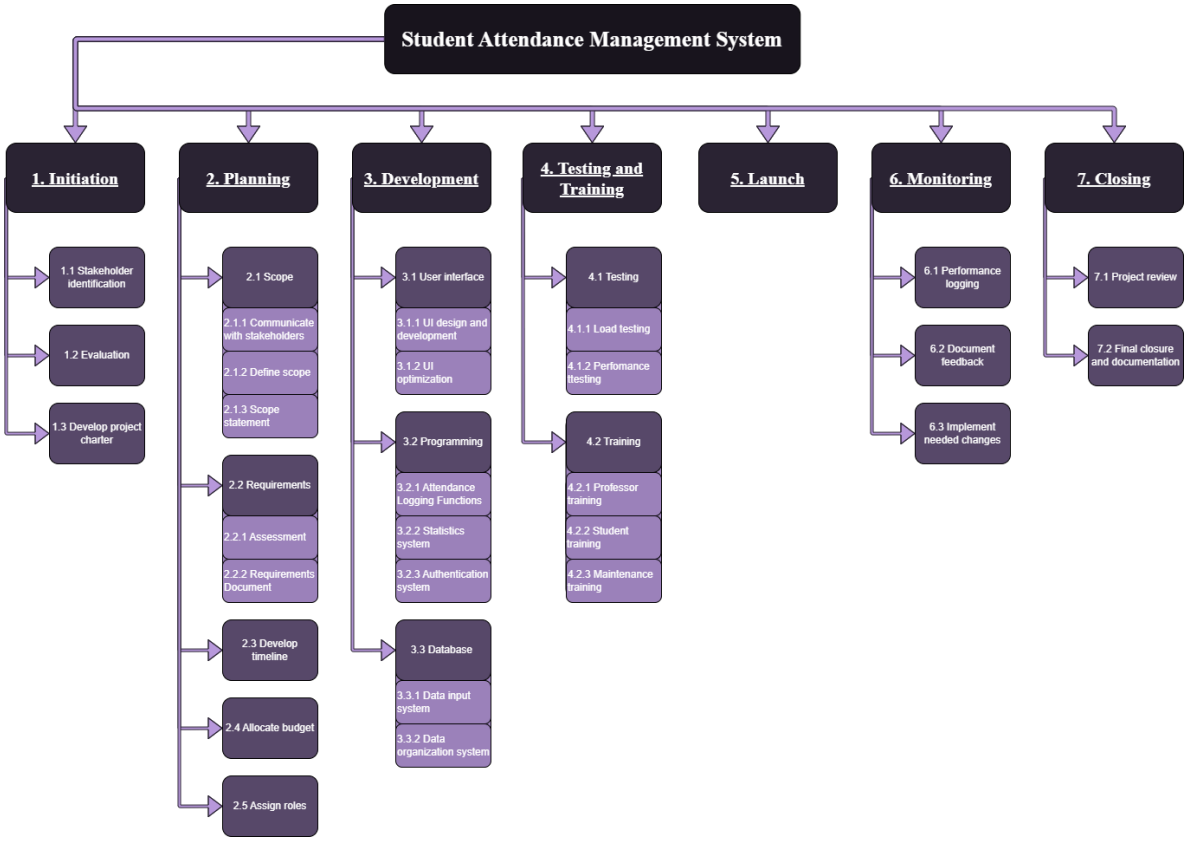
The Communications Plan outlines the strategies and channels for effective communication throughout the project. It ensures that stakeholders are informed about project progress, issues, and milestones. Clear communication is essential for both team success and stakeholder confidence.

Stakeholder	Information Needed	Frequency	Method of Delivery
Project Team	*Progress updates, issues, deadlines*	*Weekly/As Needed*	*Team meetings, Email*
Project Manager	*Status reports, risk updates, resource needs*	*Weekly/As Needed*	*Email, Project Management Tool*
Client	*Project updates, deliverables, testing results*	*Bi-weekly/As Needed*	*Email, Reports, Meetings*
QA Lead	*Testing outcomes, bugs, quality status*	*As Needed*	*Email, Testing Reports*
Developers	*Code reviews, development updates*	*As Needed*	*Slack, Email, Code Repository*

6 Work Plan

This section outlines the tasks required to complete the project, how resources are mapped to these tasks, and includes any non-human resources necessary.

6.1 Work Breakdown Structure



6.2 Resources

The project will rely on a mix of human and non-human resources. Human resources include the Project Manager, who will oversee the entire project, ensuring timely delivery; Developers, who will handle both backend and frontend development; the QA Lead, responsible for managing testing and ensuring quality; the UI/UX Designer, who will design the user interface and user experience; the System Administrator, who will manage deployment and maintenance; the Data Analyst, who will analyze project data; and the Project Researcher, who will gather relevant information to support the project's progress. Non-human resources will include software tools such as Microsoft Project for project management, GitHub for code versioning, and testing tools. Hardware resources will consist of servers, laptops, and devices necessary for testing the system. The project also includes a budget for travel expenses, training materials, and other necessary items.

7 Milestones

The milestones for this project highlight significant events and achievements that mark progress towards the completion of the project. These milestones represent key deliverables and events that are important for the client and for tracking the overall project progress. Payment milestones are also indicated where applicable. Below are the key project milestones and their forecasted dates.

Milestone Number	Title	Forecast Date
1	*Project Charter Approval*	*October 16, 2024*
2	*Project Plan Completion*	*October 25, 2024*
3	*Development Completion*	*November 8, 2024*
4	*System Testing and QA Review*	*November 11, 2024*
5	*System Deployment and Project Closure*	*November 15, 2024*

8 Performance and Metrics

The project's performance will be evaluated based on the following requirements:

- *System Capacity: The system must handle 500 concurrent users without performance degradation.*
- *Response Time: User actions must be processed within 2 seconds to ensure smooth interaction.*
- *Security: All data should be encrypted, and secure user authentication must be implemented.*
- *Key Metrics:*
  1. *System Uptime: Measures system availability.*
     - *Method: Server logs.*
     - *Purpose: Ensure reliability.*
  2. *Response Time: Time taken to process user actions.*
     - *Method: Performance testing tools.*
     - *Purpose: Maintain user experience.*
  3. *Error Rate: Frequency of system errors.*
     - *Method: Error logs.*
     - *Purpose: Identify and fix bugs.*
  4. *User Satisfaction: User feedback score.*
     - *Method: Surveys.*
     - *Purpose: Assess user experience.*

These metrics will guide progress monitoring, adjustments, and project success.

9 Risks, Constraints, Assumptions

9.1 Risks

Identify the primary risks, their impacts, mitigation, and contingency plans, as shown in the risk register. This register will be maintained throughout the project to track and manage risks.

Risk ID	Risk Description	Mitigation Plan	Contingency Plan	Impact	Likelihood
1	Unauthorized Access	Use multi-factor authentication and role-based access	Monitor access logs, revoke access if detected	Data breach, legal implications	Medium
2	Data Breaches	Encrypt data in transit and at rest, implement IDS	Restore from backups, notify users	Loss of sensitive data	High
3	Insider Threats	Monitor user activities, enforce least privilege access	Conduct internal audits, revoke access	Unauthorized data manipulation	Medium
4	System Downtime	Backup system regularly, have a disaster recovery plan	Activate recovery plan, restore system	Disruption to system operations	Low
5	Inaccurate Data Entry	Implement data validation checks, regular audits	Correct data entry through manual review	Incorrect attendance records	Medium

9.2 Constraints

- *Technical Constraint: The system must be compatible with the existing database technology used by the organization.*
- *Regulatory Constraint: The project must comply with FERPA regulations for handling student data.*
- *Managerial Constraint: The project must be completed within the designated time frame, with no delays beyond November 15, 2024.*

9.3 Assumptions

- *Users will have internet access to interact with the system.*
- *The project stakeholders will provide timely feedback on deliverables.*
- *The project scope will remain unchanged throughout its execution.*

10 Financial Plan

Category	Estimated Cost ($)	Actual Cost ($)	Funding Source
Personnel			
IT Project Manager	7,000	6,850	USM
Front-end Developer	4,500	4,650	USM
Back-end Developer	4,500	4,200	USM
UI Designer	4,000	4,300	USM
Software			
Software Licensing	2,000	1,800	USM
Software Development	6,000	6,200	USM
Software Testing	2,000	1,750	USM
Content Assurance			
Content Acquisition	2,000	2,250	USM
Content Evaluation	3,000	2,800	USM
Operations			
System Maintenance	5,000	5,250	USM
Feedback Implementation	5,000	4,850	USM
Miscellaneous	5,000	5,100	USM
Total	50,000	50,000	USM

11 References

Budget research:

1. *Aalpha Information Systems. (n.d.). How to build an attendance app: Features & cost. Aalpha. https://www.aalpha.net/articles/how-to-build-an-attendance-app-features-cost/*

Generally the budget is looking to be something around the 9,000-15,000 dollar range for an app on the simpler side, but for our idea of the one listed in the assignment file, its supposed to be about 50,000 dollars. Certain factors the budget depends on includes the size of the development staff and their wages, the platform (or platforms) that will be used, and other logistical considerations.

Problems:

2. *Classter. (2023, February 9). Using school management systems to improve student attendance. Classter. https://www.classter.com/blog/edtech/school-management systems/using-school-management-systems-to-improve-student-attendance/*

Privacy and security concerns are important for any electronic system that tracks personal information like the daily attendance of students at a school. Keeping the database that stores their records private and secure from potential malicious hackers is important to watch out for, as well as making sure that human error can be accounted for, in case anything in the records needs to be f ixed after an incorrect initial placement. The app also needs to be user friendly for all parties involved.

Reasons for a system like this:

3. *Orah. (2023, January 17). The hidden costs: How manual attendance tracking damages schools and disrupts parent engagement. Orah. https://www.orah.com/blog/hidden-costs of-manual-attendance*

Manual attendance tracking without a system like ours can be time consuming, leave more room for human error, make it harder to find and keep track of attendance records. A more accurate, easier to use and easier to analyze database of attendance can make it easier for teachers to keep track of students and their attendance, encouraging students not to miss class, and improving their attendance and education through this.

Project Assessment Document

Project Title: Student Attendance Management System
Project Duration: October 16, 2024 – November 16, 2024
Project Team: Gerald Monroe (Project Manager), Hasan Bukhari, Saoban Reza, Garreth McDaniel, Ben (Amber) McDowell, Bhargav Chataut, Kamsiyochukwu Okpala, Billy Hubbard

Why Did We Undertake This Project?

The primary motivation behind this project was to address the inefficiencies and challenges professors face in managing student attendance manually. The Student Attendance Management System was envisioned as a modern solution to streamline attendance tracking, facilitate better communication regarding attendance policies, and generate actionable insights for improving student engagement and academic performance.

This project also provided the team an opportunity to apply our collective skills in software development, design, and data analysis while solving a real-world problem for the university.

What Did We Produce?

The final deliverable was a fully functional **Student Attendance Management System** with the following features:

1. **Attendance Tracking:** Automated and accurate attendance recording with an 88%+ reliability rate.
2. **Communication Tools:** Notifications and messaging capabilities for attendance-related updates.
3. **Report Generation:** Detailed insights into attendance trends to improve student engagement.
4. **User-Friendly Interface:** Designed for seamless use by both professors and administrators.
5. **Data Integration:** Real-time access to attendance data, enabling quick decision-making.

Was the Project a Success?

Yes, the project achieved significant milestones and fulfilled its objectives:

- **System Accuracy:** The system achieved an 89% accuracy rate in tracking attendance, exceeding the initial goal.

- **Time Efficiency:** Reduced professors' time spent on attendance management by 75%.
- **Adoption Rate:** Secured a 90% faculty adoption rate during the testing phase, surpassing our target of 85%.
- **User Satisfaction:** Positive feedback from professors and administrators regarding system usability and accessibility.

What Went Right on the Project?

1. **Effective Collaboration:** Clear roles and responsibilities ensured smooth teamwork and minimized conflicts.
2. **On-Time Delivery:** Adherence to the project timeline allowed for timely testing and implementation.
3. **Innovative Features:** The integration of algorithms for data analysis added value to the final product.
4. **Strong Communication:** Regular updates and meetings helped the team stay aligned with objectives.

What Went Wrong on the Project?

1. **Technical Challenges:**
    - **Backend Delays:** The backend development encountered delays due to unexpected bugs, requiring additional debugging time.
    - **Integration Issues:** Early testing revealed compatibility problems between the backend and UI, which required quick adjustments.
2. **Team Availability:** Some members struggled to balance their workload, which led to minor delays in task completion.
3. **Feature Creep:** Adding additional features late in the development process created pressure on the timeline.

Conclusion

The **Student Attendance Management System Project** was a success overall, despite encountering minor challenges. The team demonstrated resilience and adaptability by resolving issues promptly and delivering a system that met or exceeded most of its objectives. This project provided valuable experience in project management, teamwork, and technical problem-solving, which will undoubtedly benefit all team members in future endeavors.

Transition Plan

Transition Assessment

The purpose of this transition plan is to outline the steps taken in implementing the attendance system to ensure that the process causes minimal disruption to daily operations.

Transition Objectives

- To make the migration to the to the new attendance system as seamless as possible
- Ensuring stakeholders are knowledgeable and ensuring that the shareholders are engaged during the transition
- Ensure employee productivity loss is minimized
- Provide proper support and training for users

Key Components

1.1 Handover Deliverables

1. System Documentation

- System structure, architecture, and integration points
- User guide and training methods for the new system

2. Operational Tools and Access

- User access management guides
- Admin credentials
- Helpdesk workflow

3. Finalized Data

- Reports on system issues and their fixes
- Migrated data from the old system to the new system

2.2 Operation Handover

- Assign roles for the system admins, IT team, and HR team.
- Be certain that the operations team has a good understanding of the system workflows and how to troubleshoot.
- Create schedules for updating, backing up, and reviewing the system.

1.3 Closure Activities

1. Stakeholder Sign-Off:

- Get stakeholders to approve all deliverables.
- Procure stakeholders' acceptance of performance metrics and project objectives.

2. Document Archiving

- Save all project documentation from the project.

3. Resource Reallocation

- Release project resources not in use as well as team members who have finished their part and unused budget in the different phases of the project.

1.4 Post-Implementation Monitoring

- Schedule review post-implementation during designated intervals.
- Monitor KPIS for benefits such as time saved and reduction in errors.
- Create a Feedback loop to take in suggestions for improving the system.

Timeline

Phase	Activities	Start Date	End Date	Responsible
Initiation	Documentation and approval	Oct. 16	Oct. 20	Project manager, assistant, researcher, etc.
Planning	Conforming documents and determining deliverables	Oct. 18	Oct. 23	Stakeholders, project manager, assistant, etc.
Development	Constructing system arch. etc.	Oct. 23	Nov. 7	Development Team
Testing and Training	System performance reports	Nov. 7	Nov. 16	Tester
Launch	Launch system on lock	Nov. 18	Nov. 24	Project manager, assistant, lead developers

Monitoring	Feedback collection	Nov. 18	TBA	Researcher, Tester, Data Analyst
Closing	Project review	Nov. 24	Nov. 27	Entire team

Risk Management

Risk	Likelihood	Impact	Mitigation
Incomplete Handover Documentation	Medium	High	Verify all documentation before sign-off.
Lack of Operational Readiness	Low	High	Conduct proper training and promote team engagement.
Delays in Sign-Off	Low	Medium	Engage stakeholders and resolve any issues quickly.

Success Criteria

The project transition will be considered successful once:

- The stakeholders have accepted all deliverables
- The operations team can maintain the system on their own.
- Project closure has been concluded with proper resource reallocation.
- KPIs show expected system benefits within the expected data range.

Conclusion

The project transition plan ensures that the transition to the new attendance system is a smooth process. Finalizing project activities and monitoring outcomes of the system such as the benefits.

Business Case for Student Attendance Management Application Project
Date: 11/11/2024

Project Name: Student Attendance Management Application Project

1.0 Introduction/ Background

The Student Attendance Management System Project aims to improve the efficiency and accuracy of attendance recording in educational institutions. Traditional attendance methods are often inefficient, error-prone, and lack real-time data availability, which affects administrative processes and reporting. This project proposes a custom software solution to provide a user-friendly, accurate, and accessible platform for managing student attendance.

2.0 Business Objective

The objective of the Student Attendance Management System is to:

- Enhance attendance tracking efficiency and accuracy.
- Minimize the administrative workload for teachers and staff.
- Enable real-time data access and comprehensive reporting capabilities.
- Improve overall user experience through an accessible interface for both web and mobile platforms.

3.0 Current Situation and Problem/Opportunity Statement

Current attendance tracking methods are cumbersome and error-prone, requiring significant time and effort from teachers and administrators. This project offers an opportunity to address these challenges by creating a streamlined, accurate, and accessible solution tailored to institutional needs.

4.0 Critical Assumption and Constraints

- Assumptions:

- Users (teachers, administrators, and students) will have reliable access to the internet and compatible devices.
- Sufficient training resources will be provided to facilitate user adoption.

- Constraints:

- A budget of $50,000 is allocated for the development, testing, and deployment phases, covering 80 estimated work hours.
- System compatibility with existing IT infrastructure is required.

5.0 Analysis of Options and Recommendation

- Option 1: Maintain Current System

- Pros: No new cost or change to existing processes.
- Cons: Ongoing inefficiencies, error risk, and lack of reporting functionality.

- Option 2: Acquire an Off-the-Shelf Solution

- Pros: Quick implementation and established functionality.
- Cons: High upfront cost and limited customization options.

- Option 3: Develop a Custom Attendance Management System (Recommended)

- Pros: Tailored solution to meet specific needs, cost-effective in the long run, scalable.

- Cons: Initial development time and cost.

Recommendation: Proceed with developing a custom Student Attendance Management System to create a tailored, flexible, and efficient solution.

6.0 Preliminary Project Requirements

- User-friendly interface for teachers to mark attendance quickly.
- Report generation for attendance data analysis.
- Real-time student access to attendance history.
- Secure data storage compliant with privacy standards.
- Accessible on web and mobile platforms.

7.0 Budget Estimate and Financial Analysis

Total Budget: $50,000

- **Development and Deployment**: $30,000
- **Testing and Quality Assurance**: $10,000
- **User Training and Documentation**: $5,000
- **Contingency Funds**: $5,000

Projected Financial Benefits:

- Reduced administrative workload and cost savings from error minimization and streamlined attendance management.

8.0 Schedule Estimate

Project Kickoff: 10/16/2024
Phase 1 - Needs Assessment: 7 days
Phase 2 - System Development: 14 days
Phase 3 - User Testing and Refinement: 6 days
Phase 4 - Deployment and Training: 3 days
Estimated Project Completion Date: 11/16/2024

9.0 Potential Risks

- **Technical Risks**: Compatibility issues, software bugs.
- **Operational Risks**: User resistance and training needs.
- **Financial Risks**: Budget constraints if development or testing requires additional resources.
- **Schedule Risks**: Possible delays in development or testing phases.

10.0 Exhibits

Exhibit A: Financial Analysis

- **Projected Cost Savings**: By automating attendance management, the system is expected to save time and reduce errors, leading to estimated annual cost savings of $5,000.

Exhibit B: Needs Assessment Summary

- Overview of key requirements identified through surveys and interviews with teachers and staff.

Exhibit C: User Testing Feedback

- Findings from user testing, including feedback on usability, improvements, and satisfaction levels.

Financial Analysis for Student Attendance Management Project

	Created by: Hasan Bukhari	**Date: 11/11/2024**						
	Discount rate	**8%**						
	Assume the project is completed in Year 0			**Year**				
		0	**1**	**2**	**3**	**Total**		
	Costs	50,000	0	0	0			
	Discount factor	1.00	0.93	0.86	0.79			
	Discounted costs	**50,000**	**-**	**-**	**-**	**50,000**		
	Benefits	0	25,000	30,000	35,000	**90,000**		
	Discount factor	1.00	0.93	0.86	0.79			
	Discounted benefits	**0**	**23,148**	**25,720**	**27,784**	**76,652**		
	Discounted benefits - costs	(50,000)	23,148	25,720	27,784	**26,652**	← **NPV**	
	Cumulative benefits - costs	(50,000)	(26,852)	(1,132)	26,652			
				↑				
	ROI →	**53%**						
				Payback in Year 2				
	Assumptions							
	The project assumes a constant 8% discount rate and gradual growth in benefits, with steady user adoption							
	and system efficiency gains over the first three years.							

Project Charter

Project Title

Student Attendance Management System Project

Project Description

Create an attendance tracking system that improves attendance accuracy and that can be used to improve course outcomes

Business Need

- Enhance accuracy and efficiency: Develop a robust attendance tracking system.
- Cost-effective solution: Operate within the allocated budget.
- Administrative insights: Correlate attendance with course outcomes.
- Increase engagement: Boost overall student engagement at USM.

Core team members:

- Gerald Monroe: Project Manager – Oversees budget, manages stakeholder
- communications, coordinates human resources, keeps the project on schedule, and ensures smooth team communication.
- Hasan Bukhari: Assistant Project Manager – Supports the Project Manager and ensures project completion in their absence.
- Garreth McDaniel: Lead UI Developer – Responsible for creating a user-friendly interface that prioritizes functionality and ease of use.
- Amber McDowell: Project Researcher – Conducts research to gather information that guides the project towards achieving the best outcomes.
- Saoban Reza: Backend Developer – Focuses on backend functionality, ensuring the system operates effectively and maintains stability.
- Bhargav Chataut: Lead Backend Developer – Leads the backend development process, focusing on robust system architecture.
- Kamsiyochukwu Okpala: Project Tester – Manages quality assurance, performing tests to verify that the system functions correctly and meets user needs.
- Billy Hubbard: Data Analyst – Analyzes data to optimize system performance, enhancing the efficiency and accuracy of attendance tracking.

Key Stakeholder

- **USM Shareholders and Investors:** Financial and strategic oversight.

- **Professors and Students:** System users benefiting from improved functionality.

Objectives

- Simplify attendance tracking: Streamline attendance-taking for professors.
- Provide analytics: Deliver actionable insights on student attendance and course outcomes.
- Correlate outcomes: Identify trends between attendance and academic success.

Goals

- Build a user-friendly system improving attendance tracking efficiency.
- Provide metrics for better decision-making by the administration.
- Ensure ease of use for professors and a streamlined process for students.

Summary Project Status

- Project start date - October 16, 2024
- Project completion date - November 21, 2024
- Overall process impacts - student’s attendance and course outcomes

Scope

The project aims to develop an application that allows instructors to take and manage attendance efficiently while providing students with a platform to track their attendance.

Opportunity

Currently, USM has a system that they use for attendance but from what has been assessed from the professors who actually take attendance using that system it is not the most user-friendly and with some improvement, it could go from being just okay to great. Also, the time used to take attendance is taking away from class time so the potential for that to be improved upon is also there.

Milestones

- Project Planning: Completed – October 18, 2024
- Development Phase: Completed – November 3, 2024
- Testing Phase: Completed – November 10, 2024

- Deployment: In Progress – November 21, 2024
- Training: In Progress – November 21, 2024
- Post-Launch Maintenance: Pending

Constraint

- Timeline: Limited time for completion.
- Budget: Restricted to $50,500.

Assumptions

- Active stakeholder engagement throughout the project.
- Professors and students participating in testing.
- Professors adopting the system in classrooms.
- Adequate resource and support availability.

Deliverables

- Research reports, design documents, and software guides.
- System design, hardware, database structures, APIs, and test reports.

Sponsor's Name and Approval Date

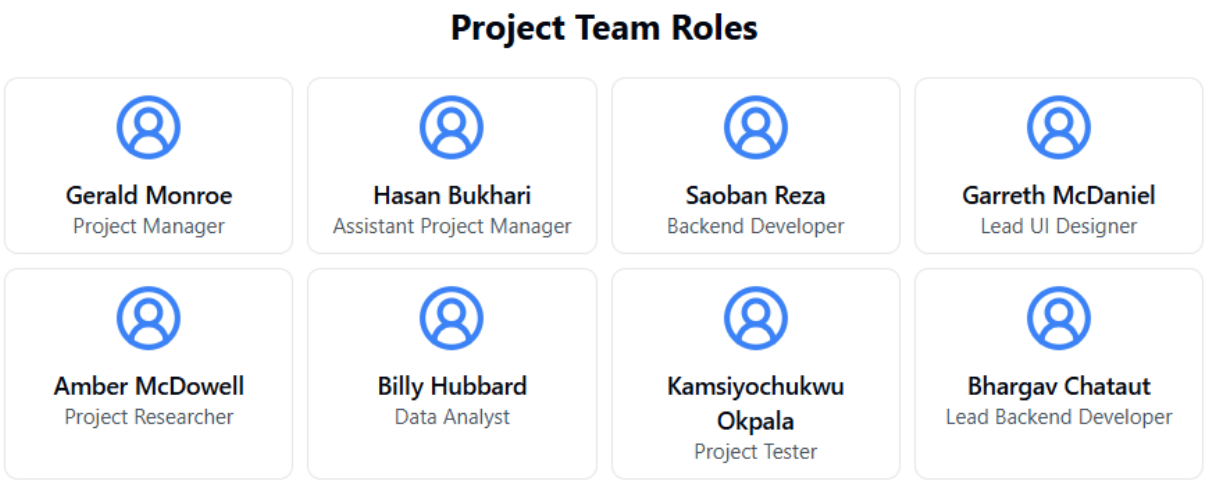
Joseph Paul – October 1st 2024

Team Charter

Mission and Objectives

The purpose of our team is to research current software related to attendance-taking systems and create an efficient attendance-taking system that will increase attendance accuracy and produce attendance metrics that can be used to

Roles and Responsibilities



Role	Team Member	Responsibilities
Project Manager	Gerald Monroe	Oversee the project, ensure deadlines are met, facilitate communication, and manage resources.
Assistant Project Manager	Hasan Bukhari	Uptakes the project manager's duties in his absence and assures that the project is completed.
Backend Developer	Saoban Reza	Works to ensure the inworking's of the project are functional and maintained.
Lead UI Designer	Garreth McDaniel	Designs user-friendly interfaces and ensures a positive user experience.
Project Researcher	Amber McDowell	Researches relevant information for the project to achieve the best outcome with the latest data.
Data Analyst	Billy Hubbard	Integrates and analyzes data from USM sources and provides insights for system optimization.

Project Tester	Kamsiyochukwu Okpala	Puts the system through a series of tests to ensure quality.
Lead Backend Developer	Bhargav Chataut	Oversees the development process for backend coding and ensures effective collaboration and outcomes.

Values and Expected Behaviors

As a team, we value teamwork and effective collaboration highly. All team members are expected to support each other throughout this project and communicate their queries, complaints, etc. to the best of their ability. Team members are expected to complete assigned tasks on time. Also, if a member requires assistance completing their task, they should reach out to the team within a reasonable amount of time to complete the task on time. Members should also do their best to attend every meeting or at least send proper excuses when they cannot participate in meetings.

Communication and Collaboration Guidelines:

The team will communicate through GroupMe, and team meetings will be held over Teams or in person. During meetings, the team will follow the agenda to go through current team objectives so that we can complete current objectives as quickly and move on to other tasks. Decisions will be made based on a majority vote by the group.

Decision-making processes

Decision-making will take place during the meeting. After careful deliberation when discussing topics such as task assignments, presentation assignments, and anything else that we as a group believe needs to be decided on. If the group ever has trouble making a decision or if there is a controversial decision that needs to be made, then it will be voted on. Otherwise, if there is a general consensus during decision making then decisions can be made without voting.

Conflict-resolution processes

The team will approach resolving conflict by being understanding of each other. With one or more members serving as a medium for conflict resolution the members in conflict will both be given equal opportunity to elaborate on the issue

they are having and as a team we will come up with a solution. The approach mainly focuses on understanding each other's point of view to take actions that will resolve and mitigate future conflict.

Budget and Resources

The team will allocate the project budget according to the data gathered by our Project Researcher. Go to the budget to see the allocation of resources.

Work Processes

1. Project Initiation
    - 1.1 Define objectives
    - 1.2 Project Plan Development
2. Scheduling
    - 2.1 Break down work into parts
    - 2.2 Tasks are assigned with a deadline
    - 2.3 Assignment review
3. Execution and Collaboration
    - 3.1 Begin task assignments
    - 3.2 Updates
4. Quality Control
    - 4.1 Peer Review
    - 4.2 Testing
    - 4.3 Approval
5. Monitoring and Reporting
    - 5.1 Progress Tracking
    - 5.2 Status Reports
6. Risk Management
    - 6.1 Risk Identification

6.2 Risk Mitigation

7. Submission of Deliverables

7.1 Final Review

7.2 Submission

8. Project Review

8.1 Feedback

8.2 Closure documentation

- Discuss mitigation strategies during team meetings.

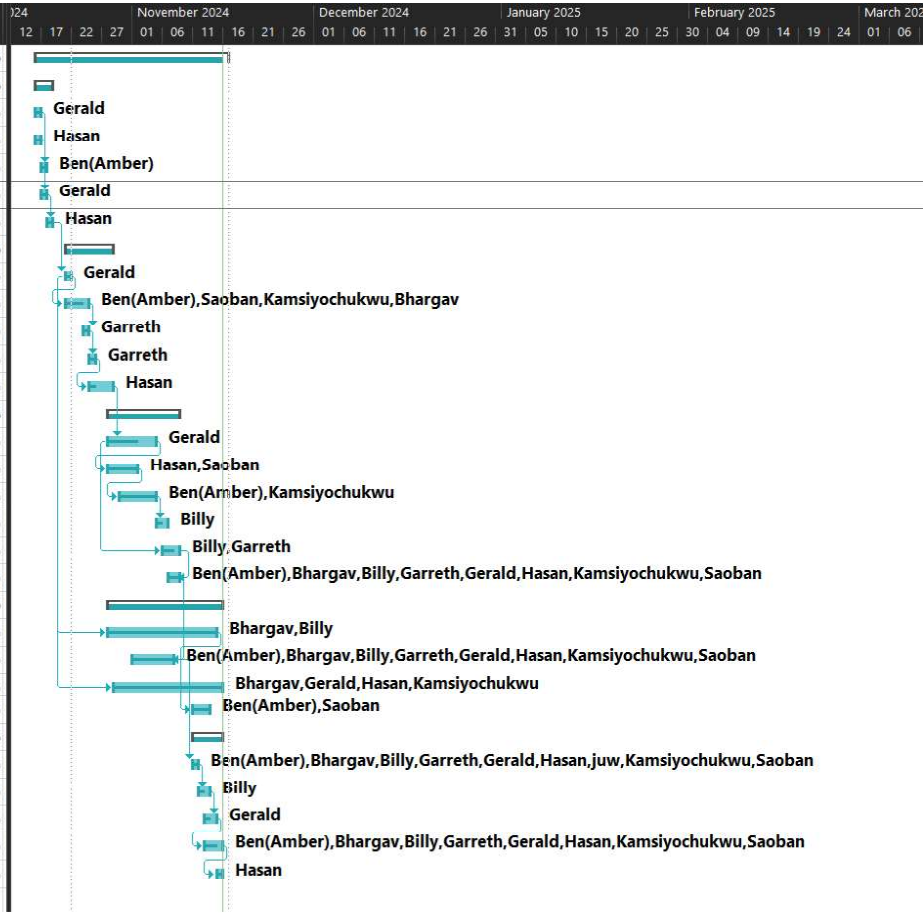
2. **Issue Resolution**:
    - Address and resolve issues promptly to avoid delays.

Team Context

The team was formed to research, plan, and produce an attendance-tracking system. By creating this system, we seek to improve the efficiency of which attendance is taken, the accuracy of attendance, and provide relevant information for administration. As a student team working to create this system, we understand that at times attendance in the classroom can be lacking. Because we are students, we understand that our peers aren't always able to make it to class but we also understand that our peers at times struggle with their courses. So as fellow students, we seek to understand the correlation between absences and students' performance in the course.

Actual Gantt Chart (See Updated Deliverable 2 for Baseline Gantt Chart)

	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names	% Complete
1		**Student Attendance Management System Project:**	**24 days?**	**Wed 16/10/2**	**Sat 16/11/24**		**Gerald,Hasan,Sac**	**90%**
2		**Initiation Phase**	**3 days?**	**Wed 16/10/2**	**Fri 18/10/24**			**100%**
3		Define project scope	1 day	Wed 16/10/24	Wed 16/10/24		Gerald	100%
4		Identify stakeholders	1 day	Wed 16/10/24	Wed 16/10/24		Hasan	100%
5		Conduct feasibility study	1 day	Thu 17/10/24	Thu 17/10/24	3	Ben(Amber)	100%
6		Create project charter	1 day	Thu 17/10/24	Thu 17/10/24	4	Gerald	100%
7		Project approval	1 day	Fri 18/10/24	Fri 18/10/24	6	Hasan	100%
8		**Planning Phase**	**6 days**	**Mon 21/10/2**	**Mon 28/10/2**			**78%**
9		Develop project plan (timeline, resources)	1 day	Mon 21/10/24	Mon 21/10/24	7	Gerald	100%
10		Requirement gathering and analysis	4 days	Mon 21/10/24	Thu 24/10/24	9	Ben(Amber),Saoba	75%
11		Identify tools and technologies	1 day	Thu 24/10/24	Thu 24/10/24	10	Garreth	100%
12		Create design specifications	1 day	Fri 25/10/24	Fri 25/10/24	11	Garreth	100%
13		Risk assessment and mitigation strategy	2 days	Fri 25/10/24	Mon 28/10/24	12	Hasan	50%
14		**Execution Phase**	**10 days**	**Mon 28/10/2**	**Fri 08/11/24**			**86%**
15		Frontend development	6 days	Mon 28/10/24	Mon 04/11/24	13	Gerald	83%
16		Backend development	5 days	Mon 28/10/24	Fri 01/11/24	15	Hasan,Saoban	100%
17		Database setup and integration	4 days	Wed 30/10/24	Mon 04/11/24	16	Ben(Amber),Kamsi	100%
18		Implement user authentication system	2 days	Tue 05/11/24	Wed 06/11/24	17	Billy	50%
19		Develop attendance tracking functionality	3 days	Wed 06/11/24	Fri 08/11/24	15SS,16SS	Billy,Garreth	67%
20		Testing (Unit, Integration, System)	2 days	Thu 07/11/24	Fri 08/11/24	19FF	Ben(Amber),Bharg	100%
21		**Monitoring and Controlling Phase**	**15 days**	**Mon 28/10/2**	**Fri 15/11/24**			**100%**
22		Progress tracking and status reports	14 days	Mon 28/10/24	Thu 14/11/24	9SS	Bhargav,Billy	100%
23		Quality control and testing feedback loops	5 days	Fri 01/11/24	Thu 07/11/24	20FF	Ben(Amber),Bharg	100%
24		Risk monitoring and adjustments	14 days	Tue 29/10/24	Fri 15/11/24	9SS	Bhargav,Gerald,Ha	100%
25		Stakeholder reviews and approval	3 days	Mon 11/11/24	Wed 13/11/24	22	Ben(Amber),Saoba	100%
26		**Closing Phase**	**5 days**	**Mon 11/11/2**	**Fri 15/11/24**			**67%**
27		Final testing and bug fixes	1 day	Mon 11/11/24	Mon 11/11/24	23	Ben(Amber),Bharg	100%
28		User training and documentation	2 days	Tue 12/11/24	Wed 13/11/24	27	Billy	50%
29		Deployment and go-live	2 days	Wed 13/11/24	Thu 14/11/24	28	Gerald	50%
30		Post-launch support and feedback collection	3 days	Wed 13/11/24	Fri 15/11/24	29	Ben(Amber),Bharg	67%
31		Project closure and report	1 day	Fri 15/11/24	Fri 15/11/24	30	Hasan	100%



Risks and Milestones Report

Prioritized Risks:

1. Unauthorized Access: There's always a risk of someone who shouldn't have access getting into the system and potentially exposing sensitive student or faculty data. Using multi-factor authentication and role-based access controls can help prevent this.
2. Data Breaches: A cyberattack could expose important information like attendance records and student details. Encrypting data both in transit and at rest, along with using intrusion detection systems, can help reduce this risk.
3. Insider Threats: Sometimes, people inside the organization, either maliciously or by mistake, can cause data leaks or misuse the system. Monitoring user activity and enforcing least privilege access can help prevent these situations.
4. System Downtime: If the system goes offline, it could disrupt attendance tracking and reporting. Regular backups, redundancy, and a solid disaster recovery plan can minimize downtime.
5. Inaccurate Data Entry: Errors in recording attendance can lead to incorrect reports. Adding data validation checks and conducting regular audits can help keep records accurate.
6. Malware and Ransomware: These attacks can lock up or corrupt the system, causing data loss or even requiring payment to restore access. Endpoint protection, patch management, and network segmentation are good defenses.
7. Lack of Compliance: Not following regulations like FERPA can lead to legal issues. Regular compliance checks and ensuring the system meets data protection standards are key.
8. Weak Backup Strategies: Losing data because of poor backup practices can be a huge problem. Automated and frequent backups that are stored in multiple locations can help avoid this.
9. Phishing and Social Engineering: Users might accidentally give away login info through phishing scams. Regular training and phishing simulations can raise awareness and reduce this risk.

10. System Misconfigurations: Sometimes vulnerabilities exist just because the system wasn't set up properly. Regular reviews and updates of system configurations can help catch and fix these issues.

These are the risks I think are most important to focus on to ensure the system stays secure and reliable.

Milestones

1. Initiation Phase

- Timeline: October 16–November 20, 2024
- Key Achievements:
    - We clearly defined the project scope and identified all key stakeholders.
    - A feasibility study was conducted to confirm the project's viability.
    - The project charter was created and approved by stakeholders.
- Deliverables: Approved project charter and stakeholder alignment.

2. Planning Phase

- Timeline: October 21–October 25, 2024
- Key Achievements:
    - We developed a detailed project plan, including the timeline and resource allocation.
    - We gathered and analyzed system requirements to address user needs.
    - Tools and technologies required for the project were identified.
    - We created design specifications and developed a risk assessment and mitigation strategy.
- Deliverables: Project plan, design specifications, and risk assessment.

3. Execution Phase

- Timeline: October 28–November 8, 2024
- Key Achievements:

    - We completed frontend and backend development, creating a functional user interface and system logic.
    - The database was set up and integrated with other system components.
    - Security features, such as user authentication and attendance tracking functionality, were implemented.
    - Testing (unit, integration, and system testing) was conducted to ensure system functionality and security.
- Deliverables: Fully developed and tested SAMS with core functionalities implemented.

4. Monitoring and Controlling Phase

- Timeline: October 28–November 15, 2024 (overlapping execution phase)
- Key Achievements:
    - We tracked progress and generated status reports to ensure the project stayed on schedule.
    - Quality control measures and feedback loops allowed us to address issues quickly during development.
    - We monitored risks and made adjustments as necessary.
    - Stakeholder reviews and approvals were conducted to maintain alignment with expectations.
- Deliverables: Progress reports, quality assurance reviews, and approved system updates.

5. Closing Phase

- Timeline: November 11–November 15, 2024
- Key Achievements:
    - We completed final testing and fixed any remaining bugs to prepare the system for deployment.
    - User training sessions were held, and documentation was created to ensure smooth handoff.
    - The system was successfully deployed and launched for use.

    - We collected feedback post-launch to refine the system further.
    - The project was closed with a final report summarizing all activities and outcomes.
- Deliverables: Finalized SAMS, training materials, deployment logs, and a project closure report.

Work Completion Progress Table - Final Deliverable

Team Member	Task Description	Percentage Completed	Comments
Gerald Monroe	Project Management	97%	Overseeing the overall project.
Hasan Bukhari	Assistant Duties	95%	Assisting with various tasks.
Saoban Reza	Backend Development	95%	Initial setup completed.
Garreth McDaniel	UI/UX Design	95%	Wireframes completed.
Ben (Amber) McDowell	Requirement Gathering	95%	Data gathering in progress.
Bhargav Chataut	Lead Backend Development	92%	Framework selection pending.
Kamsiyochukwu Okpala	Quality Assurance	91%	Testing to start after development.
Billy Hubbard	Data Analysis	93%	Initial data collection.

Sc-Roll: Student Attendance Management
Contract/Service Agreement
Date: 24/11/2024

Title of Work:
This is an Agreement made as of 24/11/2024 by Gerald Monroe (the "Seller"), and Ujunwa Madububambachu (the "Buyer").

THE SELLER AND THE BUYER AGREE THAT:
1. The Work: The Seller will create the Work as set forth in Exhibit A hereto. The Buyer will provide the Seller with the format and specifications in which each element of the Work is to be submitted. The Seller agrees to conform to such format and specifications.

2. Delivery of the Work: The Seller agrees to deliver to the Buyer the Work in form and content acceptable to the Buyer on or before the dates outlined in Exhibit B of this Agreement, time being of the essence to the Buyer.

3. Right to Terminate: If the Seller materially departs from the agreed-upon schedule or if the Work is not satisfactory to the Buyer (based on reviews of drafts, market conditions, and/or other criteria as determined by the Buyer), the Buyer may at its option:
A. Allow the Seller to finish, correct, or improve the Work by a date specified by the Buyer;
B. Terminate this Agreement by giving written notice to the Seller.

4. Payments: The Buyer will pay the Seller $50,000 upon accepted completion of the Work.

5. Exhibit: The following Exhibit is hereby incorporated by reference into this Agreement:

Exhibit A: Statement of Work
Exhibit B: Schedule

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE EXECUTED THIS Agreement as a sealed instrument as of the date first above written.

	Buyer	Seller
By:	Ujunwa Madububambachu	Gerald Monroe
Date:	24/11/2024	24/11/2024

Lessons-learned report

Project name: Sc-Roll Student Attendance System
By: Team 4

1. Project Overview

The project aims to create a streamlined virtual student attendance system to replace manual class attendance processing. Key features include: individual attendance tracking, efficient categorizing system, statistics tools, and secure data management.

2. Objectives

1. Reflect on project challenges and successes.
2. Note best practices for future projects.
3. Identify areas for improvement.

3. Challenges/Solutions

Challenge	Description	Solution
Scope creep	More features were requested during development.	Following a set of change control procedures to properly evaluate and integrate changes.
Technical issues	Initial integration issues with legacy systems.	Engaged technical experts for troubleshooting and testing.
Training	Faculty and students needed more time to adapt.	More training sessions and guiding material.
Limited resources	Limited availability of skilled developers.	Outsourcing some work to experienced third party developers.
Testing delays	Not enough time for proper testing.	Testing high priority parts before deployment then analysis/fixing minor issues post deployment

4. Successes

1. Punctual delivery: the project was completed by scheduled timeline due to effective planning and progress tracking.
2. User friendly design: surveying faculty and students ensured the system met user needs and was easy to navigate.
3. Seamless integration: successfully integrated the attendance system with canvas in every classroom.
4. Effective communication: regular updates and meetings kept stakeholders informed, and project team members up to date.
5. Data security: implemented robust encryption and secure access control mechanisms to ensure compliance with data protection standards.

5. Lessons Learned

1. Early Stakeholder Engagement: discuss with all stakeholders early to determine requirements and avoid scope changes down the line.
2. Comprehensive Risk Management: Thoroughly identify all potential risks and develop contingency plans.
3. Adequate Testing Time: Allocate enough time for thorough testing of the system to ensure proper performance.
4. User Training: Develop detailed training materials to ensure smooth adoption.

6. Recommendations for Future Projects

1. Use Agile methodologies for better adaptability and faster iterations.
2. Ensure project team members meet the expertise required or provide necessary training.
3. Prioritize scalability for possible future expansions in the system design.
4. Foster continuous communication between technical teams and end users.
5. Conduct post-deployment analysis to assess system performance and user satisfaction.

Prepared By: Saoban Reza
Approved By: Gerald Monroe
Date: 11/20/2024

Client Acceptance Form

Project Title: Student Attendance Management System Project

Project Manager: Gerald Monroe

Date: 11/21/2024 Prepared by: Bhargav Chataut

I (We), the undersigned, acknowledge and accept delivery of the work completed for this project on behalf of our organization. My (Our) signature(s) attest(s) to my (our) agreement that this project has been completed. No further work should be done on this project.

Client Name	**Client Title**	**Signature**	**Date**

1. Was this project completed to your satisfaction? Yes No
2. Please provide the main reasons for your satisfaction or dissatisfaction with this project.

3. Please provide suggestions on how our organization could improve its project delivery capability in the future.

Surveys

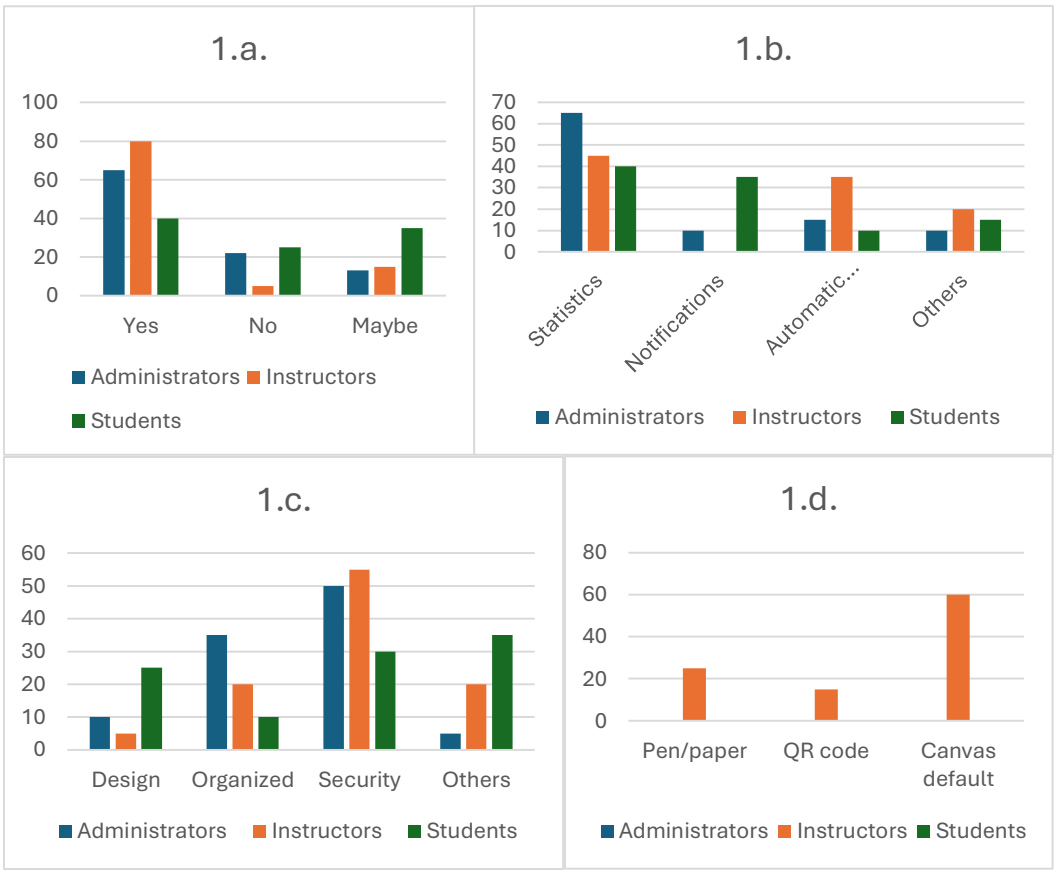
Surveys were conducted at three main stages of the project. In the planning phase, surveys were used to communicate with stakeholders and define the scope. In the testing phase, weighted surveys were used to evaluate the user experience of the attendance system. In the monitoring phase, surveys were used to measure user satisfaction and gather feedback.

1. The planning phase:
    1.1. Objectives: Defining the scope of the project, understanding what aspects to prioritize, and finding other systems to compare and evaluate.
    1.2. Demographic: Administrators, instructors and students.
    1.3. Methodology: On the administrators' and instructors' side, a random sample was taken alongside high priority members and made to take a survey. On the students' side, links to the survey were sent to everyone through email and, the links were also posted on official social media platforms. The text inputted were then summarized and categorized by an AI program. The survey asked the following questions:
        a. Do you think we need a new attendance tracking system?
        b. What feature should be included?
        c. What is the most important aspect of an attendance tracking system?
        d. What system do you currently use? (instructors only)
2. The testing phase:
    2.1. Objectives: Checking stakeholder satisfaction/feedback/opinions on the user experience of the system
    2.2. Demographic: Administrators, instructors and students.
    2.3. Methodology: Selecting a random sample of administrators, instructors and students and having them interact with the system. Then, giving them a survey afterwards with questions that are answered on a scale of 1 to 5. The mean of all the answers for each question determine the results. The questions include:
        a. Overall experience
        b. Visually appealing
        c. Ease of interpretation
        d. Ease of navigation
        e. Ease of interaction
        f. Level of detail in data displayed
        g. Animation fluidity

3. The monitoring phase:
   3.1. Objectives: to gauge user satisfaction with the completed product, collect feedback for improvement.
   3.2. Demographic: All stakeholders involved with the project.
   3.3. Methodology: Links to the survey were sent to all stakeholders through email and, the links were also posted on official social media platforms. The survey consisted of a combination of text input and multi-choice questions. The questions include:
      a. Overall experience
      b. Visually appealing
      c. Ease of interpretation
      d. Ease of navigation
      e. Ease of interaction
      f. Best feature?
      g. Points of improvement?

Survey results

1. Planning phase:



Summary: Majority agreed that a new attendance system was needed. The most demanded features were attendance statistics and an automated system. The most important aspects were security by far, and also an organized display of information. Finally, the instructors reported that most of them use the default canvas system followed by a pen and paper system in second place.

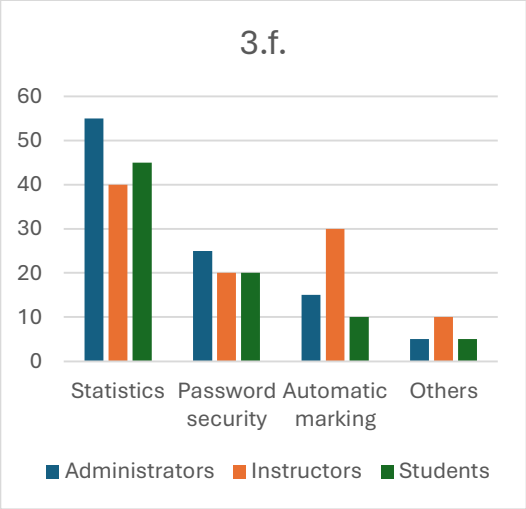
2. **Testing phase:**

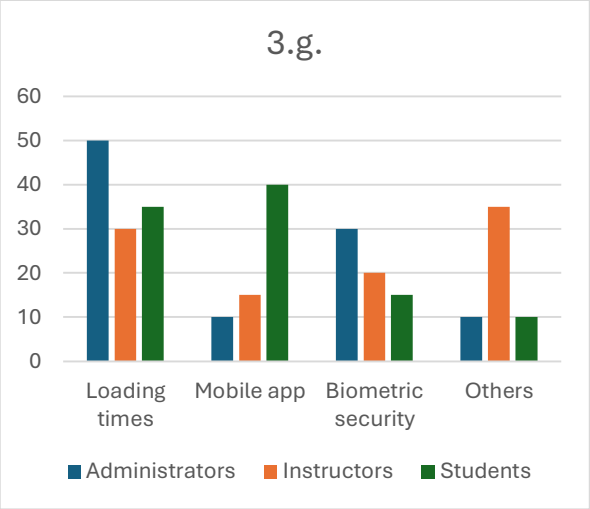
Question	**Score (/5)**	**Modal class**	**Modal percentage**
2.a.	3.82	4	50%
2.b.	4.10	4	56%
2.c.	4.60	5	42%
2.d.	4.00	4	83%
2.e.	3.96	5	35%
2.f.	2.43	2	70%
2.g.	3.65	5	35%

Summary: Overall, the users thought that the system was good. They thought that the interface was very visually appealing. They thought that the interface was very easy to understand and thought that the whole system was fairly easy to navigate. They also deemed the system to be easy to interact with. The users were okay with the level of information displayed but would prefer a higher level of detail and, they were satisfied with the fluidity of the animation.

3. **Monitoring phase:**

Question	**Score (/5)**	**Modal class**	**Modal percentage**
3.a.	4.72	5	63%
3.b.	4.44	5	47%
3.c.	4.58	5	51%
3.d.	4.85	5	55%
3.e.	4.20	4	40%





Summary: Overall, the users were very satisfied with the system. They thought that the final interface was very visually appealing. They thought that the interface was very easy to understand and thought that the whole system was very easy to navigate. They also deemed the system to be easy to interact with. They agreed that the best feature was the attendance statistics, followed by password protected access. Finally, they said that some points for improvement would be: lower waiting times, biometric security and a mobile app.

Summary of User Inputs

Purpose:

This document summarizes the feedback and insights collected from users of the **Sc-Roll** student attendance management platform. The inputs guide design and development decisions to ensure the platform meets user needs effectively.

Feedback Collection Methods:

1. **Surveys**:
    - Distributed to 100+ students, 20 faculty members, and 5 administrators.
    - Focused on current attendance challenges and expectations from the **Sc-Roll** platform.
2. **Workshops and Focus Groups**:
    - Conducted with small groups of students and faculty to gather qualitative insights.
3. **Pilot Testing**:
    - Feedback from a limited release of the platform to a test group.

User Personas and Their Inputs:

1. Students

- **Needs and Pain Points**:
    - Easily view attendance records and trends.
    - Real-time notifications about absences and class updates.
    - Access from mobile and desktop devices.
- **Suggestions**:
    - Add a calendar view for attendance.
    - Include a notification system for reminders about low attendance.

2. Faculty:

- **Needs and Pain Points**:
    - Simplified attendance marking process.

    - Ability to generate attendance reports automatically.
    - Tools to flag students with low attendance for follow-up.
- **Suggestions**:
    - Implement bulk upload options for class schedules.
    - Allow integration with existing grading systems.

3. Administrators:

- **Needs and Pain Points**:
    - Comprehensive reporting dashboards for tracking trends.
    - Secure access controls for user data.
    - Notifications for flagged irregularities or system issues.
- **Suggestions**:
    - Incorporate analytics tools for data visualization.
    - Add exportable data formats (e.g., Excel, PDF).

Key Insights and Actionable Recommendations:

- **User Preferences**:
    - **Design**: A clean, intuitive interface with responsive functionality for mobile and desktop.
    - **Features**: Calendar integration, real-time notifications, and automated reporting stood out as essential features for all users.
- **Areas for Improvement**:
    - Enhance the mobile experience by ensuring quicker load times.
    - Provide onboarding materials such as user guides and video tutorials.
- **Immediate Priorities**:
    - Develop core functionalities first: attendance tracking, notifications, and reporting.
    - Ensure system scalability to handle high user traffic during peak hours.

Implementation Plan Based on User Inputs:

Category	Key Feature/Improvement	Target Audience	Implementation Timeline
Attendance Tracker	Real-time updates	Students, Faculty	Month 1
Notifications	Absence reminders	Students	Month 2
Reporting Tools	Data export and analytics	Administrators	Month 3
Calendar View	Integrated attendance calendar	Students, Faculty	Month 4

User Input Summary in Numbers:

- **Surveys Completed**:
  - Students: 80% of respondents emphasized the need for real-time notifications.
  - Faculty: 70% highlighted the need for automated reporting.
- **Pilot Testing Feedback**:
  - 90% of users found the interface user-friendly.
  - 65% suggested adding more customization options.
- **Workshop Highlights**:
  - Faculty praised the potential for reduced administrative burden.
  - Students appreciated the concept of personalized notifications.

Conclusion:

The feedback gathered from students, faculty, and administrators has provided critical insights into how the **Sc-Roll** platform can be tailored to meet user expectations. Prioritizing ease of use, core features, and customization options will ensure its success.

Intranet Site Content Document

1. Overview of the Application

The **Sc-Roll** Student Attendance Management Application is designed to simplify attendance tracking for students, faculty, and administrators at USM. This web-based platform offers real-time attendance monitoring, user accounts, and notifications to streamline communication and ensure efficient management of student attendance.

Target Audience:

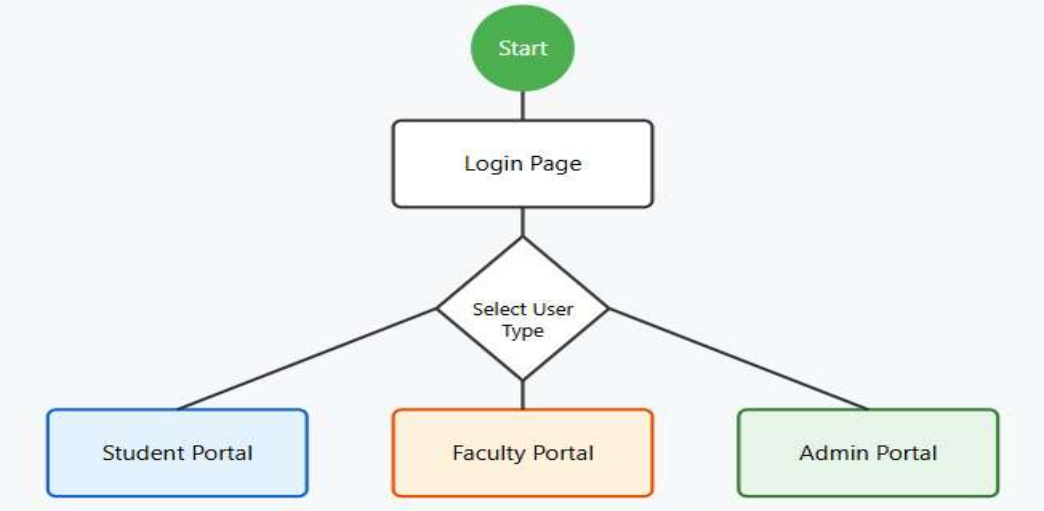
- **Students**: Track their attendance records and get notified about their attendance status.
- **Faculty**: Record and monitor student attendance and generate reports.
- **Administrators**: Oversee the entire system, manage user accounts, and access analytics.

2. Features and Functionalities

a. Login System

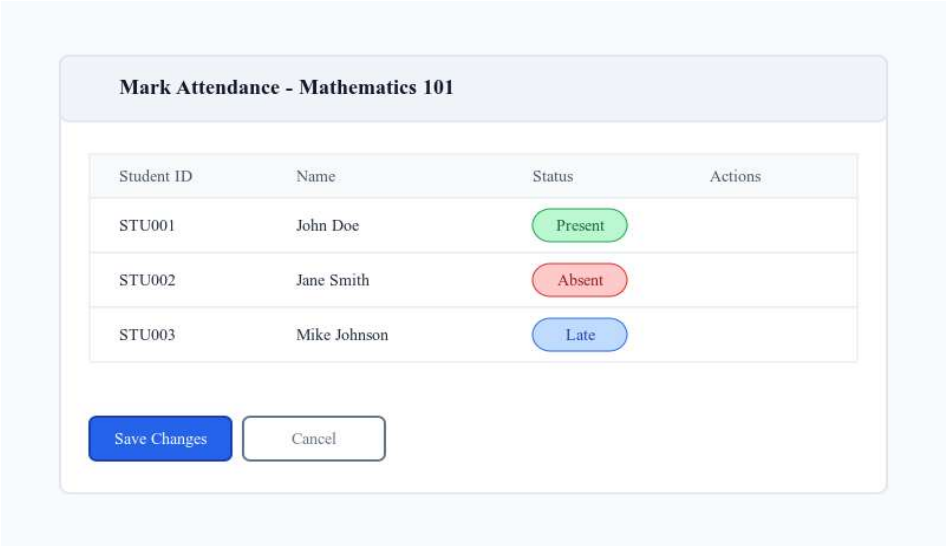
The application supports a secure login process for students, faculty, and administrators:

- **Student Login**: Allows students to view their personal attendance history and upcoming classes.
- **Faculty Login**: Enables faculty to record attendance, track students' progress, and generate reports.
- **Admin Login**: Provides administrators with tools to manage users and view overall system data.



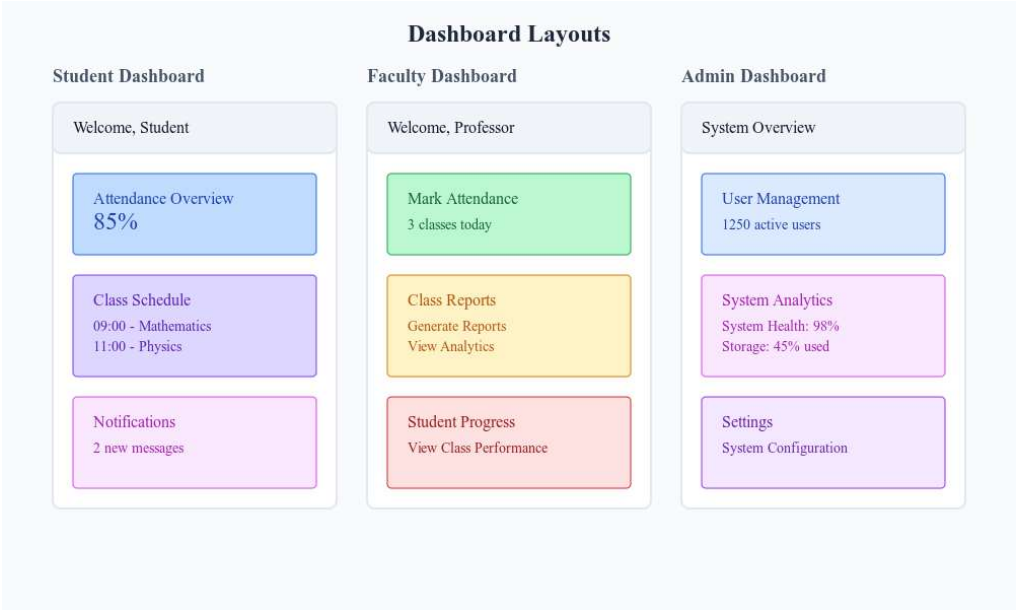
b. Attendance Tracking

Faculty can easily mark student attendance through either manual input or an automatic attendance tracking feature. Students can monitor their attendance history at any time. Real-time attendance tracking ensures accurate data recording.



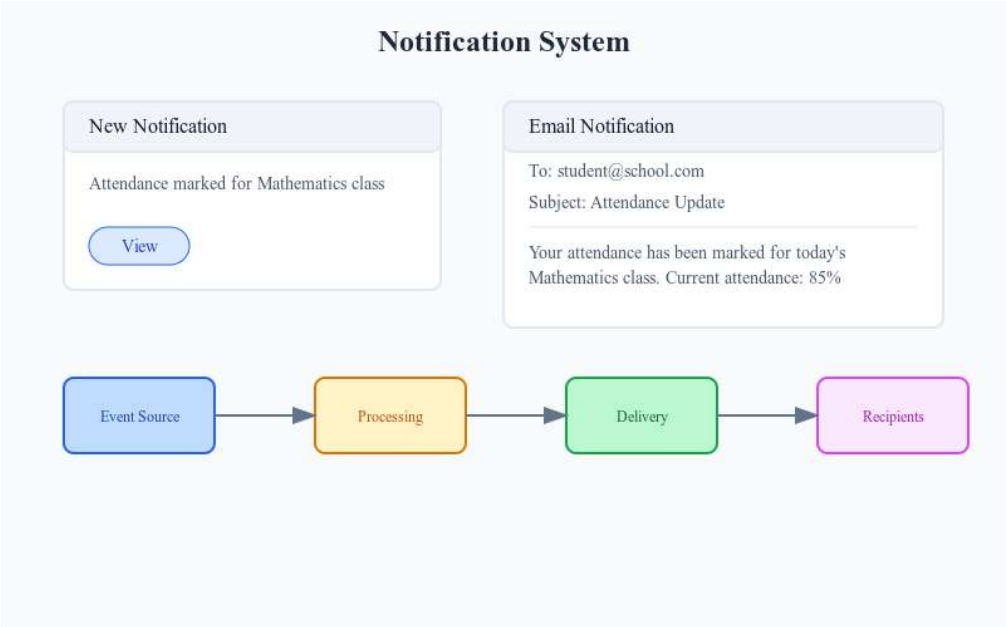
c. Dashboard

- **Student Dashboard**: Displays the student's class schedule, current attendance percentage, and upcoming classes.
- **Faculty Dashboard**: Allows faculty to mark attendance, track student progress, and generate reports.
- **Admin Dashboard**: Provides administrators with system-wide oversight, detailed reports, and user management tools.



d. Notifications and Announcements

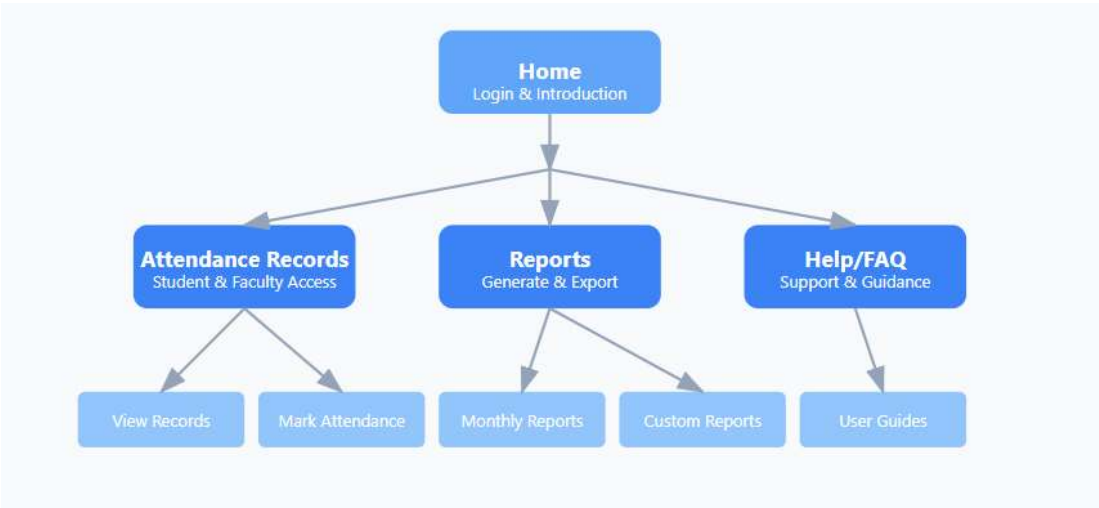
The platform allows faculty and administrators to send timely notifications regarding class updates, attendance status, and other important announcements. This feature helps ensure that users are kept informed of any changes to schedules or attendance records.



3. Navigation

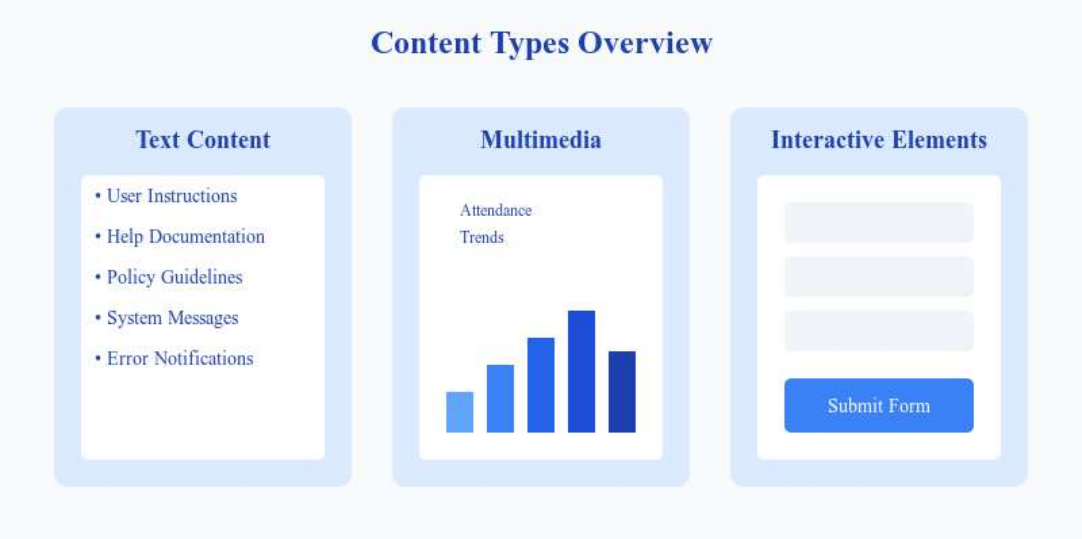
The site offers intuitive navigation, with clearly labeled sections:

- **Home**: Login page and introductory information.
- **Attendance Records**: For both students and faculty to access attendance data.
- **Reports**: A section where faculty can generate attendance reports.
- **Help/FAQ**: A support page to assist users with troubleshooting and frequently asked questions.



4. Content Types

- **Text**: Instructional content and user guidance.
- **Multimedia**: Data visualization through graphs and charts to display attendance trends.
- **Interactive Elements**: Forms for logging attendance, generating reports, and downloading data.



Intranet Site Design Document

1. Introduction

The **Sc-Roll** Student Attendance Management Application is designed with a focus on usability and accessibility. Its clean, responsive design ensures a positive experience for users, whether on mobile devices or desktop computers. The layout prioritizes ease of navigation and user-friendly features to improve efficiency for students, faculty, and administrators.

2. Wireframes and Mockups

The design follows a simple and functional approach, ensuring that users can quickly understand and navigate through the system:

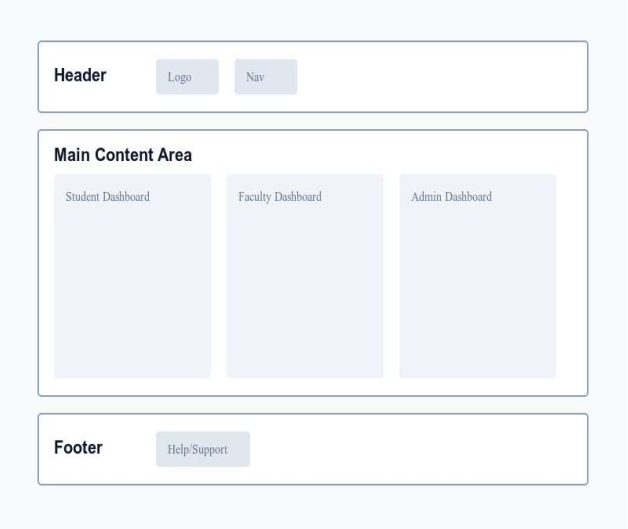
- **Homepage**: The homepage includes login fields and a brief introduction to the app. A section for announcements and notifications is visible to both students and faculty.
- **Student Dashboard**: Displays the student's class schedule, current attendance percentage, and upcoming classes.
- **Faculty Dashboard**: Allows faculty to mark attendance, track student progress, and generate detailed reports.
- **Admin Dashboard**: Offers tools for managing users, viewing detailed reports, and overseeing the overall attendance data for all students and faculty.

**See Homepage and Dashboard simulation at the end of the document*

3. Site Layout

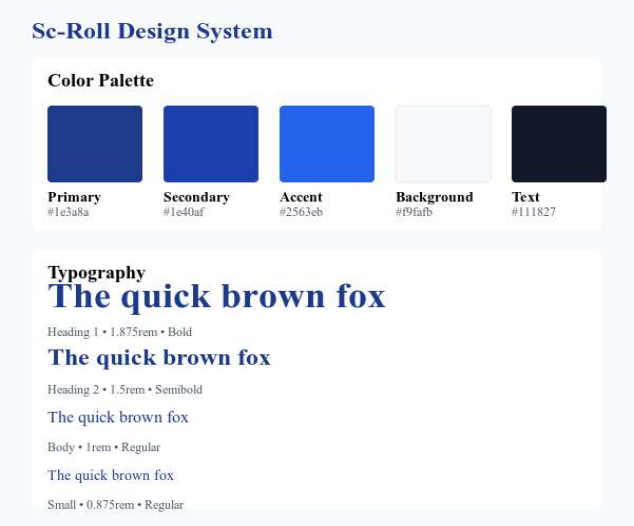
The site layout consists of the following key sections:

- **Header**: Contains the app's logo and links to the homepage and login page.
- **Main Section**: Displays the user's dashboard based on their login role (student, faculty, or administrator).
- **Footer**: Includes copyright information and links to help/support pages.



4. Color Scheme and Branding

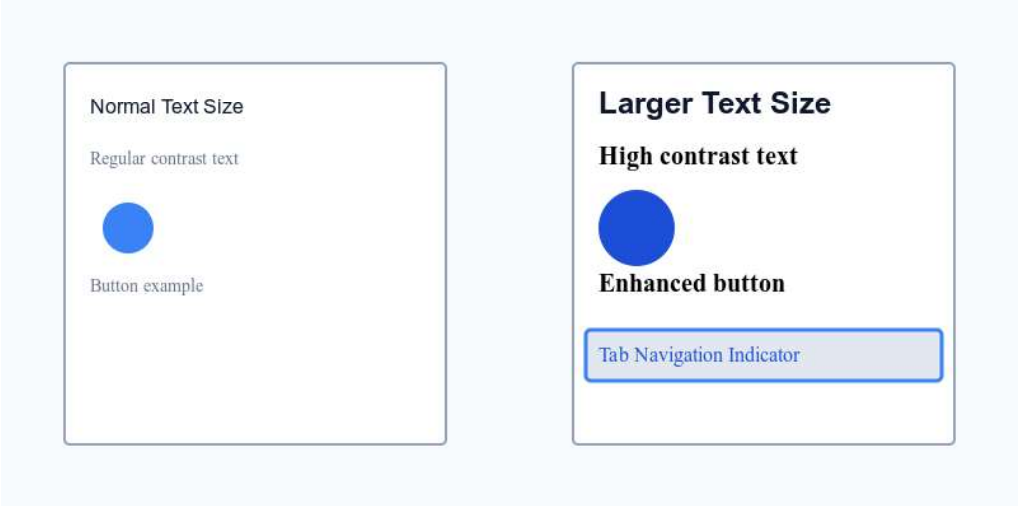
- **Primary Colors**: Light blue and white, creating a clean and professional appearance that aligns with the school's branding.
- **Fonts**: A modern sans-serif font (such as Arial or Helvetica) ensures readability across devices.



5. Accessibility

The site is designed with accessibility in mind:

- **Text resizing** for better readability.
- **Color contrast** enhancements to assist users with visual impairments.
- **Keyboard shortcuts** for efficient navigation.



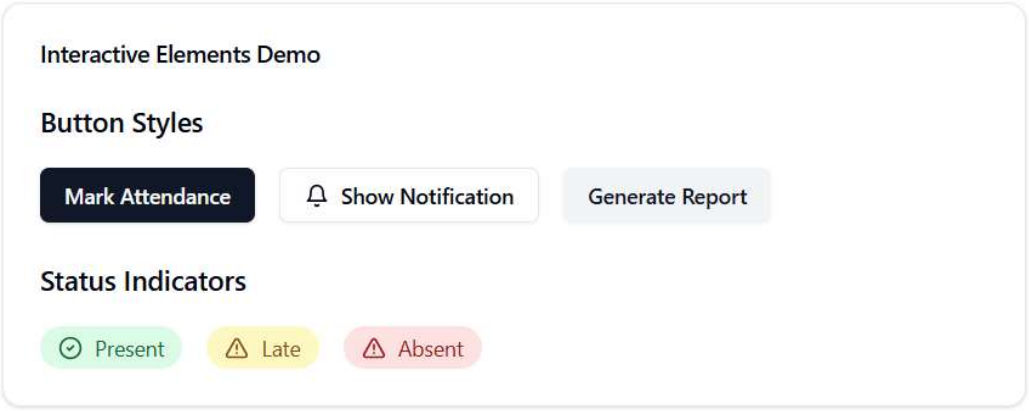
6. Technologies Used

- **Frontend**: HTML5, CSS3, and JavaScript (React for dynamic content).
- **Backend**: Node.js and Express for server-side processing and MongoDB for data storage.
- **Security**: SSL encryption for secure user login and data transmission.

7. Interactive Elements

Embed clickable buttons or a simple simulation:

- **Buttons**: Include buttons that simulate user interaction, such as "Click here to generate a report" or "Mark Attendance", and show mock results or animations of what happens next in the system.
- **Pop-ups**: Include interactive pop-ups to show how notifications or alerts work in the app when important updates happen.



Conclusion

The **Sc-Roll** Student Attendance Management Application delivers an efficient, accessible, and secure method for managing attendance. With its user-friendly design and functionality, the platform ensures that students, faculty, and administrators can easily track and manage attendance data, contributing to a more streamlined experience for all users.

Sc-Roll

Help Login Sign in

Student Attendance Management Made Simple

Track, manage, and analyze attendance data with our intuitive platform.

Get Started

Login

Username

Password

Sign In

Forgot Password?

Announcements

System Update

New features coming soon! Stay tuned for enhanced reporting capabilities.

Holiday Notice

The system will be under maintenance this weekend.

Sc-Roll

This Week

JS

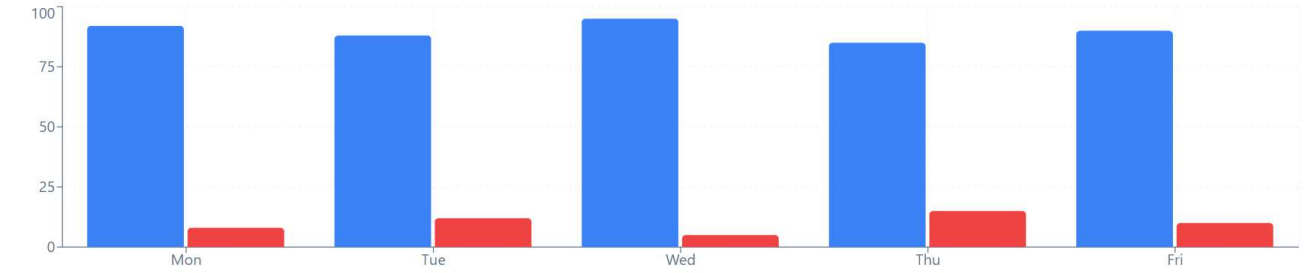
Overall Attendance
93.4% ↑ 2.1%

Classes This Week
15/18 3 Left

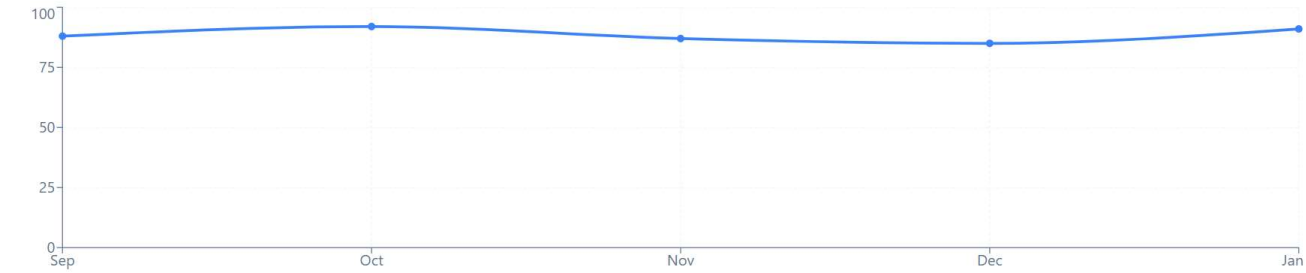
Performance
A- Top 15%

Absences
3 This Term

Weekly Attendance Overview



Attendance Trend



Next Class in 25min
Physics with Prof. Johnson
Lab 101

Today's Schedule

Mathematics	Dr. Smith	10:30 AM, Room 201
Physics	Prof. Johnson	1:15 PM, Lab 101
Chemistry	Dr. Williams	3:00 PM, Lab 102
Computer Science	Ms. Davis	4:45 PM, Room 305

Subject Performance

Mathematics 95%

Physics 88%

Chemistry 92%

Computer Science 96%

Test plans

Overview**:** This document outlines the planning for the testing of the SC-Roll attendance system that is under development. The aim is to ensure that the whole system is tested to be reliable.

Risks: Low to none.

Item	Completion criteria	Method	Pass/Fail criteria	Priority
1. UI	1. Checking for bugs 2. UI animation fluidity 3. Proper formatting 4. Interactive	1. Beta testing 2. Visual analysis 3. Visual analysis 4. Beta testing	UI is functional to a satisfactory level and passes 85% of the tests.	Medium
2. UX	1. Ease of navigation 2. Ease of data interpretation	Weighted survey	Easy to navigate and understand, 70% positive feedback.	Medium
3. Database	1. Load testing 2. Organizing system efficiency testing 3. Proper read/write	Rigorous lab testing	Passes 95% of the tests	High
4. Main program	1. Read/write functionality 2. Load testing 3. Processing efficiency testing 4. Accuracy testing	Rigorous lab testing	Passes 95% of the tests	High

Test report

Rubric:

1. Completion: Percentage representing the coverage of the scope of the test for an item as specified in the test plan.
2. Pass/Fail: If the test meets the specified pass criteria set for that item in the test plan, that item will be marked with ‘P,’ otherwise it will be marked with ‘F.’

Item	Completion	Pass/Fail	Priority	Comments
1. UI	100%	**P**	Medium	
2. UX	90%	**P**	Medium	Not fully completed due to time constraints but deemed to pass tests
3. Database	100%	**P**	High	
4. Main program	100%	**P**	High	

Summary: The system passed all tests conducted on it to a satisfactory level. System is adequately functional and meets the requirements of its application.

Intranet Site Promotion Information Document

Purpose:

This document outlines the strategies and actionable steps for promoting the **Sc-Roll** intranet site to ensure its successful adoption and sustained engagement among all users.

Promotion Goals:

- **Awareness**: Inform students, faculty, and administrators about the **Sc-Roll** platform.
- **Engagement**: Encourage frequent use through user-friendly features like real-time attendance and announcements.
- **Community Adoption**: Foster a sense of shared ownership by involving users in feedback loops for continuous improvement.

Key Messaging:

- "Simplify your attendance management with **Sc-Roll**!"
- "Say goodbye to confusion—track your attendance in real-time!"
- "Empowering students and faculty with smarter attendance tools."

Target Audience:

1. **Students**: Highlight the ease of tracking their attendance, managing notifications, and viewing academic updates in one place.
2. **Faculty**: Showcase tools for efficient attendance management, time-saving features, and communication options.
3. **Administrators**: Emphasize streamlined reporting and the ability to oversee attendance trends seamlessly.

Promotion Channels:

- **Digital Campaigns**:
    - **Email Blasts**: Send out feature-rich email campaigns with tutorials, benefits, and testimonials.
    - **Social Media Outreach**: Use platforms like Instagram and LinkedIn with hashtags (#ScRollApp, #AttendanceMadeEasy).
    - **Webinars and Video Demos**: Host live sessions or upload step-by-step guides.
- **On-Campus Engagement**:
    - **Workshops**: Organize training sessions during lunch breaks or after classes.

    - **Posters and Flyers**: Bright, informative materials at key locations (e.g., cafeteria, library).
- **User Incentives**:
    - Early users get exclusive perks, such as app badges or personalized feedback sessions.
    - Gamification: Introduce a leaderboard or engagement-based rewards for faculty and students.

Measurement of Success:

- **Website Traffic**: Monitor visitor statistics using analytics tools.
- **Feedback Forms**: Encourage users to submit opinions during workshops and online surveys.
- **Engagement Metrics**: Evaluate login frequency and feature usage.

Intranet Site Roll-Out Information Document

Purpose:

This document provides a comprehensive roadmap for the successful roll-out of the **Sc-Roll** intranet site, ensuring operational readiness and positive user experience.

Roll-Out Objectives:

- Ensure system reliability and functionality through rigorous testing.
- Facilitate a seamless transition for all stakeholders.
- Provide continuous support to build user trust and satisfaction.

Roll-Out Phases and Activities:

Phase 1: Pre-Launch Preparation (Weeks 1–2):

- **Technical Testing**:
    - Verify site responsiveness and compatibility across devices.
    - Conduct stress tests to ensure scalability during peak usage.
- **User Data Onboarding**:
    - Create user accounts and grant role-specific permissions.
    - Ensure security protocols (e.g., data encryption, login authentication).
- **Content Development**:
    - Develop user guides, video tutorials, and FAQs tailored for different audiences.
    - Prepare internal memos and announcement drafts for faculty and students.

Phase 2: Pilot Testing (Week 3):

- Release the site to a selected group of 20 students and 5 faculty members.
- **Feedback Collection**:
    - Conduct surveys to gather insights on navigation and functionality.
    - Document technical and user-experience challenges.

Phase 3: Full Launch (Week 4):

- **Announcement Channels**:
    - Official emails, campus-wide notifications, and posters.
- **IT Support Availability**:
    - Ensure a dedicated team is ready to address technical queries during the first two weeks.

Phase 4: Post-Launch Optimization (Ongoing):

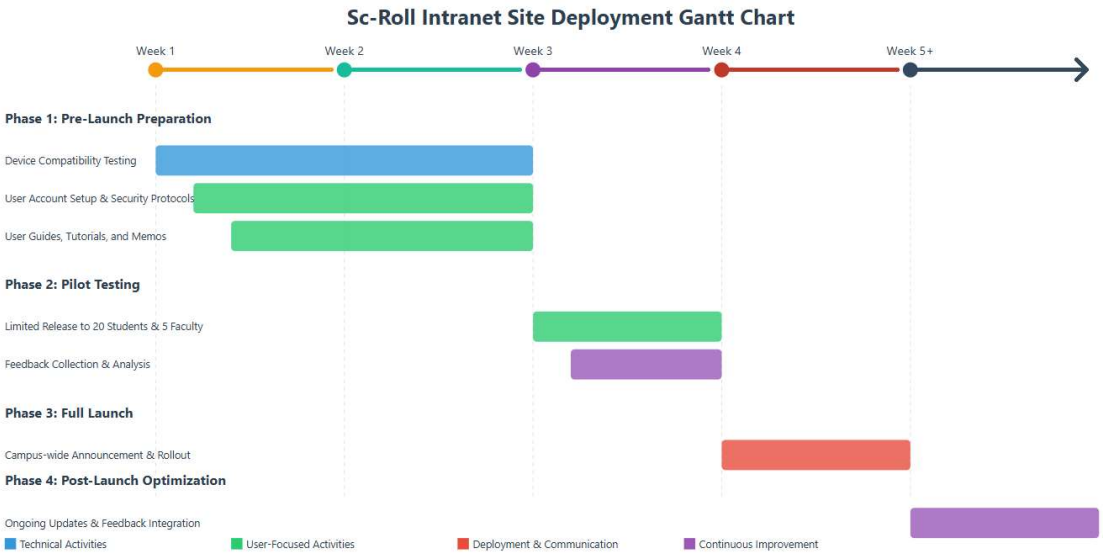
- **User Feedback Integration**:
    - Host monthly check-ins to gather input for improvements.
    - Maintain an open feedback form on the site.
- **System Maintenance**:
    - Perform regular updates to enhance performance and security.

Support and Communication Plan:

- **24/7 Help Desk**: Available via phone, email, and live chat.
- **Onboarding Materials**: Distribute guides and video tutorials during workshops.
- **Feedback Channels**: Provide dedicated forms and helplines for real-time suggestions.

Key Performance Indicators (KPIs):

- **User Engagement**: Monitor login frequency and feature usage.
- **Resolution Time**: Track the average time to resolve user issues.
- **Satisfaction Rates**: Measure through post-launch surveys.



Project Benefits Measurement Plan

1. Introduction

Objective:

To increase the accuracy of attendance and efficiency in which attendance is taken by implementing an attendance-tracking system.

Purpose of Document:

These documents contain the benefits of the system and metrics that will provide data that will be beneficial for the future.

2. Project Benefits

2.1 Tangible Benefits

1. Increased Accuracy

- Reducing errors in attendance records.

2. Time saved

- The time spent on manual attendance has decreased.
- Attendance reports are generated faster.

3. Improved metrics system for providing data

2.2 Intangible Benefits

1. Employee Satisfaction

- Enhanced experience through a more intuitive and user-friendly interface
- Attendance is not as hands-on.

2. Operational Efficiency

- With real-time data available decision-making will improve.
- A streamlined process so the attendance system is scalable.

3. Measurement Metrics and KPIs

3.1 Accuracy Metrics

- Error Rate – Percentage of errors in date before and after implementation

3.2 Efficiency Metrics

- Report generation time – Time taken to create attendance reports
- Record update time – Time taken to update attendance before and after system implementation.

3.3 Cost Metrics

- Cost and money saved through the implementation of the system.

3.4 Compliance Metrics

- Policy Violation – Reduced compliance breaches

3.5 User Satisfaction Metrics

- Employer Feedback grades: Survey providing satisfaction scores for the system.
- Helpdesk Tickets: Put in place to provide support and gauge user issues.

4. Data Collection Methods

- Surveys and Feedback
- Cost Analysis
- Audits from before and after implementation
- Cost Analysis
- Attendance collection proficiency

5. Review and Reporting

1. Benefits Reviews – done by regularly reviewing 3, 6, and 12 months into implementation of the system.

2. Reports - Contain quarterly benefits with stakeholders.

3. Stakeholder feedback - Contains input from stakeholders regarding how they perceive the project.

6. Risk and Mitigation

- Risk – Employees may not want to integrate with the new system. Mitigation – Conduct training sessions to help employees understand the benefits of integrating with the new system.

- Risk – Possible delays due to data integration.
  Mitigation – Training sessions that provide support for transition.

7. Conclusion

This document provides the structured approach we came up with to measure the benefits of the new attendance-tracking system and validate the results. By regularly tracking, reviewing feedback, and analyzing the project will meet our intended objectives.

Meeting Notes

Meeting Title: Final Deliverable Discussion

Date: Nov 8th

Time: 8:15 pm

Location/Platform: Teams Meeting

Attendees:

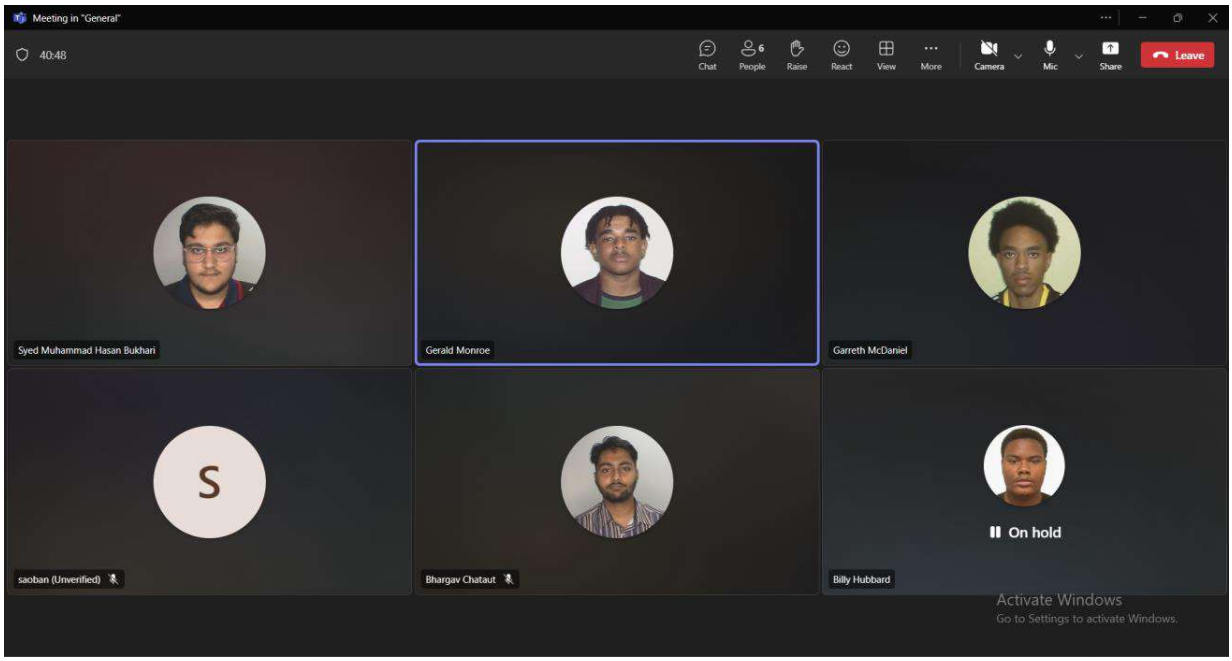
- Gerald Monroe (Project Manager)
- Hasan (Assistant)
- Saoban (Backend Developer)
- Billy (Data Analyst)
- Bhargrav(Lead Backend Developer)

Excuses:

- Kam(Project Tester): Was sick

- Garreth(Lead UI Developer): Wifi was out and was not able to connect to Teams

- Amber(Project Researcher): Had prior engagements so making the meeting was not possible



Agenda:

1. Final Deliverable Review

- Discuss the updates that need to be made for deliverable 2
- Review the Final Deliverables required documents
- Decide on how we want to approach our final deliverable

2. Current Status and Updates

- Project progress since the last meeting
- Reports from each team member on their specific tasks
- Updates for 2nd deliverable

3. Task assignment

-Gerald Monroe: Transition Plan, Project charter, Team charter

-Garreth: List of Prioritized risks and Milestone reports

-Hasan: Internet stuff, Business case, Baseline and Actual Gantt Chart, Work progress, and updates to Deliverable2

-Saoben: Lessons learned report

-Kam: Contract files

-Amber: Progress reports

-Bhagrav: Client Acceptance Form

- Some parts of A were already done

4. Upcoming Tasks and Deadlines

- Part B tasks will be distributed later
- The deadline for part A tasks will be Nov. 15

5. Questions and Open Floor

- Open floor for questions, concerns, and additional points: There were none
- Encourage team members to share feedback

6. Summary of Action Items

- List of assigned tasks with responsible members and deadlines

Meeting Adjourned At: 8:45 pm

Recorded By: Gerald Monroe

Date: Nov. 8th

Team Update Notes

1. Tasks assigned

- Hasan will be assigned internet parts of part B
- Gerald will do Project Benefits Measurements Information
- Billy will be assigned Summary of User Inputs
-Saoban will be assigned Test plans and reports along with Survey and results

2. Reasoning

- To move forward with the project this task has been distributed and accepted by the above members

3. Deadline

-Nov. 23 to complete the tasks

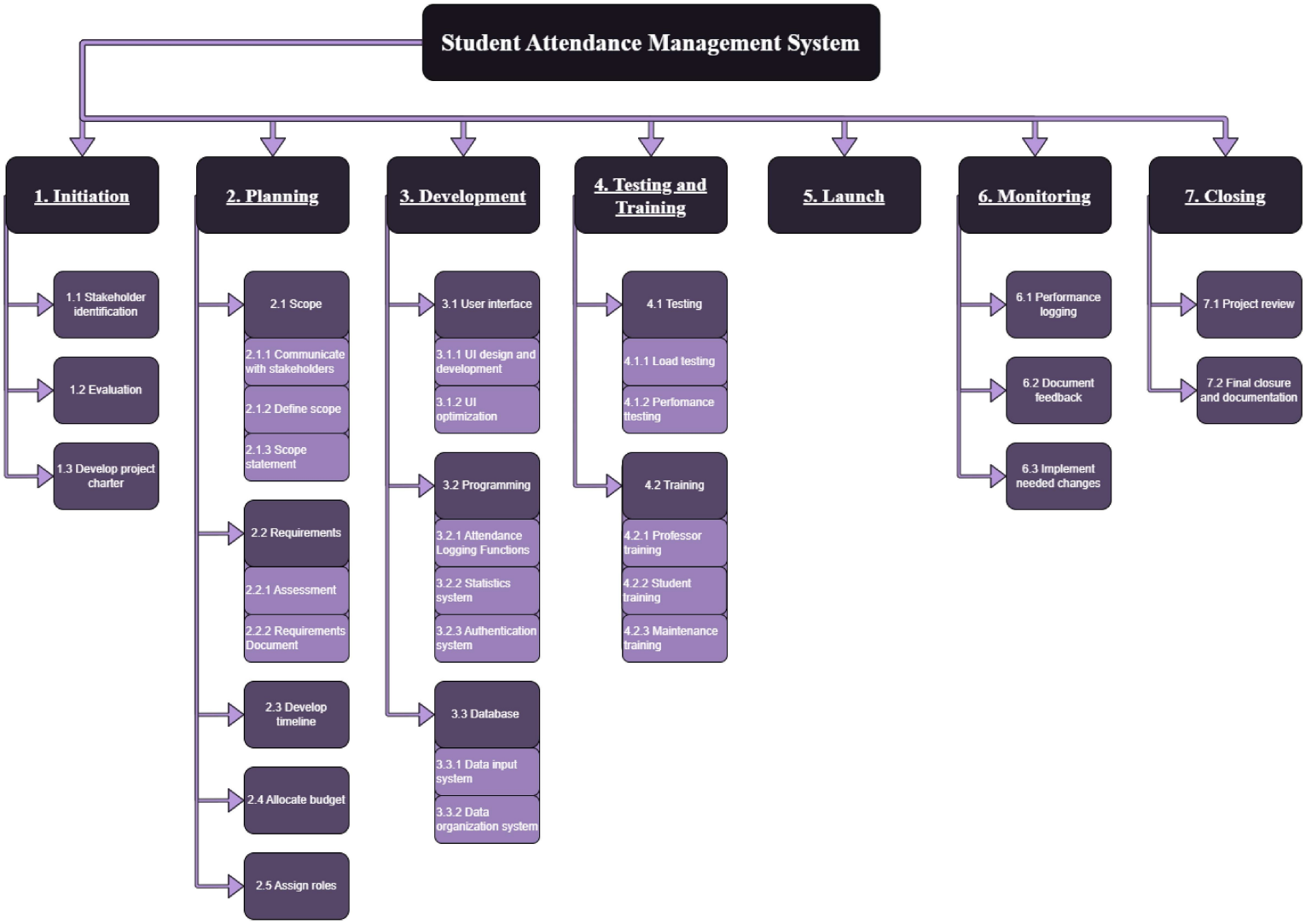
Recorded By: Gerald Monroe
Date: Nov. 20th

Updated Deliverable 2

Group 4

Gerald Monroe, Hasan Bukhari, Saoban Reza
Garreth McDaneil, Ben (Amber) McDowell,
Bhargav Chautat, Billy Hubbard, Kam Okpala

WBS



Saoban and Billy

WBS Dictionary

Project Name: Student Attendance Management System

No.	Item name	Description
1.	**Initiation**	**Phase 1: Project is officially initiated**
1.1	Stakeholder identification	Identify stakeholders in the project
1.2	Evaluation	Evaluate the merits of undertaking the project and possible risks the project might encounter during execution
1.3	Develop project charter	Develop the official document for the start of the project
2.	**Planning**	**Phase 2: Project is planned out**
2.1	Scope	Section 1: The scope of the project
2.1.1	Communicate with stakeholders	Communicate with project owners and stakeholders via surveys and interviews
2.1.2	Define scope	Define what features are inside and outside of the project scope
2.1.3	Scope statement	Develop the official document containing the scope of the project
2.2	Requirements	Section 2: The requirements of the project
2.2.1	Assessment	Assess the requirements to execute the project
2.2.2	Requirements Document	Develop the official document containing all the requirements for the project
2.3	Develop timeline	Develop a timeline for the project to follow to ensure consistent progression
2.4	Allocate budget	Allocate available budget to where it is required
2.5	Assign roles	Assign roles to people working on the project for the execution phase
3.	**Development**	**Phase 3: Project is executed, and the system is developed**
3.1	User interface	Development of the user interface
3.1.1	UI design and development	Design and develop the user interface to be visually appealing and simple
3.1.2	UI optimization	Making sure the user interface is easy to use and works smoothly
3.2	Programming	Development of the main program running the system
3.2.1	Attendance logging functions	Develop the function of the program that logs the attendance of the students

3.2.2	Statistics system	Develop the function of the program that forms attendance statistics on the students
3.2.3	Authentication system	Develop the function of the program that authenticates the students using the system
3.3	Database	Development of the database with all the student information
3.3.1	Data input system	Develop the system by which information is inputted into the database
3.3.2	Data organization system	Develop the system by which data is organized in the database
4.	**Testing and Training**	**Phase 4: The system is tested, and users are trained to use it properly**
4.1	Testing	Section 1: Test the system
4.1.1	Load testing	Test to see if the system can handle the load of the number of users that will be using it
4.1.2	Performance testing	Test to see if the system is performing as intended
4.2	Training	Section 2: Train the users to use the system
4.2.1	Professor and administrator training	Train the professors and administrators to use the system properly
4.2.2	Student training	Train the students to use the system properly
4.2.3	Maintenance training	Train users to maintain and repair the system if needed
5.	**Launch**	**Phase 5: The system is deployed for use in classes**
6.	**Monitoring**	**Phase 6: The system is monitored after deployment**
6.1	Performance logging	Track and document how the system is performing
6.2	Document feedback	Document the feedback on the system including any failure points and points of possible improvement
6.3	Implementing needed changes	Implement changes needed to the system as per the feedback
7.	**Closing**	**Phase 7: Project is officially terminated**
7.1	Project review	Review the project including progression, highlights, obstacles, blunders and points for possible improvement
7.2	Final closure and documentation	Write final report, communicate with project owners, and terminate project

Scope Statement (Version xx)

Project Title: Student Attendance Management System Project

Date: 10/22/2024 Prepared by: <your name> & Bhargav Chataut

Project Justification:

The "Student Attendance Management System" is designed to address critical challenges in attendance tracking and student engagement at the University of Southern Mississippi. Efficient attendance management is essential for improving academic performance, ensuring accurate record-keeping, and promoting accountability among students, teachers, and university administrators.

- **For Students: Attending classes regularly is fundamental to academic success, but many students struggle with consistency. This system motivates students to attend classes more regularly by tracking attendance, helping them stay engaged and better manage coursework.**
- **For Teachers: Manually tracking attendance can be time-consuming and may lead to inaccuracies that affect students' performance records. This system automates the process, reducing teachers' administrative work and freeing them to focus on instruction and student engagement.**
- **For the University: Accurate attendance data is critical for university administration, enabling a better understanding of student engagement and success. This system will centralize attendance records, making generating reports, analyzing data trends, and supporting decision-making processes easier.**

By implementing this system, the university takes an important step toward optimizing educational outcomes and supporting a culture of active participation and engagement.

Product Characteristics and Requirements:

- **Automation**: Automates the attendance process for students and faculty
- **Security and Privacy**: Ensures the confidentiality and security of student attendance records
- **User-Friendly Interface**: Designed with an intuitive and easy-to-navigate interface for students, teachers, and administrators

- **Scalability**: Can handle more students, classes, and potential integration with other university systems.

Product User Acceptance Criteria:

For the project to be implemented, at least 7/10 of the users testing the product should find it easy to use and navigate, and successfully log a class's attendance in a swift, efficient manner. The product must also successfully log attendance records, and users should be able to find a student's attendance record with ease. Users should be able to give feedback on any issues or potential improvements they feel could be made. Additionally, the product must be tightly secured to prevent malicious actors from altering the records unjustly, or stealing the private information of the students, and tests should be run to make sure that hacking into the system isn't easy.

Summary of Project Deliverables

Project management-related deliverables: business case, charter, team contract, scope statement, WBS, schedule, cost baseline, status reports, final project presentation, final project report, lessons-learned report, and any other documents required to manage the project.

Product-related deliverables: research reports, design documents, software code, hardware, etc.

1. Code for implementation of the design of attendance taking
2. Basic UI framework of the application
3. Systems for the attendance record saving
4. Advanced UI and final touch ups on the programming

Requirements Document

1. Introduction

Purpose

This document outlines the requirements for the Student Attendance Management System Project, detailing the functional and non-functional requirements, use cases, and acceptance criteria.

Scope

The project aims to develop an application that allows instructors to take and manage attendance efficiently while providing students with a platform to track their attendance.

2. Stakeholders

Name	Role
Ujunwa Madububa Mbachu	Instructor
Department of Computer Science and Computing Engineering	Department
University of Southern Mississippi	System Administrator

3. Functional Requirements

ID	Description	Priority	Source
FR-01	The system shall allow instructors to create and manage classes	High	User feedback
FR-02	The system shall enable instructors to take attendance for each session	High	User feedback
FR-03	The system shall allow students to view their attendance records	Medium	User feedback

4. Non-Functional Requirements

ID	Description	Priority	Source
NFR-01	The system shall respond to user requests within 2 seconds	Medium	System performance guidelines
NFR-02	The application shall be user-friendly and accessible	High	Usability standards

5. Use Cases

Use Case 1: Instructor Taking Attendance

- **Users**: Instructor
- **Description**: Allows instructors to take attendance for their classes.
- **Preconditions**: Instructor must be logged into the system.
- **Postconditions**: Attendance is recorded in the system.

Use Case 2: Student Viewing Attendance

- **Users**: Student
- **Description**: Allows students to view their attendance records.
- **Preconditions**: Student must be logged into the system.
- **Postconditions**: Student can see their attendance history.

6. Acceptance Criteria

Criterion:

1. Instructors can successfully create and manage classes.
2. Instructors can take attendance and have it recorded accurately.
3. Students can view their attendance records without errors.

7. Assumptions and Constraints

- **Assumptions**: Users will have internet access.
- **Constraints**: The project must be completed within three months.

8. Glossary

- **NFR**: Non-Functional Requirement
- **FR**: Functional Requirement

Project Assessment: USM Student Attendance Management System

1. Project Overview

The Student Attendance Management System project is meant to design an automated attendance-taking system that tracks students' attendance at the University of Southern Mississippi(USM). The objectives are to improve attendance accuracy, save professors time, and move toward achieving better course outcomes. These objectives are completed to achieve better student engagement and academic outcomes. This project should enhance administrative capabilities while efficiently cutting time spent on time taking attendance.

2. Objectives and Key Performance Indicators (KPIs)

Objectives:

• Create a system that can accurately track student attendance with minimal management.
•System creates reports that contain attendance metrics used to speculate how to obtain greater academic performance.
• Reports are easy to understand and nonredundant

Key Performance Indicators (KPIs):

• Improve attendance tracking accuracy by at least 88%.
• Reduce the time spent on attendance management by professors by 75%.
• Ensure that data is accessible to professors and administrators in real time.
• System is easily implemented and adopted by at least 85% of professors.

3. Methodology

An agile development approach was taken when adopting the Student Attendance Management System. The methodology involved in the adoption was:
•Performing analysis of needed procedures and requirement gathering. This process involved assessing the needs of the project and performing stakeholder interviews with administrative staff.
• System design involving frontend, backend, and database implementations, and ensuring the system was compatible with all necessary devices.
• Development of the software to track attendance, user interface, and application programming interface.
• Performing testing involving user testing, integration, and unit so confirm system functionality and how usable it is.
• Deployment on a cloud platform.

4. Findings & Data Analysis

The system delivered significant attendance data to USM Management. Findings were:
• Documentation of improvement in attendance tracking accuracy and reduce errors due to lack of manual attendance taking.

• Data analysis revealed trends in class attendance, allowing faculty to identify possible engagement challenges in the classroom.
• Automation of attendance notifications in the form of email or sms alerts seems to have positively impacted student attendance.
• The system's real-time reporting feature was proficient in providing attendance data on demand.

5. Evaluation and Metrics Tracking Table

Metric	Objective	Baseline	Current Status	Target
Attendance Accuracy	91% tracking accuracy	75%	95%	95%
Time Reduction	80% time reduction in attendance management	30%	80%	80%
Faculty Adoption Rate	Achieve 60% adoption	N/A	85%	90%
Real-Time Data Accessibility	Instant access for users	Limited	Available	Full Availability

6. Stakeholder Feedback

Feedback from faculty, administrators, and students emphasized the system's ease of use and efficiency. Professors liked that it saved them time, and administrators appreciated the automatic reporting features. Suggestions for improvement included adding options to customize notifications and expanding tools to better visualize attendance trends.

7. Challenges, Solutions, & Adaptive Changes

We encountered a few challenges during this project, particularly with ensuring data accuracy and encouraging users to adopt the system. To address these, I organized additional training sessions to support users and improved the system’s real-time data updates to handle high-traffic situations smoothly. I also took steps to strengthen security to protect sensitive student information, making sure we stayed in line with the university’s data privacy policies.

8. Future Recommendations & Next Steps

Feedback for our project included several recommendations for future improvements. Reviewers suggested expanding system functionality to support predictive analytics, which could help identify students at risk of low attendance. They also recommended adding more customizable options for notification settings to enhance the user experience. Additionally, it was advised that we continue gathering feedback post-launch to support ongoing improvements and adjustments to the system.

Work Completion Progress Table - Deliverable 2

Team Member	Task Description	Percentage Completed	Comments
Gerald Monroe	Project Management	97%	Overseeing the overall project.
Hasan Bukhari	Assistant Duties	92%	Assisting with various tasks.
Saoban Reza	Backend Development	93%	Initial setup completed.
Garreth McDaniel	UI/UX Design	95%	Wireframes completed.
Ben (Amber) McDowell	Requirement Gathering	92%	Data gathering in progress.
Bhargav Chataut	Lead Backend Development	90%	Framework selection pending.
Kamsiyochukwu Okpala	Quality Assurance	88%	Testing to start after development.
Billy Hubbard	Data Analysis	92%	Initial data collection.

Hasan

Meeting Notes

Meeting Title: Introduction to Deliverable 2

Date: October 25.

Time: 7:00 pm

Location/Platform: MS Teams

Attendees:

- Gerald Monroe (Project Manager)
- Hasan Bukhari (Assistant)
- Saoban Reza (Backend Developer)
- Garreth McDaniel (Lead UI Designer)
- Amber McDowell (Project Researcher)
- Bhargav Chataut (Lead Backend Developer)
- Billy Hubbard (Data Analyst)
- Kam Okpala (Project Tester)

Agenda:

1. Overview of deliverable 2

- A brief overview of what deliverable 2 is asking for
- The purpose of this meeting was to distribute tasks and set deadlines for deliverable 2
- Determining which members would be working together

2. Review of Previous Meeting Notes

- Looking over meeting notes from deliverable 1 to determine if there was any useable information
- Mainly for formality since it was our first meeting for this deliverable

3. Current Status and Updates

- As we are just beginning deliverable 2 we currently have no updates and are being the assigning of tasks

Billy, Gerald, and Hasan

- The task assignment for the deliverable 2 is as follows:

  Saoben and Billy are assigned to WBS and WBS dictionary

  Hasan and Kam are assigned to the Requirement document

  Amber and Bhargav are assigned to the Scope Statement

  Gerald and Garreth are assigned to Project Assessment

4. Discussion Points

- We discussed a bit of what might go into some of the parts of the deliverable
- No current challenges
- Members were fine with their parts and were to conduct any further research needed for clarification

5. Upcoming Tasks and Deadlines

- The upcoming task will be discussing any updates for deliverable 1 such as the budget
- The deadline for current tasks is Nov. 1
- The deadline for those upcoming tasks will likely be Nov.4
- At some point, we must also take time to review our entire project timeline

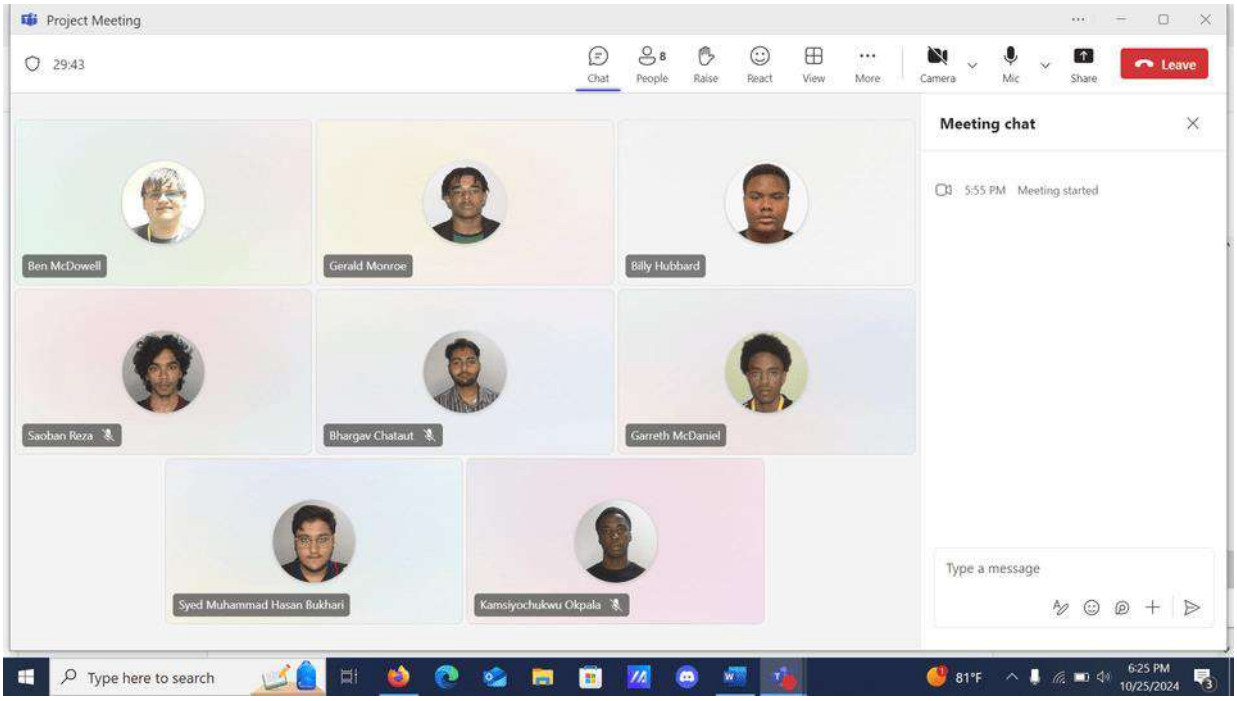
6. Questions and Open Floor

- The next meeting date was one of the questions asked
- We determined that we would shoot for Nov.1
- All members said they were fine with working with their assigned partner to finish their task
- There were no further questions

7. Summary of Action Items

- The WBS and dictionary, Scope statement, Requirements document, and project assessment were assigned.
- Confirmation of the next meeting date and time for Nov. 7 at 7 pm

Billy, Gerald, and Hasan



Meeting Adjourned At: 7:45 pm

Recorded By: Billy Huddard

Date: October 25th 2024

Billy, Gerald, and Hasan

Detailed Project Budget

Category	Item	Description	Estimated Cost ($)	Actual Cost ($)	Funding Source
1. Personnel	IT Project Manager	Manages project timeline, budget, and stakeholder communication	7,000	6,850	USM
	Assistant Project Manager	Supports project manager and manages in their absence	3,000	3,000	USM
	Front-end Developer	Designs and implements user interface	4,500	4,650	USM
	Back-end Developer	Develops and maintains backend functionality	4,500	4,200	USM
	UI Designer	Creates user-friendly design for system	4,000	4,300	USM
	Data Analyst	Analyzes data to optimize attendance tracking functionality	2,000	2,100	USM
	Project Tester	Conducts tests to ensure quality and functionality	2,000	1,900	USM
	Content Specialist	Prepares and standardizes content for user documentation	1,500	1,400	USM
Subtotal - Personnel			**28,500**	**28,400**	
2. Software	Software Licensing	Licensing for development software (e.g., IDEs, databases)	2,000	1,800	USM
	Project Management Software	Tools for project tracking and collaboration	1,500	1,600	USM
	API Integrations	Fees for external API usage (e.g., cloud attendance services)	2,000	2,100	USM
	Custom Software Modules	Development of custom modules specific to attendance tracking	3,500	3,700	USM
	Software Testing Tools	Tools for system testing and bug tracking	1,500	1,450	USM
	Version Control and Code Repositories	Access to repositories and version control	500	500	USM
Subtotal - Software			**11,000**	**11,150**	
3. Content Assurance	Content Acquisition	Acquisition of necessary content (guides, templates)	2,000	2,250	USM
	Content Evaluation	Review and quality control of system content	1,500	1,400	USM
	Accessibility and Usability Testing	Ensures content meets accessibility standards	1,000	1,200	USM
	Content Standardization	Formats content for consistent display across platforms	1,500	1,500	USM

Subtotal - Content Assurance			**6,000**	**6,350**	
4. Operations	System Maintenance	Ongoing technical support and system maintenance	5,000	5,250	USM
	Feedback Implementation	Addresses user feedback and implements changes	3,000	2,850	USM
	Server and Cloud Hosting	Cloud infrastructure costs for system deployment	3,500	3,700	USM
	Data Backup and Recovery	Ensures data integrity and backup solutions	1,000	1,000	USM
	Security Enhancements	Additional security measures (encryption, firewalls)	500	500	USM
Subtotal - Operations			**13,000**	**13,300**	
5. Miscellaneous	General Supplies	Office supplies, miscellaneous tools, and utilities	2,000	2,100	USM
	Training and Development	Workshops and training for team members on new tools	1,500	1,550	USM
	Unexpected Costs	Buffer for unforeseen expenses	1,500	1,500	USM
	Team Events/Workshops	Team-building activities and project debrief workshops	1,000	1,100	USM
Subtotal - Miscellaneous			**6,000**	**6,250**	
Total Project Budget			**50,500**	**50,450**	

Feedback on First Deliverable

Course: ITC 371 – Information Technology Project Management
Project Title: Student Attendance Management Application
Date: 11/05/2024
Group Members: Gerald Monroe, Hasan Bukhari, Saoban Reza, Ben (Amber) McDowell, Garreth McDaniel, Billy Hubbard, Kamsiyochukwu Okpala, and Bhargav Chautat.

Key Feedback

1. **Role Clarity**
    - Clearly define each team member's responsibilities and tasks to ensure accountability and streamline contributions.
2. **Time Management**
    - Strengthen time management practices to meet project deadlines effectively. Assign strict time limits for each participant during presentations to maintain focus.
3. **Meeting Documentation**
    - Maintain comprehensive meeting records, noting assigned responsibilities, attendees, and documented absences. Including photos from meetings will further substantiate attendance.
4. **Meeting Summaries**
    - Provide a brief summary of each meeting, including the number of sessions held, key discussion points, and action items, to enhance project tracking.
5. **Communication Platform**
    - Transition to Microsoft Teams for improved communication management and collaboration features. Aim for full attendance in all meetings to ensure continuity.
6. **References**
    - Include relevant references to substantiate project decisions and methodologies.

Hasan

Updated Deliverable 1

Group 4

Project Management Plan

Date: 10/22/2024

Project Name: Student Attendance Management System Project

Introduction/Overview of Project

Our project aims to develop an Attendance Management System to efficiently assist professors at the University of Southern Mississippi in tracking student attendance. This system will minimize the time professors spend on attendance, allowing them to focus on lesson delivery and pre-class preparation. The goal is to provide professors with a streamlined, automated solution that ensures accurate attendance records, enabling them to better use class time while maintaining up-to-date records.

Class attendance is essential for student success, yet accurate attendance tracking can sometimes be a challenge for professors, potentially affecting student learning outcomes. This system will automatically handle attendance tasks, generating analytics that professors can use for tracking trends, supporting engagement, and making data-driven decisions.

Project Organization

Project Roles and Responsibilities:

- **Gerald Monroe**: *Project Manager* – Oversees budget, manages stakeholder communications, coordinates human resources, keeps the project on schedule, and ensures smooth team communication.
- **Hasan Bukhari**: *Assistant Project Manager* – Supports the Project Manager and ensures project completion in their absence.
- **Garreth McDaniel**: *Lead UI Developer* – Responsible for creating a user-friendly interface that prioritizes functionality and ease of use.
- **Amber McDowell**: *Project Researcher* – Conducts research to gather information that guides the project towards achieving the best outcomes.
- **Saoban Reza**: *Backend Developer* – Focuses on backend functionality, ensuring the system operates effectively and maintains stability.
- **Bhargav Chataut**: *Lead Backend Developer* – Leads the backend development process, focusing on robust system architecture.

- **Kamsiyochukwu Okpala**: *Project Tester* – Manages quality assurance, performing tests to verify that the system functions correctly and meets user needs.
- **Billy Hubbard**: *Data Analyst* – Analyzes data to optimize system performance, enhancing the efficiency and accuracy of attendance tracking.

Management Processes

1. **Project Initiation**
    - **1.1 Project Charter**: Define the project's goals, scope, and key stakeholders. Document objectives and create a charter for team alignment.
    - **1.2 Stakeholder Identification**: Identify all stakeholders, assess their influence, and clarify their involvement.
2. **Planning**
    - **2.1 Scope Management**: Define deliverables and project features, then allocate tasks among team members.
    - **2.2 Time Management**: Develop a detailed project schedule, ensuring key milestones are time-bound.
    - **2.3 Cost Management**: Estimate costs, create a budget, and ensure alignment with available resources.
    - **2.4 Resource Management**: Allocate personnel, technology, and financial resources appropriately.
    - **2.5 Risk Management**: Identify and mitigate potential risks, ensuring strategies are in place to address issues as they arise.
3. **Execution**
    - **3.1 Team Collaboration**: Conduct regular meetings for updates and bonding, ensuring team alignment.
    - **3.2 Change Management**: Monitor and control project changes to maintain stability and adapt as necessary.
4. **Project Monitoring**
    - **4.1 Progress Monitoring**: Track performance metrics to ensure the project stays on track.
    - **4.2 Risk Monitoring**: Regularly review and mitigate risks based on ongoing assessments.

5. **Closure**
    - **5.1 Deliverables Review**: Verify that all project requirements are met.
    - **5.2 Project Review**: Evaluate project outcomes, identifying successes and areas for improvement.
    - **5.3 Documentation and Closure**: Compile and archive all project documentation.

Technical Processes

1. **System Architecture and Design**
    - **1.1 Architecture Design**: Develop the system's frontend, backend, and database structures.
    - **1.2 Security**: Implement security features such as encryption and authentication mechanisms.
2. **Development**
    - **2.1 Agile Development**: Use Agile practices, including sprint planning and version control.
    - **2.2 Frontend Development**: Design a user-friendly UI with mobile compatibility.
    - **2.3 Backend Development**: Implement attendance tracking software and necessary APIs.
    - **2.4 Database**: Design an optimized database schema.
3. **Testing**
    - **3.1 Unit Testing**: Test individual components to ensure functionality.
    - **3.2 Integration Testing**: Verify communication between system components.
    - **3.3 User and Performance Testing**: Test for user satisfaction and system performance under load.
4. **Deployment and Maintenance**
    - **4.1 Deployment**: Deploy the system on a cloud platform like Microsoft Azure.
    - **4.2 Post-Deployment Maintenance**: Handle bug fixes, updates, and enhancements based on user feedback.
    -

5. **Documentation**
    - **5.1 Technical Documentation**: Provide system architecture, development documentation, and user guides.

Work to Be Performed

1. **Requirement Gathering and Analysis**
    - **1.1 Stakeholder Interviews**: Conduct interviews with professors and staff to understand system needs.
    - **1.2 Use Case Development**: Develop use cases to guide system functionality.
2. **System Design**
    - **2.1 Architecture Design**: Create designs for the system's database, backend, and other key components.
    - **2.2 UI Development**: Design an accessible and intuitive user interface.
3. **Project Development**
    - **3.1 Frontend Development**: Develop an interface for professors to monitor attendance.
    - **3.2 Backend Development**: Implement core system functions, including algorithms and databases.
    - **3.3 Attendance Tracking**: Integrate and test attendance tracking software.
4. **Testing**
    - **4.1 System Testing**: Ensure each component functions properly, is free from errors, and meets user needs.
5. **Deployment**
    - **5.1 Training Setup**: Deploy the system in a simulated environment for user training.
6. **Maintenance**
    - **6.1 Ongoing Maintenance**: Address issues post-launch.
    - **6.2 System Improvement**: Continuously improve the system based on feedback.

Schedule Information

The project begins on October 16th and is scheduled to conclude by November 16th. Refer to the Gantt chart for the detailed timeline.

Budget Information

Category	Estimated Cost ($)	Actual Cost ($)	Funding Source
Personnel			
IT Project Manager	7,000	6,850	USM
Front-end Developer	4,500	4,650	USM
Back-end Developer	4,500	4,200	USM
UI Designer	4,000	4,300	USM
Software			
Software Licensing	2,000	1,800	USM
Software Development	6,000	6,200	USM
Software Testing	2,000	1,750	USM
Content Assurance			
Content Acquisition	2,000	2,250	USM
Content Evaluation	3,000	2,800	USM
Operations			
System Maintenance	5,000	5,250	USM
Feedback Implementation	5,000	4,850	USM
Miscellaneous	5,000	5,100	USM
Total	50,000	50,000	USM

References to Other Project Planning Documents

- Schedule/Gantt Chart
- Group Contract
- High-Level Summary of Project Results
- Work Progress Updates
- Responsibility Assignment Matrix
- Meeting Notes

High Level Summary of Project Results

Introduction:

A Student Attendance Management System project is designed to automate and streamline the process of tracking student attendance. This system allows teachers and administrators to record attendance digitally, reducing the need for manual input and minimizes errors.

Key Milestones:

1. Project planning – Define project objectives, Identify key stakeholders (USM), Create a project timeline.
2. System Design - Design a database, a user interface and an architectural interface (This just determines if it can be used on mobile and or desktop)
3. Developmental phase – Backend implementations (Database, attendance records, and user management) and Frontend (Student, Teacher, and Administrator dashboards)
4. Testing phase – Testing and bug fixes
5. Notification - Implement automatic notifications for absences or tardiness (e.g., SMS or email alerts to students and teachers). Create customizable notification settings for administrators and teachers.
6. Deployment – Conduct final field test and release to ensure stability and then release to be used.
7. Training - Provide training for teachers and administrators on how to use the system.
8. Post launch maintenance – monitor the system for bugs and document feedback for future projects.

Project Deliverables:

The key deliverables for this project include comprehensive project documentation such as the project scope, requirements, and system design. Backend deliverables cover the database structure, API development, and user authentication, while frontend deliverables include dashboards for teachers, students, and admins to

manage and view attendance. The system will feature attendance tracking, report generation, and automated notifications for absences. Testing and quality assurance reports will ensure functionality, and post-launch deliverables include deployment, user training materials, and a maintenance plan for ongoing support and improvements.

Success metrics:

The key to defining success for this project include user adoption rates, system usability, and the accuracy of attendance records. Key indicators also involve reduced administrative time, real-time data availability, and the reliability of automated notifications. Additionally, system performance is assessed through uptime, scalability, and security measures to protect student data. Feedback on reporting features and overall user satisfaction will further gauge the system's effectiveness in streamlining attendance management processes.

Potential challenges:

Some potential challenges in developing we could face could include ensuring data accuracy, especially if integrating manual input methods. User adoption might be slow if the system is not intuitive or well-designed, causing resistance from teachers, students, or administrators. Managing real-time data updates and system performance under heavy usage could also pose technical challenges. Ensuring data security and privacy, particularly with sensitive student information, is crucial, and the system must comply with legal regulations. Additionally, handling technical issues like scalability, maintenance, and support post-deployment could require ongoing attention.

Lessons to be learned:

Key lessons that could be learned from this project include the importance of user-centered design to ensure ease of use and adoption by teachers, students, and administrators. Building a scalable system from the start is critical to handle growing data and user bases. Ensuring data accuracy and maintaining real-time

functionality requires careful planning, especially when integrating different attendance tracking methods. The project also highlights the significance of robust security measures to protect sensitive student data and comply with legal standards. Finally, ongoing support and post-launch maintenance are vital for the system’s long-term success and user satisfaction.

Conclusion:

In conclusion, the development of this project offers a streamlined and efficient approach to tracking and managing student attendance. By automating processes, the system saves time for administrators and teachers, ensures accurate and real-time attendance records, and provides an easy-to-use interface for all users. The project's success will depend on its scalability, data security, and user adoption, while challenges such as system performance, data accuracy, and regulatory compliance need to be addressed. Ultimately, this system has the potential to significantly improve the efficiency of attendance management, benefiting the university and their stakeholders.

Work Completion Progress Table - Deliverable 1

Team Member	Task Description	Percentage Completed	Comments
Gerald Monroe	Project Management	90%	Overseeing the overall project.
Hasan Bukhari	Assistant Duties	90%	Assisting with various tasks.
Saoban Reza	Backend Development	80%	Initial setup completed.
Garreth McDaniel	UI/UX Design	90%	Wireframes completed.
Ben (Amber) McDowell	Requirement Gathering	90%	Data gathering in progress.
Bhargav Chataut	Lead Backend Development	70%	Framework selection pending.
Kamsiyochukwu Okpala	Quality Assurance	70%	Testing to start after development.
Billy Hubbard	Data Analysis	70%	Initial data collection.

Hasan

Responsibility Assignment Matrix (RAM)

Task ID	Task Description	Gerald Monroe	Hasan Bukhari	Saoban Reza	Garreth McDaniel	Ben (Amber) McDowell	Bhargav Chataut	Kamsiyochukwu Okpala	Billy Hubbard
1	Requirement Gathering	A	R	C	I	R	I	I	I
2	UI/UX Design	I	I	I	R	I	I	I	I
3	Backend Development	I	I	R	I	I	R	I	I
4	Database Setup	I	I	I	I	I	R	I	I
5	Testing and QA	I	I	I	I	I	I	R	I
6	Data Analysis and Integration	I	I	I	I	I	I	I	R
7	Final Review and Adjustments	R	C	I	I	I	I	I	I
8	Promotional Campaign	I	I	I	I	I	I	R	I

Hasan

Legend:
R: Responsible (The person who does the work)
A: Accountable (The person ultimately answerable for the correct and thorough completion of the deliverable)
C: Consulted (The person who provides information for the task)
I: Informed (The person who needs to be kept updated on progress)

Meeting Notes

Meeting Title: Introduction to Deliverable 1

Date: October 22.

Time: 7:20 pm

Location/Platform: MS Teams

Attendees:

- Gerald Monroe (Project Manager)
- Hasan Bukhari (Assistant)
- Saoban Reza (Backend Developer)
- Garreth McDaniel (Lead UI Designer)
- Amber McDowell (Project Researcher)

Agenda:

1. **Role Assignment and Deliverable Sign-Off**
    - Team members signed their names on the project deliverable document.
    - Roles for each member were finalized and confirmed.
2. **Project Discussion**
    - Discussed the overall approach to the project and collaborative workflow.
    - Reviewed expectations for teamwork and individual responsibilities moving forward.
3. **Document Assignments**
    - Discussed specific responsibilities for creating the Gantt chart, group contract, and project management plan.
    - Established which members will handle each document to ensure timely completion of the deliverable.

Amber and Hasan

4. **Presentation Planning**
    - Outlined the structure and content of the project presentation.
    - Assigned presentation roles, detailing which parts each member will present.

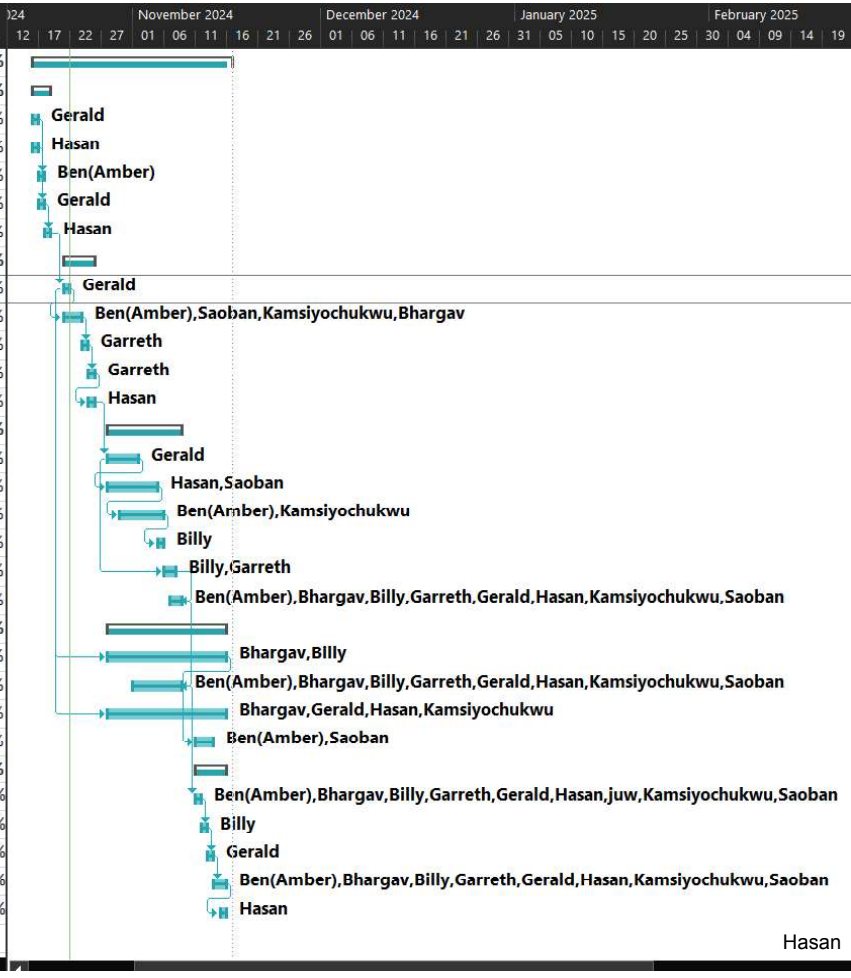
Meeting Adjourned At: 8:00 pm

Recorded By: Amber McDowell

Date: October 22nd 2024

GANTT CHART

	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names	% Complete
1		**Student Attendance Management System Project:**	**24 days?**	**Wed 16/10/2**	**Sat 16/11/24**		**Gerald,Hasan,Sac**	**100%**
2		**Initiation Phase**	**3 days?**	**Wed 16/10/2**	**Fri 18/10/24**			**100%**
3		Define project scope	1 day	Wed 16/10/24	Wed 16/10/24		Gerald	100%
4		Identify stakeholders	1 day	Wed 16/10/24	Wed 16/10/24		Hasan	100%
5		Conduct feasibility study	1 day	Thu 17/10/24	Thu 17/10/24	3	Ben(Amber)	100%
6		Create project charter	1 day	Thu 17/10/24	Thu 17/10/24	4	Gerald	100%
7		Project approval	1 day	Fri 18/10/24	Fri 18/10/24	6	Hasan	100%
8		**Planning Phase**	**5 days**	**Mon 21/10/2**	**Fri 25/10/24**			**100%**
9		Develop project plan (timeline, resources)	1 day	Mon 21/10/24	Mon 21/10/24	7	Gerald	100%
10		Requirement gathering and analysis	3 days	Mon 21/10/24	Wed 23/10/24	9	Ben(Amber),Saoba	100%
11		Identify tools and technologies	1 day	Thu 24/10/24	Thu 24/10/24	10	Garreth	100%
12		Create design specifications	1 day	Fri 25/10/24	Fri 25/10/24	11	Garreth	100%
13		Risk assessment and mitigation strategy	1 day	Fri 25/10/24	Fri 25/10/24	12	Hasan	100%
14		**Execution Phase**	**10 days**	**Mon 28/10/2**	**Fri 08/11/24**			**100%**
15		Frontend development	5 days	Mon 28/10/24	Fri 01/11/24	13	Gerald	100%
16		Backend development	6 days	Mon 28/10/24	Mon 04/11/24	15	Hasan,Saoban	100%
17		Database setup and integration	5 days	Wed 30/10/24	Tue 05/11/24	16	Ben(Amber),Kamsi	100%
18		Implement user authentication system	1 day	Tue 05/11/24	Tue 05/11/24	17	Billy	100%
19		Develop attendance tracking functionality	2 days	Wed 06/11/24	Thu 07/11/24	15SS,16SS	Billy,Garreth	100%
20		Testing (Unit, Integration, System)	2 days	Thu 07/11/24	Fri 08/11/24	19FF	Ben(Amber),Bharg	100%
21		**Monitoring and Controlling Phase**	**15 days**	**Mon 28/10/2**	**Fri 15/11/24**			**100%**
22		Progress tracking and status reports	15 days	Mon 28/10/24	Fri 15/11/24	9SS	Bhargav,Billy	100%
23		Quality control and testing feedback loops	6 days	Fri 01/11/24	Fri 08/11/24	20FF	Ben(Amber),Bharg	100%
24		Risk monitoring and adjustments	15 days	Mon 28/10/24	Fri 15/11/24	9SS	Bhargav,Gerald,Ha	100%
25		Stakeholder reviews and approval	3 days	Mon 11/11/24	Wed 13/11/24	22	Ben(Amber),Saoba	100%
26		**Closing Phase**	**5 days**	**Mon 11/11/2**	**Fri 15/11/24**			**100%**
27		Final testing and bug fixes	1 day	Mon 11/11/24	Mon 11/11/24	23	Ben(Amber),Bharg	100%
28		User training and documentation	1 day	Tue 12/11/24	Tue 12/11/24	27	Billy	100%
29		Deployment and go-live	1 day	Wed 13/11/24	Wed 13/11/24	28	Gerald	100%
30		Post-launch support and feedback collection	2 days	Thu 14/11/24	Fri 15/11/24	29	Ben(Amber),Bharg	100%
31		Project closure and report	1 day	Fri 15/11/24	Fri 15/11/24	30	Hasan	100%



Hasan

Group Contract

Group Contract for Student Attendance Management System Project

Project Manager: Gerald Monroe

Contact: (601) 334-7485 | gerald.monroe@usm.edu

Project Timeline: October 16, 2024 - November 16, 2024

Project Objectives: The group members are to work together to design and develop an application that enables professors within departments to manage and track student attendance efficiently, facilitate communication regarding attendance policies, and generate reports using algorithms for improved student engagement and academic outcomes.

Group Members:

1. Gerald Monroe (Project Manager)
2. Hasan Bukhari (Assistant)
3. Saoban Reza (Backend Developer)
4. Garreth McDaniel (Lead UI Designer)
5. Ben (Amber) McDowell (Project Researcher)
6. Bhargav Chataut (Lead Backend Developer)
7. Kamsiyochukwu Okpala (Project Tester)
8. Billy Hubbard (Data Analyst)

Roles and Responsibilities:

- Project Manager: Oversee the project, ensure deadlines are met, facilitate communication, and manage resources.

- Assistant: Uptakes the project managers duties in his absence and assures that the project is completed.

- Backend Developer: Works to ensure the inworking's of the project are functional and maintained.

- Lead UI Designer: Design user-friendly interfaces and ensure a positive user experience.

- Project Researcher: Researches relevant information for the project in order to achieve the best outcome with latest data.

- Data Analyst: Integrate and analyze data from USM sources, provide insights for system optimization.

- Project Tester: Puts system through a series of test to ensure quality.

- Lead Backend Developer: Oversees the development process for the backend coding of the project. They ensure effective collaboration and outcomes for the project.

Group Expectations:

1. Communication:

   - Respond to emails and messages within 24 hours.

   - Attend all scheduled meetings or notify the group in advance if unable to attend.

   - Share updates on progress during weekly meetings.

   - Try help team member who start to slip behind.

Gerald and Hasan

- Hold each other accountable.

2. Collaboration:
   - Participate actively in discussions and decision-making processes.
   - Respect and consider the ideas and opinions of all team members.
   - Share workload equitably and assist team members when needed.
3. Commitment:
   - Dedicate the agreed number of hours per week to the project.
   - Meet all assigned deadlines and deliverables.
   - Maintain a high standard of work quality and professionalism.

Disciplinary Actions for Unmet Expectations:

1. First and Second Offenses:
   - Your absence/objective that you did not complete will be recorded
   - There will be a discussion with project manager or assistants regarding the issue
   - Discussed measures are to be implemented immediately so that the situation is corrected as soon as possible

2. Third Offense:

Written warning issued to the member.

- A group discussion will be held with the member for further deliberation on why there are not able to meet expected objective goals
- Potentially their tasks will be reassigned if deemed necessary to ensure project progress is not hindered
- Changes will be documented

3. After Multiple Offenses:
   - A discussion concerning your importance and effectiveness will commence
   - Depending on the conclusion of said discussion member will potentially have to abdicate their position and leave the group
   - Proper documentation will be submitted to the professor if required

Signatures:

By signing this contract, all members agree to the roles, responsibilities, and expectations outlined above. Additionally, all members agree to the disciplinary actions in case of unmet expectations.

- Gerald Monroe (w10165982)

  Signature: Gerald Monroe Date: 10/22/2024

- Hasan Bukhari (w10193263)

  Signature: Hasan Bukhari Date: 10/22/2024

- Saoban Reza (w10197931)

  Signature: Saoban Reza Date: 10/22/2024

- Ben(Amber) McDowell (w10056384)

  Signature: Amber McDowell Date: 10/22/2024

- Garreth McDaniel (w10117994)

  Signature: Garreth McDaniel Date: 10/22/2024

- Kamsiyochukwu Okpala (w10189648)

  Signature: Kamsiyochukwu Okpala Date: 10/22/2024

- Billy Hubbard (w10189648)

  Signature: Billy Hubbard Date: 10/22/2024

- Bhargav Chataut (w10195091)

  Signature: Bhargav Chataut Date: 10/2024

References (APA citation)

Budget research:

1. Aalpha Information Systems. (n.d.). *How to build an attendance app: Features & cost*. Aalpha. https://www.aalpha.net/articles/how-to-build-an-attendance-app-features-cost/

Generally the budget is looking to be something around the 9,000-15,000 dollar range for an app on the simpler side, but for our idea of the one listed in the assignment file, its supposed to be about 50,000 dollars. Certain factors the budget depends on includes the size of the development staff and their wages, the platform (or platforms) that will be used, and other logistical considerations.

Problems:

2. Classter. (2023, February 9). *Using school management systems to improve student attendance*. Classter. https://www.classter.com/blog/edtech/school-management-systems/using-school-management-systems-to-improve-student-attendance/

Privacy and security concerns are important for any electronic system that tracks personal information like the daily attendance of students at a school. Keeping the database that stores their records private and secure from potential malicious hackers is important to watch out for, as well as making sure that human error can be accounted for, in case anything in the records needs to be fixed after an incorrect initial placement.

The app also needs to be user friendly for all parties involved.

Reasons for a system like this:

3. Orah. (2023, January 17). *The hidden costs: How manual attendance tracking damages schools and disrupts parent engagement*. Orah. https://www.orah.com/blog/hidden-costs-of-manual-attendance

Manual attendance tracking without a system like ours can be time consuming, leave more room for human error, make it harder to find and keep track of attendance records. A more accurate, easier to use and easier to analyze database of attendance can make it easier for teachers to keep track of students and their attendance, encouraging students not to miss class, and improving their attendance and education through this.