



RECREATION AND WELLNESS INTRANET MANAGE YOUR HEALTH INC.

A Report submitted as a part of
the Assignment for the subject CSIT883

System Analysis and Project Management

from

UNIVERSITY OF WOLLONGONG

by

Karan Goel - 7836685
Banin Sensha Shrestha - 8447196
Kushal Rimal - 8735876
Dipesh Baral - 8712785
Affan Mehmood - 8228851

School of Computing and Information Technology
Faculty of Engineering and Information Sciences

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RECREATION AND WELLNESS INTRANET
MANAGE YOUR HEALTH INC.

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ABSTRACT

A comprehensive workplace health program is crucial for fostering a positive corporate culture and maintaining a productive workforce. These programs encourage employees to manage their health proactively, which reduces absenteeism and minimizes health-related costs, ultimately boosting job satisfaction and productivity. By prioritizing wellness, organizations create a supportive environment that values the physical and mental well-being of their employees, leading to long-term benefits for both individuals and the business.

Manage Your Health Inc. (MYH), recognizing the importance of workplace health programs, has proposed developing a project that integrates a suite of health and wellness modules into its organizational framework. This initiative aims to cultivate a culture of wellness, enhance employee health, and reduce insurance costs, with projected net savings of \$2,400,000 over the next four years.

This report offers a comprehensive overview of the system specifications and details the methodologies followed to implement the project successfully. It covers key components such as system analysis, resource allocation, stakeholder engagement, risk assessment, and UML modeling. Together, these elements create a cohesive roadmap that ensures the project's effectiveness in achieving the company's health management goals.

MEMBER CONTRIBUTION

Table 1: Contribution Table

Name	Student Number	Contribution
Karan Goel	7836685	contributed
Banin Sensha Shrestha	8447196	contributed
Kushal Rimal	8735876	contributed
Dipesh Baral	8712785	contributed
Affan Mehmood	8228851	contributed

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Part 1

Project Integration Management

Our first step in ensuring the successful delivery of this project to MYH is to gain a comprehensive understanding of their primary goals and objectives. This part provides an overview of the main objectives, initial proposals, and business case studies that have been developed in consultation with the MYH.

1.1 Proposals

Manage Your Health, Inc. (MYH) is a global healthcare provider ranked among the Fortune 500. With over 25,000 employees worldwide, including 20,000 full-time and 5,000 part-time workers, MYH is committed to cutting internal costs, enhancing cross-selling of products, and leveraging new web technologies to foster collaboration among employees, customers, and suppliers, thereby enhancing the delivery of healthcare products and services.

MYH has identified three potential projects in line with their strategic objectives:

- 1. Health Coverage Costs Business Model:** This project involves developing a secure application to model and analyze healthcare expenses. It requires an initial investment of \$100,000 and is projected to save \$20 annually for each

full-time employee.

2. Web-Enhanced Communications System: The goal of this project is to implement a web-based system that streamlines the development and delivery of products. With a development cost of \$3 million, the system is expected to save \$2 million annually, notwithstanding ongoing maintenance costs.

3. Recreation and Wellness Intranet Project: This initiative aims to launch an intranet application to enhance employee health and wellness, potentially reducing healthcare premiums and saving \$30 per employee each year through better health outcomes.

MYH requests a preliminary analysis to determine which project best meets their strategic goals and asks for a detailed business plan for the chosen proposal.

1.2 Project Analysis

In response to the request from MYH, we initiated a preliminary analysis of the proposed projects.

1.2.1 Objectives Analysis

The analysis began with an understanding of the strategic goals of MYH. These objectives were elucidated through comprehensive discussions with MYH's visionary leaders. The key strategic goals derived from these discussions are summarized in Table 1.1.

Goal	Description
Reduce-Cost	Aim to decrease internal costs to enhance efficiency and boost profitability.
Business-Growth	Increase market penetration and revenue through enhanced cross-selling opportunities.
Develop	Improve collaboration among employees, customers, and suppliers with new web-based technologies, thereby optimizing the development and delivery of healthcare products and services.

Table 1.1: Strategic Goals of Manage Your Health, Inc.

This structured approach allows us to align each project proposal with MYH's strategic objectives, facilitating an informed decision-making process for developing the subsequent business plan.

1.2.2 Proposal Analysis

Once the objectives were established, our team conducted a comprehensive analysis of each proposal to ensure they aligned with MYH's goals. We focused on several key metrics, assigning different weights to each criterion based on its importance:

- Tie to business strategy - 10%
- Upfront cost - 25%
- Potential net savings - 25%
- Realistic technology - 15%
- In-house expertise - 10%
- Potential resistance - 15%

The findings of our analysis are summarized in Table 1.2, providing a clear comparison of how each proposal measures up against the set criteria.

Table 1.2: Comparison of Project Criteria and Their Impact

Criteria	Weight	Health age Costs Business Model	Cover- age Busi- ness Model	Web-Enhanced Communica- tions System	Recreation and Wellness Intranet Project
Tie-to business strategy	10%	Reduce-Cost (1/3)		Business-Growth, Develop (2/3)	Reduce-Cost (1/3)
Upfront cost	25%	\$100,000		\$3,000,000	\$200,000
Potential net sav- ings	25%	\$1,600,000		\$6,000,000	\$2,400,000
Realistic technol- ogy	15%	Data Analysts needed to analyze the premiums of current and past employees linked to 10 different insurance compa- nies.		The project is highly achievable with modern tech- nology, as we all have experience with similar sys- tems.	The project is highly achievable with modern tech- nology, as we all have experience with similar sys- tems.
In-house expertise	10%	Organization might need to hire more ex- perienced Data Analysts, even though we have expert developers to implement the application to analyze the data.		New components to be implemented and new services to be provided, such as delivery services, customer support, and suppliers manage- ment, necessitate hiring quite a few staff.	Project is easy to implement with proper guidance from a Team Lead.
Potential resistance	15%	Project might not face much resis- tance since the application is rel- atively easy to build.		Project might not face much resis- tance since the ap- plication is rela- tively easy to build.	Senior employ- ees might resist involvement in recreational pro- grams due to greater responsi- bilities like family care. Other em- ployees might also show disinterest.

1.2.3 Weighted Model

To further analyze our findings, we quantified the results from Table 1.2 to create a weighted model, as shown in Table 1.3.

Criteria	Weight	Health Coverage Costs Business Model	Web-Enhanced Communications System	Recreation and Wellness Intranet Project
Tie to business strategy	10%	50	70	60
Upfront cost	25%	70	35	85
Potential net savings	25%	70	30	90
Realistic technology	15%	60	85	75
In-house expertise	10%	55	40	80
Potential resistance	15%	80	85	60
Total	100%	66.5	52.75	78

Table 1.3: Comparison of Project Criteria and Their Impact (Weighted Model)

The chart depicted in Figure 1.1 provides a visual representation of the evaluation model. From this chart, we can see that **Project 3: Recreation and Wellness Intranet Project** is the most preferred, followed by **Project 1: Health Coverage Costs Business Model**. This visual aids in understanding the relative preferences based on the weighted scoring of each project.

1.2.4 Financial Analysis

To enhance our project selection process, we conducted a financial analysis to ensure that the chosen projects provide maximum benefit to MYH. Our team evaluated the

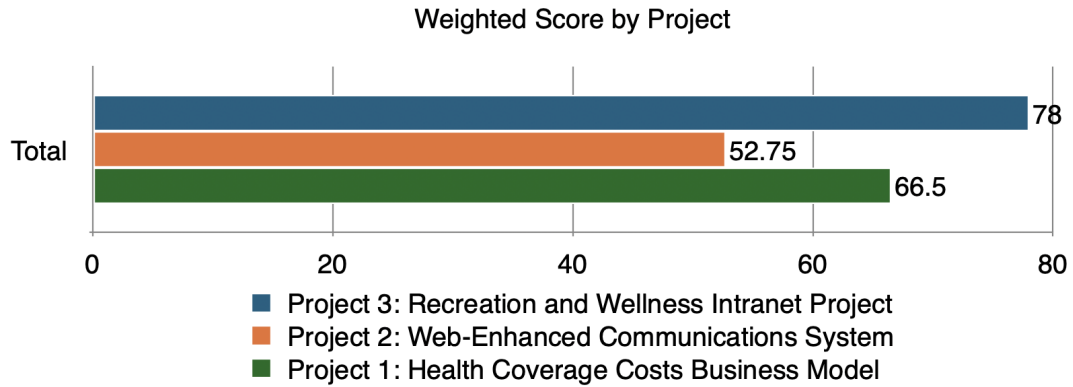


Figure 1.1: Weighted Score Model

Net Present Value (NPV) and Return on Investment (ROI) for each project to verify alignment with financial objectives and to ensure optimal returns. The detailed metrics and results of this analysis are summarized in the subsequent sections, providing a clear basis for our project recommendations.

Net Present Value (NPV)

Net Present Value (NPV) is a financial metric used to evaluate the profitability of an investment or project. It represents the difference between the present value of cash inflows and the present value of cash outflows over the investment's lifetime. NPV is calculated using the formula:

$$\text{NPV} = \sum_{t=0}^n \frac{C_t}{(1+r)^t}$$

where:

- C_t represents the cash flow at time t ,
- r is the discount rate,
- t is the time period (usually in years),

- n is the total number of periods.

This formula discounts each of the cash flows back to their present value and then sums them up. A positive NPV indicates that the projected earnings exceed the anticipated costs, thus making it a potentially profitable investment.

Return on Investment (ROI)

Return on Investment (ROI) is a financial metric used to measure the efficiency of an investment or to compare the efficiencies of several different investments. ROI measures the amount of return on an investment relative to the investment's cost, calculated as:

$$\text{ROI} = \left(\frac{\text{Total Benefits} - \text{Total Costs}}{\text{Total Costs}} \right) \times 100\%$$

where:

- Total Benefits represents the total cash inflows from the investment,
- Total Costs represents the total cash outflows for the investment.

ROI is expressed as a percentage; a higher ROI means the investment gains compare favorably to its cost. It is used to evaluate the efficiency of an investment or compare the efficiencies of several different investments.

Financial Analysis of Projects

The NPV and ROI calculations for the projects are detailed and summarized in Table 1.4. This table provides insights into the financial viability and potential profitability of each project, aiding in the decision-making process.

Table 1.4: Financial Analysis for Three Projects

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Total
Project 1: Health Coverage Costs Business Model						
Benefits	\$0	\$400,000	\$400,000	\$400,000	\$400,000	\$1,600,000
Cost	\$100,000	\$0	\$0	\$0	\$0	\$100,000
Cashflow	-\$100,000	\$400,000	\$400,000	\$400,000	\$400,000	\$1,500,000
NPV(D=8%)						\$1,134,121.05
ROI						1500%
Project 2: Web-Enhanced Communications System						
Benefits	\$0	\$2,000,000	\$2,000,000	\$2,000,000	\$0	\$6,000,000
Cost	\$3,000,000	\$600,000	\$600,000	\$600,000	\$600,000	\$5,400,000
Cashflow	-\$3,000,000	\$1,400,000	\$1,400,000	\$1,400,000	-\$600,000	\$600,000
NPV(D=8%)						\$154,553.58
ROI						11%
Project 3: Recreation and Wellness Intranet Project						
Benefits	\$0	\$600,000	\$600,000	\$600,000	\$600,000	\$2,400,000
Cost	\$200,000	\$0	\$0	\$0	\$0	\$200,000
Cashflow	-\$200,000	\$600,000	\$600,000	\$600,000	\$600,000	\$2,200,000
NPV(D=8%)						\$1,654,885.28
ROI						1100%

1.2.5 Project Selection

After a thorough analysis of each project, considering both financial metrics (Section 1.2.4) and qualitative criteria (Section 1.2.3) we made a final decision on project selection for MYH.

- **Project 1: Health Coverage Costs Business Model**

- **NPV:** \$1,134,121.05
- **ROI:** 1500%
- **Decision:** Project 1 is appealing for selection due to its high ROI and substantial positive NPV, indicating significant profitability and efficient capital utilization but requires careful consideration of the additional staffing

needs and its modest strategic tie.

- **Project 2: Web-Enhanced Communications System**

- **NPV:** \$154,553.58
- **ROI:** 11%
- **Decision:** Not recommended for immediate selection due to its lower ROI and marginal NPV, suggesting limited profitability and efficiency.

- **Project 3: Recreation and Wellness Intranet Project**

- **NPV:** \$1,654,885.28
- **ROI:** 1100%
- **Decision:** Project 3 offers a very high ROI and the highest NPV among the evaluated projects, ensuring excellent profitability and effective capital use. It presents a balanced option with moderate costs, significant expertise availability, and high feasibility with current technology, though it might face resistance impacting its implementation.

Based on the comprehensive analysis of financial metrics along with the qualitative assessments, **Project 3: Recreation and Wellness Intranet Project** stands out as the optimal choice. This project not only demonstrates substantial financial returns but also aligns with technological feasibility and existing in-house expertise. Although there may be some resistance from senior employees, its moderate initial investment and significant long-term benefits warrant its selection. The project's strategic alignment with enhancing employee engagement and wellness further supports its potential for positive organizational impact.

1.3 Business Case

This section presents the business case for **Project 3: Recreation and Wellness Intranet Project**, proposed by Manage Your Health Inc. (MYH).

The business case was developed based on the objectives, mission statement, goals, project phases, and financial and market analyses of the project. The results are summarized in Table 1.5. The detailed business case prepared by the project manager is presented below.

Table 1.5: Business case summary for Recreation and Wellness Intranet Project

Section	Details
Project Overview	<ul style="list-style-type: none"> • Project Manager: Tony Prince • Client: Manage Your Health Inc. • Duration: 6 months • Budget: \$200,000
Executive Summary	Aims to improve employee health and reduce healthcare costs by engaging employees in wellness and recreational programs, targeting savings of at least \$30 per employee per year.
Mission Statement	To empower and engage employees in enhancing their health and well-being through accessible digital wellness solutions.

Table 1.5 – *Continued from previous page*

Section	Details
Objectives	<ol style="list-style-type: none"> 1. Reduce healthcare costs by improving employee health. 2. Enhance employee productivity and morale through structured wellness programs. 3. Offer a tailored intranet solution to promote health management.
Project Phases	Initiation, Planning, Execution, Monitoring and Control, Closure, and Post-Project Evaluation. Each phase includes specific tasks and resource allocations.
Financial Appraisal	Project targets net savings of \$30 per employee per year, with a total budget of \$200,000. (NPV: \$1,654,885.28, ROI: 1100%)
Market Assessment	Targets 20,000 full-time employees.
Marketing Strategy	Uses the intranet portal, email campaigns, company meetings, and social media to promote the wellness application.

Table 1.5 – *Continued from previous page*

Section	Details
Conclusion	The Recreation and Wellness Intranet Project is designed to directly address these challenges by introducing a comprehensive digital platform aimed at enhancing the health and wellness of our workforce. By investing in this project, we anticipate not only a reduction in health-related costs but also improvements in employee productivity, engagement, and overall morale.

Business Case: Recreation and Wellness Intranet Project

Prepared by: Tony Prince, Project Manager

May 16, 2024

Problem Statement

As a leading global healthcare services provider, MYH faces significant challenges related to employee health management. Recent assessments indicate that the company's healthcare premiums are substantially higher than the industry average, primarily due to preventable health issues among employees.

Business Objectives

MYH introduces the Recreation and Wellness Intranet Project, with an allocated budget of \$200,000 and a completion timeline of six months. The objectives are to:

1. Reduce healthcare costs by improving employee health.
2. Enhance employee productivity and morale through structured wellness programs.
3. Offer a tailored intranet solution to promote health management.

Critical Assumptions and Constraints

The application is designed to offer substantial value by addressing the critical issues of rising healthcare costs and deteriorating employee health within MYH's workforce. The success of the project depends on active employee participation, expected to lead to significant behavioral changes towards better health. This project is constrained by a fixed budget of \$200,000 and a strict six-month timeline. The successful implementation also depends on the IT and development team's capabilities, overcoming potential resistance to change among employees, and ensuring seamless integration with existing systems. Legal and regulatory constraints may also impact the project's scope and execution.

Analysis of Options and Recommendation

- **Option 1: Do Nothing**

- Pros: Minimal disruption and costs in the short term.
- Cons: Missed opportunity to address rising healthcare costs and worsening employee health.

- **Option 2: Purchase an Existing Application**

- Pros: Quicker implementation with potential access to tested features.
- Cons: Initial costs for licensing, possible misalignment with specific needs, and limited customization.

- **Option 3: Design and Implement the Application**

- Pros: Fully customizable to meet MYH's unique requirements, complete control over features, functionality, and user experience.
- Cons: Longer development timeline and substantial initial investment.

Recommendation:

After thorough discussions with management, *Option 3: Design and Implement the Application* is the preferred choice. Despite the initial investment, the benefits of a tailored solution that aligns with MYH's strategic goals and seamlessly integrates with existing systems outweigh the disadvantages.

Preliminary Project Requirements

- Develop a user-friendly intranet application featuring program registration, participation tracking, and incentive management.
- Offer a range of recreational programs and health-management classes within the application.
- Ensure robust data security and privacy compliance.

Estimated Budget and Financial Evaluation

Budget for the Project: \$200,000.

Estimated Savings: Over four years, projected savings amount to at least \$30 per full-time employee per year.

Schedule Estimate

The project is expected to be completed within six months, adhering to the set timeline and project milestones.

Potential Risks

1. Low employee engagement may lead to minimal health improvements.
2. Technical challenges could delay application development.
3. Incentives may not sufficiently motivate employees.

Exhibits

1. Calculation of Potential Savings: The potential savings of \$30 per employee per year over four years, highlighting the project's economic advantage.
2. Return on Investment (ROI): Post-project completion, the ROI will be calculated, comparing the actual savings against the investment.

Summary

The Recreation and Wellness Intranet Project is strategically designed to improve employee health and reduce healthcare costs, aligning with MYH's long-term goals. This comprehensive initiative is expected to generate significant savings and enhance employee wellbeing through targeted wellness programs and innovative health management solutions.

Part 2

Project Scope Management

In this part, we will detail the project scope, clearly defining what is included and what is excluded from the project. We will also describe the development of the Work Breakdown Structure (WBS) and the Gantt chart for this project. These tools are essential for ensuring that the project remains focused on its intended goals and is executed efficiently without unnecessary expansion or deviation. By establishing these parameters, we aim to provide a structured approach to managing the project's scope, facilitating better control over project deliverables and timelines.

2.1 Stakeholder Identification

The first step before developing the project scope is to identify all stakeholders. This process ensures that the needs and expectations of every individual or group affected by the project are considered from the outset.

The stakeholders identified for the project are listed in Table 2.1.

Table 2.1: Stakeholders in the Recreation and Wellness Project

Stakeholder	Role/Interest
Employees	Direct beneficiaries, interested in wellness programs and facilities
Project Management Team	Responsible for planning, executing, and closing the project
Human Resources	Interested in employee satisfaction and retention
IT Department	Responsible for supporting technology needs and system integration
Health and Safety Officers	Ensure compliance with health and safety regulations
External Vendors	Provide necessary equipment or services for the wellness programs
Senior Management	Strategic oversight and funding decisions

2.2 Requirements Analysis

The next step in developing the project scope is to gather and list the requirements necessary for project completion. In this section, we will detail the requirement gathering process and present the requirements in a Requirement Traceability Matrix (RTM). This matrix will help ensure that each requirement is clearly linked to project objectives and can be traced throughout the project lifecycle.

2.2.1 Requirements Gathering

To ensure a thorough evaluation of all system aspects relevant to the project, requirements have been collected from various sources using diverse methods:

1. **Stakeholder Interviews:** In-depth interviews with identified stakeholders are conducted to obtain detailed insights into their specific requirements and expectations.
2. **Employee Surveys:** Surveys are distributed among employees to gather a broad spectrum of data on their perspectives and needs.

3. **Focus Groups:** Focus group discussions are organized to explore particular issues or topics of interest in greater depth with a select group of stakeholders.
4. **Review of Existing Systems and Data:** Current systems and historical data are analyzed to establish a baseline and identify potential areas for improvement.
5. **Benchmarking:** Investigated and compared existing wellness programs or applications in other organizations to identify best practices and innovative features that could be incorporated into our project.

2.2.2 Requirement Traceability Matrix

Once the requirements have been collected, we constructed a Requirement Traceability Matrix (RTM) to map each requirement back to its source. This matrix serves as a critical tool for ensuring that all requirements are clearly linked to their origins and that they are fully addressed throughout the project lifecycle.

Table 2.2 list the Requirement Traceability Matrix (RTM) with its source and links it to specific features.

Table 2.2: Requirement Traceability Matrix

ID	Requirement	Source	Feature
R1	Develop a user-friendly interface for the wellness program application.	Stakeholder Interviews	User Interface Design
R2	Ensure compliance with data privacy laws in health management applications.	Legal Requirements	Data Security

Table 2.2 – Continued from previous page

ID	Requirement	Source	Feature
R3	Implement a system for tracking employee participation in wellness activities.	Employee Surveys	Activity Tracking
R4	Integrate third-party services for mental health resources.	Focus Groups	Third-Party Integration
R5	Create a feedback mechanism for users to report issues and suggestions.	Employee Surveys	User Feedback System
R6	Enable customization of wellness programs to meet individual health goals.	Stakeholder Interviews	Personalization Settings

2.3 Project Scope Statement - Version 1

This section presents the initial version of the project scope statement as created by the project manager. The document outlines key project objectives, deliverables, and the overall approach.

Project Scope Statement: Recreation and Wellness Intranet Project

Prepared by: Tony Prince, Project Manager
Version 1

Project Start Date: March 18, 2024

Project Budget

\$200,000

Summary and Justification

The Recreation and Wellness Intranet project is designed to enhance staff health and reduce internal costs within a year, in alignment with MYH's strategic objectives. The project involves developing and deploying a user-friendly web-based application within a six-month period, with a budget of \$200,000. This investment aims to negotiate lower health insurance premiums, with projected annual benefits of \$600,000 and a total estimated saving of \$2.4 million over the next four years, ensuring the project's sustainability and value.

Product Characteristics and Requirements

1. **Recreational Programs:** Provide a user-friendly interface for staff to register for activities such as walking, jogging, softball, soccer, and bowling.
2. **Health-Management Programs:** Deliver programs to assist employees in managing weight, reducing stress, and quitting smoking.
3. **Data Tracking:** Implement a system to collect and analyze data on employee participation in wellness activities.
4. **Incentive Program:** Establish a rewards system to encourage active participation and goal achievement.
5. **Application Accessibility:** Ensure the application is easily accessible via the company intranet using standard internet browsers.

6. **Budget and Timeline:** Complete the project within a six-month period while adhering to the allocated budget of \$200,000.

Outcomes and Deliverables

Project Management Deliverables

The project will produce various deliverables including the business case, scope statement, work breakdown structure, schedule, cost baseline, project charter, team charter, progress reports, final project presentation, final project report, and a lessons-learned document, among other necessary documentation.

Product Deliverables

1. **Survey:** Develop and deploy a survey to collect feedback on employee preferences for recreational and health programs.
2. **Recreational Program:** Initiate a range of recreational activities based on employee interests.
3. **Health-Management Program:** Design and offer programs targeting weight management, stress reduction, and smoking cessation.
4. **Data Tracking System:** Set up a system to monitor and report employee participation in wellness activities.
5. **Incentive Program:** Design and implement an incentive scheme to boost employee participation.
6. **Testing:** Perform extensive testing to verify application functionality and user accessibility.
7. **Training:** Conduct training sessions to educate employees on how to effectively use the application.
8. **Announcement:** Implement promotional activities to inform and engage employees about the application's benefits.

Project Success Criteria

The project must meet specified requirements to fulfill company goals and employee needs, ensuring the application operates seamlessly. It is imperative to complete the project within the six-month timeframe and budget of \$200,000. Achieving project independence within a year of implementation is critical to realizing the maximum benefits for the company and its employees.

2.4 Work Breakdown Structure

A comprehensive Work Breakdown Structure (WBS) has been developed to systematically organize and define the total scope of the "Recreation and Wellness Intranet" project. This structure delineates all key deliverables and breaks them down into manageable components, facilitating more effective planning and execution.

The WBS for our project is meticulously organized into five distinct phases, each tailored to ensure structured progress and effective management throughout the project lifecycle. These phases are as follows:

1. Initiation:

- Proposal: Document the initial proposal provided by MYH.
- Project Analysis: Perform initial feasibility and scope analysis.
- Objectives Analysis: Align project objectives with strategic goals.
- Proposal Reanalysis: Refine the proposal based on initial findings.
- Financial Analysis: Calculate financial metrics like NPV and ROI.
- Business Case: Develop and finalize the business case.

2. Planning:

- Stakeholder Identification: Identify and document all key stakeholders.
- Requirements Analysis: Detailed analysis of project requirements.
- Requirement Gathering: Collection of specific system requirements.
- Requirement Traceability Matrix: Creation of an RTM.
- Project Scope: Development of a detailed project scope document.
- Work Breakdown Structure: Create a detailed WBS for task organization.

- Gantt Chart: Develop a Gantt chart to outline project timelines.

3. Execution:

- Project Quality Documentation: Set standards for project quality.
- Project Resource Documentation: Document all project resources.
- Project Risk Documentation: Assess and document project risks.
- UML Diagram and System Design: Create UML diagrams and system designs.

4. Monitoring and Control:

- Standard Draft Preparation: Develop standardized document templates.
- Version Control: Implement version control systems like GitHub.
- Performance Tracking: Monitor project performance against planned metrics.

5. Closure:

- Final Documentation: Compile comprehensive project documentation.
- Presentation: Prepare and deliver the final project presentation to MYH leadership.

6. Post-Project Evaluation:

- Evaluate project outcomes against initial objectives.
- Document lessons learned and provide recommendations for future projects.

Each of these phases plays a crucial role in the structured and successful delivery of the project, ensuring that all objectives are met and the project delivers the intended benefits.

Figure 2.1 provides a visual representation of the Work Breakdown Structure in the form of a flowchart, illustrating the hierarchical organization of project tasks.

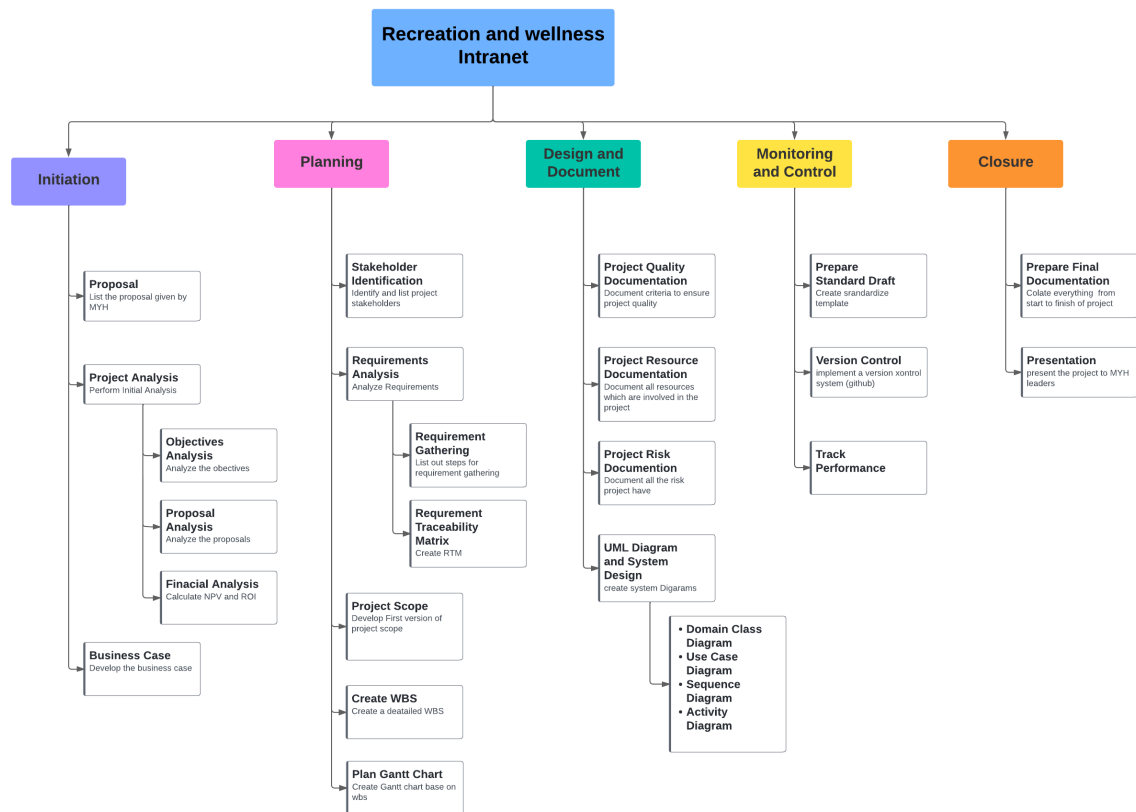


Figure 2.1: Work Breakdown Structure

2.5 Initial Gantt Chart

The initial Gantt chart, which outlines the project task and dependencies, is depicted in Figure 2.2 and 2.3.


1		Initiation	1 day?
2		Review Proposals	1 day?
3		Project Analysis	1 day?
4		Objective Analysis	1 day?
5		Proposal Analysis	1 day?
6		Create Weighted Model	1 day?
7		Financial Analysis	1 day?
8		Calculate NPV	1 day?
9		Calculate ROI	1 day?
10		Business Case	1 day?
11		Summarize Project	1 day?
12		Prepare Business Case Document	1 day
13		Planning	1 day?
14		Stakeholder Identification	1 day?
15		Requirement Analysis	1 day?
16		Requirement Gathering	1 day?
17		Requirement Traceability Matrix	1 day?
18		Project Scope	1 day?
19		Write first Project Scope	1 day?
20		WBS	1 day?
21		Gantt Chart	1 day?

Figure 2.2: Gantt Chart

22		☐ Design and Document	1 day?
23		☐ Project Quality Documentation	1 day?
24		Create Petro Chart	1 day?
25		☐ Project Resource Documentation	1 day?
26		Responsibility Matrix	1 day?
27		☐ Project Risk Documentation	1 day?
28		Positive and Negative Risk	1 day?
29		Risk Action	1 day?
30		☐ UML Diagram and System Design	1 day?
31		Domain Class Diagram	1 day?
32		Use Case Diagram	1 day?
33		Sequence Diagram	1 day?
34		Activity Diagram	1 day?
35		☐ Monitoring and Control	1 day?
36		☐ Prepare First Draft	1 day?
37		Latex Template	1 day?
38		☐ Version Control	1 day?
39		Setup Github	1 day?
40		Track Performance	1 day?
41		☐ Closure	1 day?
42		Prepare Final Document	1 day?
43		Presentation	1 day?

Figure 2.3: Gantt Chart

Part 3

Project Schedule Management

In this section, we will elaborate on the subsequent activities that followed the development of the initial Gantt chart and Work Breakdown Structure (WBS). We will provide detailed information about the development team members and the milestones that have been established. Finally, we will present the final Gantt chart and the network diagram, illustrating the comprehensive planning and scheduling of the project.

3.1 Project Team

- **Project Manager:** Tony Prince
- **Network Specialist:** Karan Goel
- **Business Analyst:** Banin Sensha Shrestha
- **Programmer/Analyst:** Dipesh Baral
- **Programmer/Analyst:** Kushal Rimal
- **Programmer/Analyst:** Affan Mehmood

3.2 Project Milestones

1. **Project Kick-Off Milestone:** This marks the official start of the project, involving setting up and conducting the kick-off meeting. The agenda is prepared and all team members and stakeholders are notified and encouraged to understand their roles and responsibilities.
2. **Budget Approval Milestone:** Achieved upon successful estimation and approval of the project budget, encompassing tasks such as budget estimation and securing necessary approvals.
3. **Planning Phase Completion Milestone:** Completion of the planning phase, including integration of data analysis tools, creation of the Work Breakdown Structure (WBS), survey preparation, requirements analysis, risk management planning, budget estimation, and project schedule development. This milestone transitions the project from planning to execution.
4. **Gantt Chart Creation Milestone:** Completion of the project scheduling phase with the creation of the Gantt chart, facilitating visual tracking of project activities and timelines.
5. **Design Phase Completion Milestone:** Completion of the design phase, including the design of user interfaces and back-end systems, approval of Business Process Documents (BPD), and planning for hardware design and integration. This milestone prepares the project for a smooth transition to the development phase.
6. **Execution Phase Completion Milestone:** Represents the end of the execution phase, with major tasks such as the implementation of system components

like Recreation Programs Registration, Health-Management Classes Registration, Tracking System, Incentive System, and hardware installation completed.

7. **Testing and Quality Assurance Milestone:** Focuses on ensuring the system's readiness and reliability before deployment, including all levels of testing (unit, integration, user) and resolution of any issues, preparing the system for go-live.
8. **Monitoring and Promotion Milestone:** Beyond project completion, this milestone ensures the ongoing operation and promotion of the system, including system monitoring, addressing operational issues, gathering user feedback for continuous improvement, providing hyper-care support, and promotional activities to boost system usage among employees.

The Recreation and Wellness Intranet project's work breakdown structure with eight milestones is depicted in Figure 3.1, and 3.2 respectively.


1		Initiation	10 days?	18/03/24 8:00 ...	29/03/24 5:00 PM	
2		Review Proposals	1 day?	18/03/24 8:00 AM	18/03/24 5:00 PM	
3		Project Kickoff Milestone	1 day?	19/03/24 8:00 AM	19/03/24 5:00 PM	2
4		Project Analysis	4 days?	20/03/24 8:00 ...	25/03/24 5:00 PM	3
5		Objective Analysis	1 day?	20/03/24 8:00 AM	20/03/24 5:00 PM	
6		Proposal Analysis	2 days?	21/03/24 8:00 ...	22/03/24 5:00 PM	5
7		Create Weighted Model	2 days?	21/03/24 8:00 AM	22/03/24 5:00 PM	
8		Financial Analysis	2 days?	21/03/24 8:00 ...	22/03/24 5:00 PM	5
9		Calculate NPV	2 days?	21/03/24 8:00 AM	22/03/24 5:00 PM	
10		Calculate ROI	2 days?	21/03/24 8:00 AM	22/03/24 5:00 PM	
11		Budger Milestone	1 day?	25/03/24 8:00 AM	25/03/24 5:00 PM	6;8
12		Business Case	4 days?	26/03/24 8:00 ...	29/03/24 5:00 PM	11
13		Summarize Project	1 day?	26/03/24 8:00 AM	26/03/24 5:00 PM	
14		Prepare Business Case Document	4 days?	26/03/24 8:00 AM	29/03/24 5:00 PM	
15		Planning	12 days?	1/04/24 8:00 AM	16/04/24 5:00 PM	1
16		Stakeholder Identification	1 day?	1/04/24 8:00 AM	1/04/24 5:00 PM	
17		Requirement Analysis	4 days?	1/04/24 8:00 AM	4/04/24 5:00 PM	
18		Requirement Gathering	4 days?	1/04/24 8:00 AM	4/04/24 5:00 PM	
19		Requirement Tracebility Matrix	4 days?	1/04/24 8:00 AM	4/04/24 5:00 PM	
20		Project Scope	4 days?	5/04/24 8:00 AM	10/04/24 5:00 PM	17
21		Write first Project Scope	4 days?	5/04/24 8:00 AM	10/04/24 5:00 PM	
22		WBS	2 days?	11/04/24 8:00 AM	12/04/24 5:00 PM	20
23		Gantt Milestone	2 days?	15/04/24 8:00 AM	16/04/24 5:00 PM	22
24		Planning Milestone	0 days?	16/04/24 5:00 PM	16/04/24 5:00 PM	23

Figure 3.1: Gantt Chart with Milestone 1

25	☐Design and Document	11 days?	17/04/24 8:00 ...	1/05/24 5:00 PM	24
26	☐Project Quality Documentation	5 days?	17/04/24 8:00 ...	23/04/24 5:00 PM	
27	Create Petro Chart	5 days?	17/04/24 8:00 AM	23/04/24 5:00 PM	
28	☐Project Resource Documentation	5 days?	17/04/24 8:00 ...	23/04/24 5:00 PM	
29	Responsibility Matrix	5 days?	17/04/24 8:00 AM	23/04/24 5:00 PM	
30	☐Project Risk Documentation	5 days?	17/04/24 8:00 ...	23/04/24 5:00 PM	
31	Positive and Negative Risk	5 days?	17/04/24 8:00 AM	23/04/24 5:00 PM	
32	Risk Action	5 days?	17/04/24 8:00 AM	23/04/24 5:00 PM	
33	☐UML Diagram and System Design	5 days?	24/04/24 8:00 ...	30/04/24 5:00 PM	26;28;30
34	Domain Class Diagram	5 days?	24/04/24 8:00 AM	30/04/24 5:00 PM	
35	Use Case Diagram	5 days?	24/04/24 8:00 AM	30/04/24 5:00 PM	
36	Sequence Diagram	5 days?	24/04/24 8:00 AM	30/04/24 5:00 PM	
37	Activity Diagram	5 days?	24/04/24 8:00 AM	30/04/24 5:00 PM	
38	Design Milestone	1 day?	1/05/24 8:00 AM	1/05/24 5:00 PM	33
39	☐Monitoring and Control	7 days?	17/04/24 8:00 ...	25/04/24 5:00 PM	24
40	☐Prepare First Draft	6 days?	17/04/24 8:00 ...	24/04/24 5:00 PM	
41	Latex Template	6 days?	17/04/24 8:00 AM	24/04/24 5:00 PM	
42	☐Version Control	1 day?	25/04/24 8:00 ...	25/04/24 5:00 PM	40
43	Setup Github	1 day?	25/04/24 8:00 AM	25/04/24 5:00 PM	
44	Execution, Testing and Quality Milestone	1 day?	26/04/24 8:00 AM	26/04/24 5:00 PM	43
45	☐Closure	16 days?	2/05/24 8:00 AM	23/05/24 5:00 PM	38;44
46	Prepare Final Document	10 days?	2/05/24 8:00 AM	15/05/24 5:00 PM	
47	Presentation	6 days?	16/05/24 8:00 AM	23/05/24 5:00 PM	46
48	Monitoring and Promotion Milestone	0 days?	23/05/24 5:00 PM	23/05/24 5:00 PM	47

Figure 3.2: Gantt Chart with Milestone 2

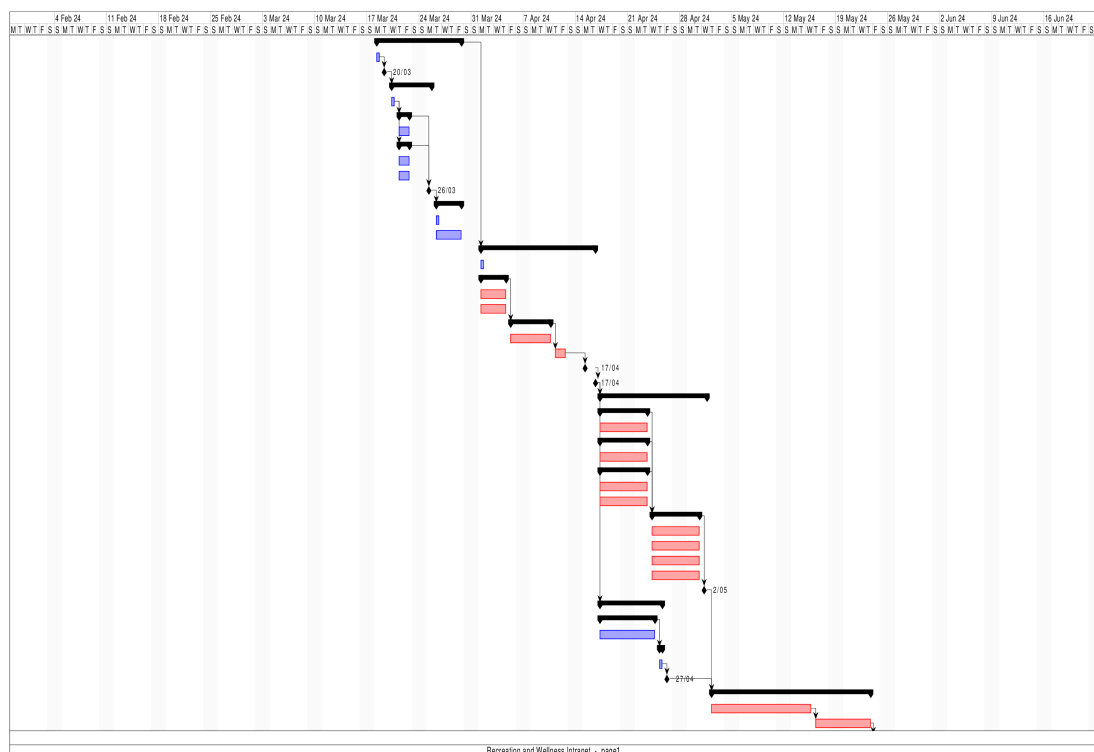


Figure 3.3: Final Gantt Chart

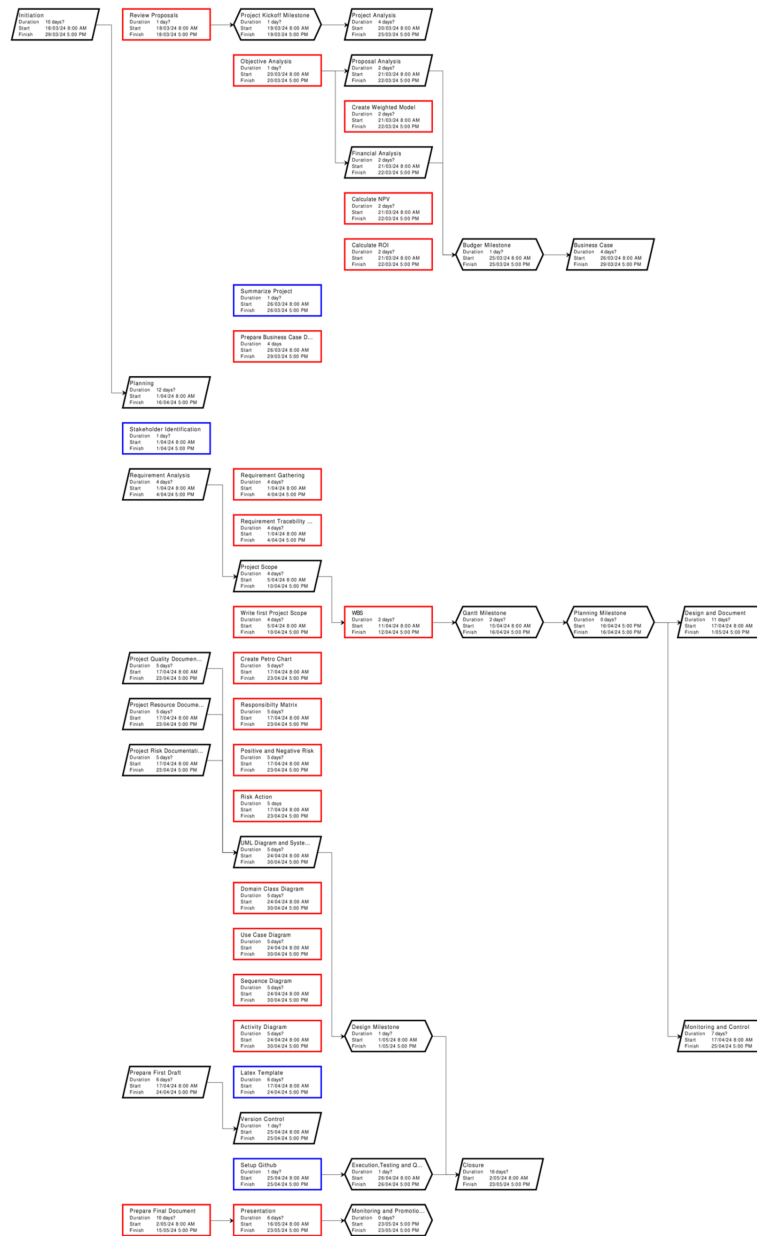


Figure 3.4: Network Diagram

3.3 Milestone Report

This section lists the status report on each milestone.

Late Milestones

Milestone Name	Expected Date	Finish Date	Delayed by
Execution Phase Completion Milestone	Fri 26/04/24	Wed 08/05/24	13 days
Testing and Quality Assurance Milestone	Fri 26/04/24	Wed 08/05/24	13 days
Design Phase Completion Milestone	Wed 01/05/24	Wed 08/05/24	7 days

Milestones Due This Month

Milestone Name	Finish Date
Monitoring and Promotion Milestone	Thu 23/05/24

Completed Milestones

Milestone Name	Finish Date
Project Kick-Off Milestone	Tue 19/03/24
Budget Approval Milestone	Mon 25/03/24
Gantt Chart Creation Milestone	Tue 16/04/24
Planning Phase Completion Milestone	Tue 16/04/24
Execution Phase Completion Milestone	Wed 08/05/24
Testing and Quality Assurance Milestone	Wed 08/05/24
Design Phase Completion Milestone	Wed 08/05/24
Monitoring and Promotion Milestone	Thu 23/05/24

Next Milestone

Monitoring and Promotion (Thu 23/05/24)

Milestone Graph

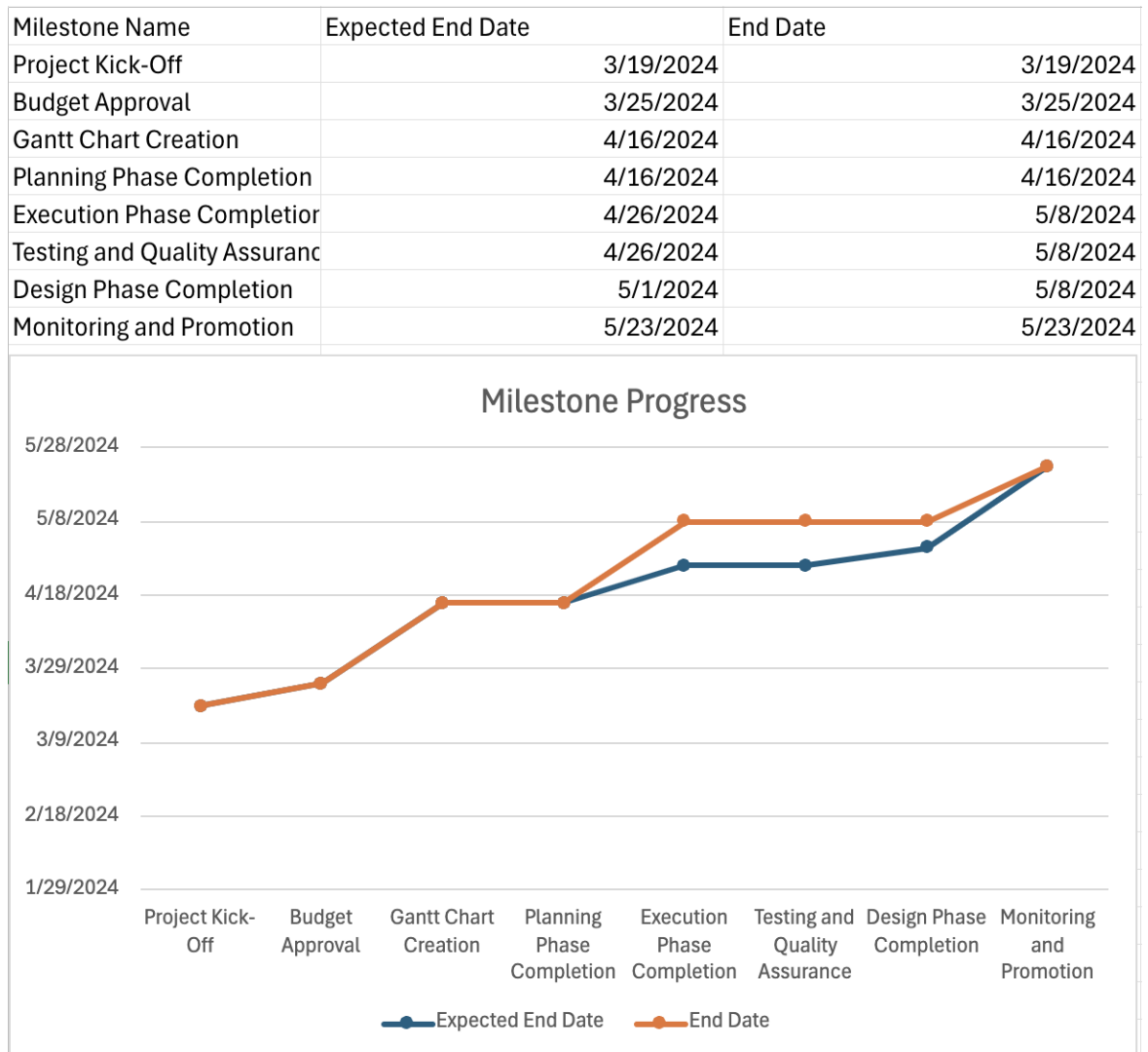


Figure 3.5: Milestone Progress Report

Part 4

Project Quality Management

Need to be added

4.1 Section1

Need to be added

4.2 Section2

Need to be added

Part 5

Project Resource Management

This section of the report details the testing process and resource allocation for the project.

5.1 Testing Process and Resource Allocation

To allocate resources properly, we begin by creating a Work Breakdown Structure (WBS) for testing, as shown in Table 5.1.

Index	Task	Time	Deliverable
1	Write Test Plan	1 week	Test Plan Document
1.2	Unit Testing	1 week	Unit Test Reports
1.3	Integration Testing	2 weeks	
1.3.1	Registration Module	5 days	Integration Test Reports for Registration
1.3.2	Tracking Module	5 days	Integration Test Reports for Tracking
1.3.3	Incentives Module	4 days	Integration Test Reports for Incentives
1.4	System Testing	1 week	System Test Reports
1.5	User Acceptance Testing	1 week	User Acceptance Test Reports

Table 5.1: Work breakdown structure for testing

5.1.1 Responsibility assignment matrices (RAM)

		WBS activities →								
OBS units ↓		1	1.1	1.2	1.3	1.3.1	1.3.2	1.3.3	1.4	1.5
	Project Manager	R	R	RP	R	RP	RP	RP	R	RP
	Programmer/Analyst	P			R					
	Aspiring Project Manage			RP	P	P	P	P		
	Network Specialist	R			P				P	
	Business Analyst				R					P
	Human Resources Staff Member									
	Finance Staff Member									
	User Representatives									R
	Consulting Firm									P

Figure 5.1: RAM Matrix

5.1.2 RACI Chart for Testing Tasks

To clarify roles and responsibilities for testing tasks, the following RACI chart has been created:

Table 5.2: RACI Chart for Testing Tasks

Task	Project Manager	Programm	Network Specialist	Business Analyst	User Rep	Consulting Firm
Write Test Plan	R	R/C	C	C	I	R/C

Table 5.2: (continued)

Task	Project Manager	Programm	Network Specialist	Business Analyst	User Rep	Consulting Firm
Unit Test- ing	R	R/C	C	C	I	R/C
Integration Testing	R	R/C	R/A	R/C	I	R/C
Registration Module	R	R/C	R/A	R/C	I	R/C
Tracking Module	R	R/C	R/A	R/C	I	R/C
Incentives Module	R	R/C	R/A	R/C	I	R/C
System Testing	R	R/C	R/A	R/C	A	R/C
User Ac- ceptance Testing	A	R/C	C	C	A	R/C

Part 6

Project Risk Management

Need to be added

6.1 Section1

Need to be added

6.2 Section2

Need to be added

Part 7

Project Stakeholder Management

Need to be added

7.1 Section1

Need to be added

7.2 Section2

Need to be added

Part 8

Project Closing and Lessons-Learned

Need to be added

8.1 Section1

Need to be added

8.2 Section2

Need to be added

Part 9

UML Diagrams

Need to be added yet

9.1 Domain Class Diagram

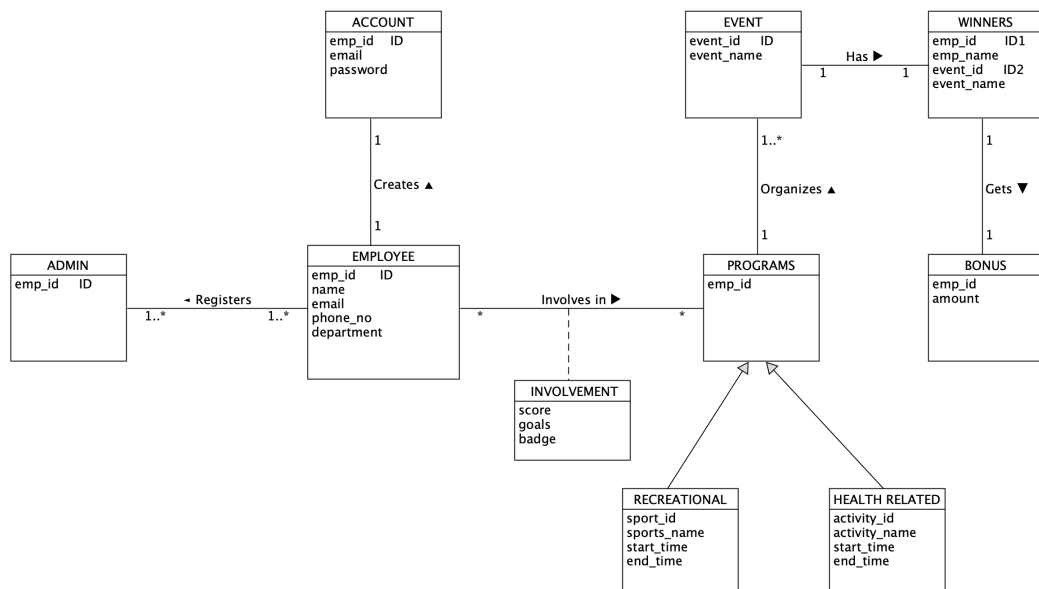


Figure 9.1: Domain Class Diagram

9.2 Use Case Diagram

Table 9.1: The Registration Subsystem Use Cases

RWIP Registration Subsystem	
Use Cases	Users/Actors
Create Account	Employee
Verify Account	Employee
Login to Account	Employee

Table 9.2: The Program Subsystem Use Cases

RWIP Program Subsystem	
Use Cases	Users/Actors
Login	Employee
Select Programs	Employee
Book/Enroll Programs	Employee
Participate in Programs	Employee
Update badges and rewards	Employee

9.3 Fully Developed Use Case Description

9.4 Sequence Diagram

9.5 Activity Diagram

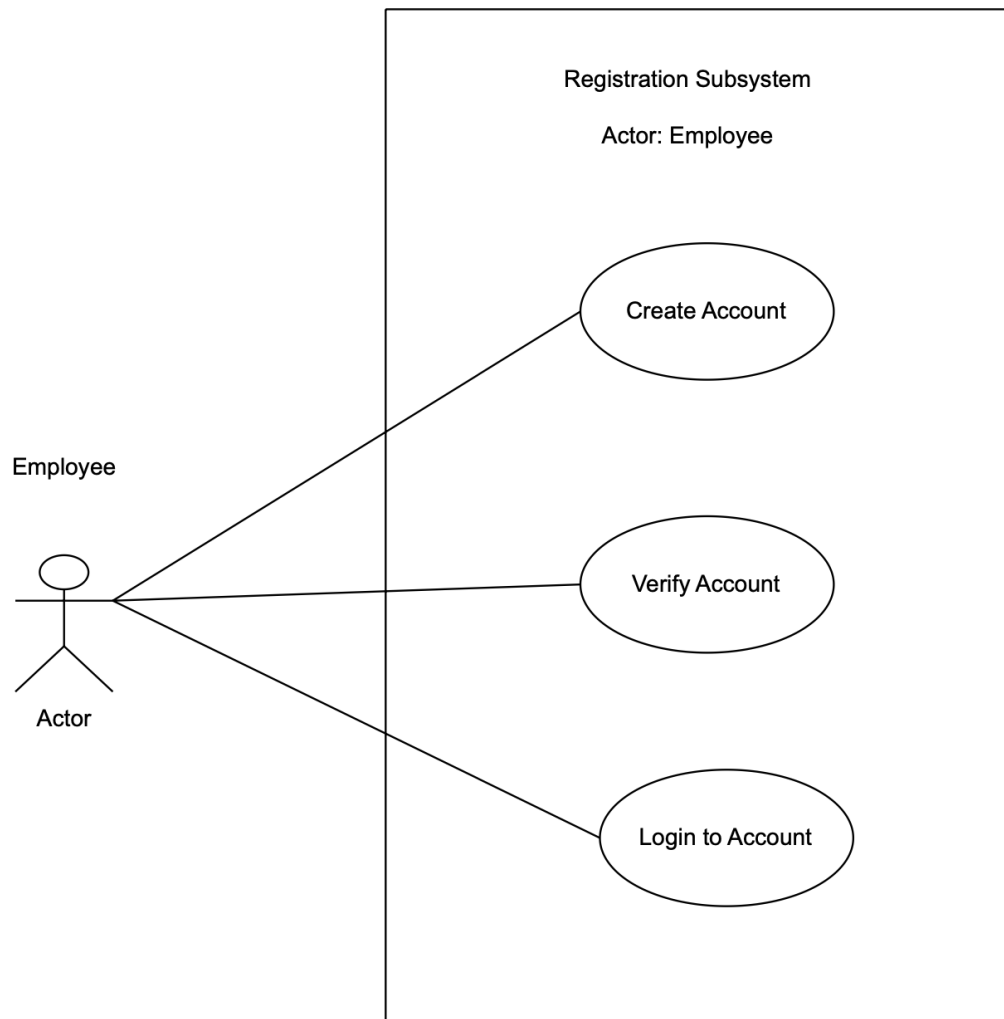


Figure 9.2: Use case diagram for Registration subsystem

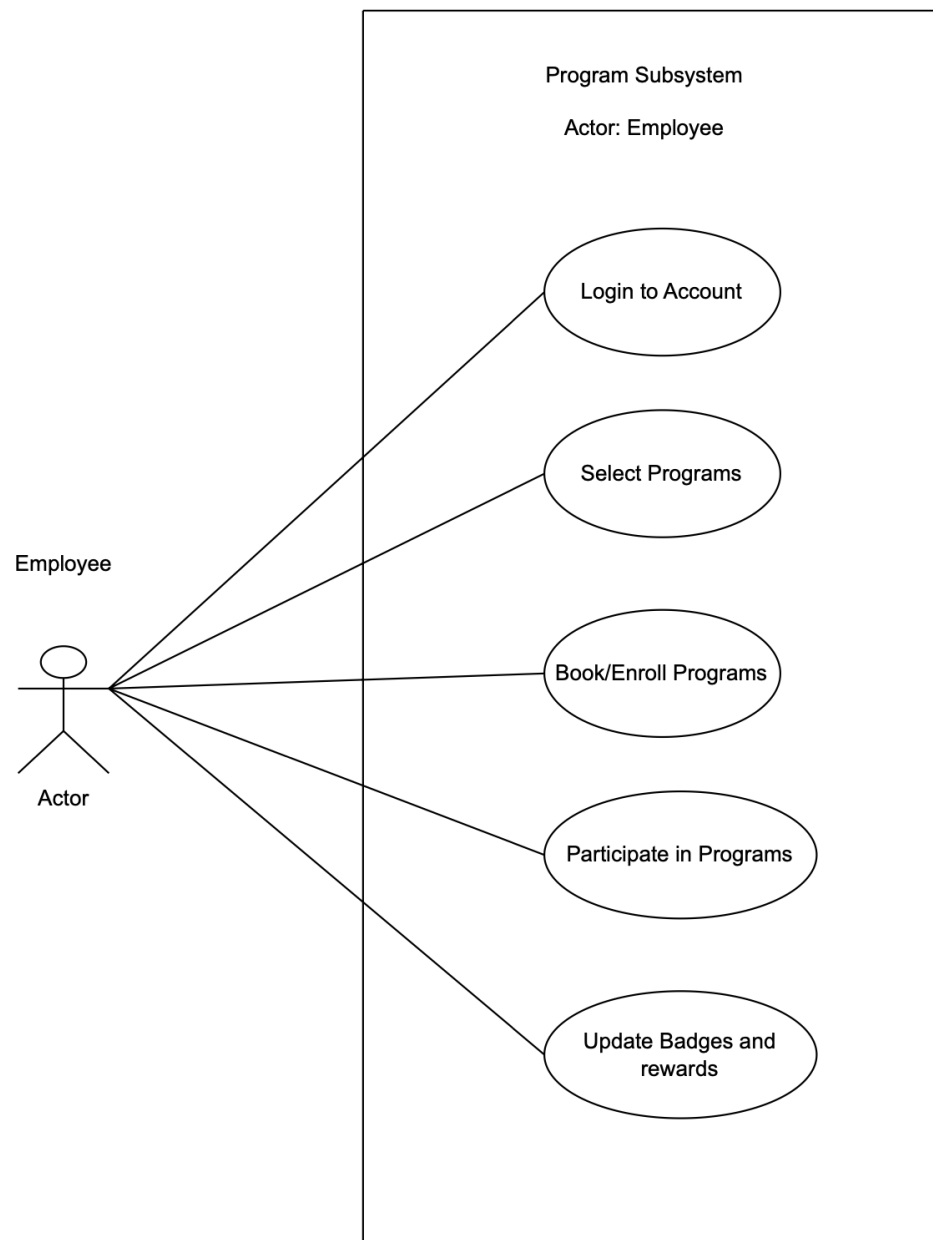


Figure 9.3: Use case diagram for Program subsystem

Table 9.3: The Event Subsystem Use Cases

RWIP Event Subsystem	
Use Cases	Users/Actors
Organise Events	HR/Admin
Notify Events	HR/Admin, Employee
Design Banner	HR/Admin
Participate in Events	Employee
Declare winners	HR/Admin, Employee

Table 9.4: The Payroll Subsystem Use Cases

RWIP Payroll Subsystem	
Use Cases	Users/Actors
Get the list of winners in different Programs	Payroll Officer, Employee
Provide bonuses	Payroll Officer, Employee
Update Payroll	Payroll Officer

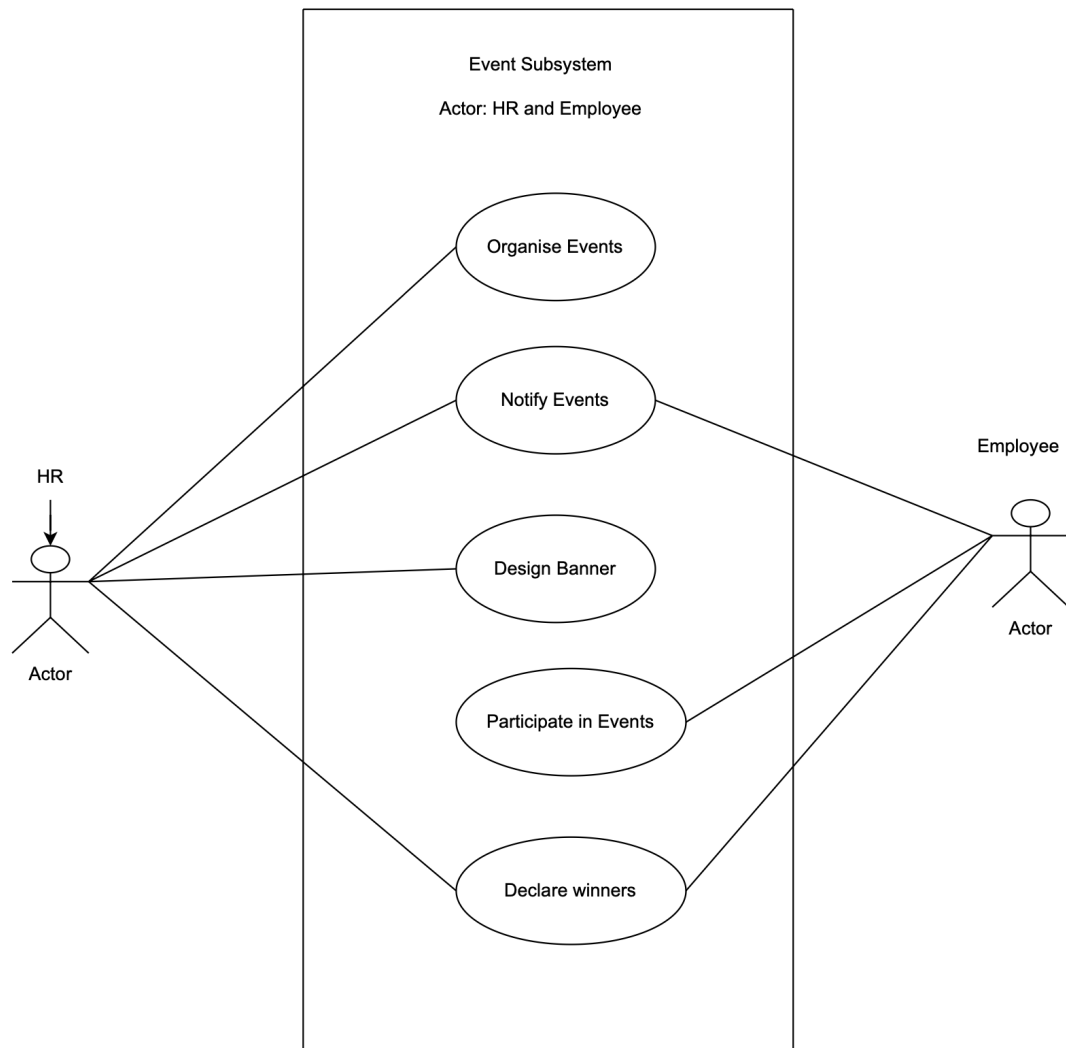


Figure 9.4: Use case diagram for Event subsystem

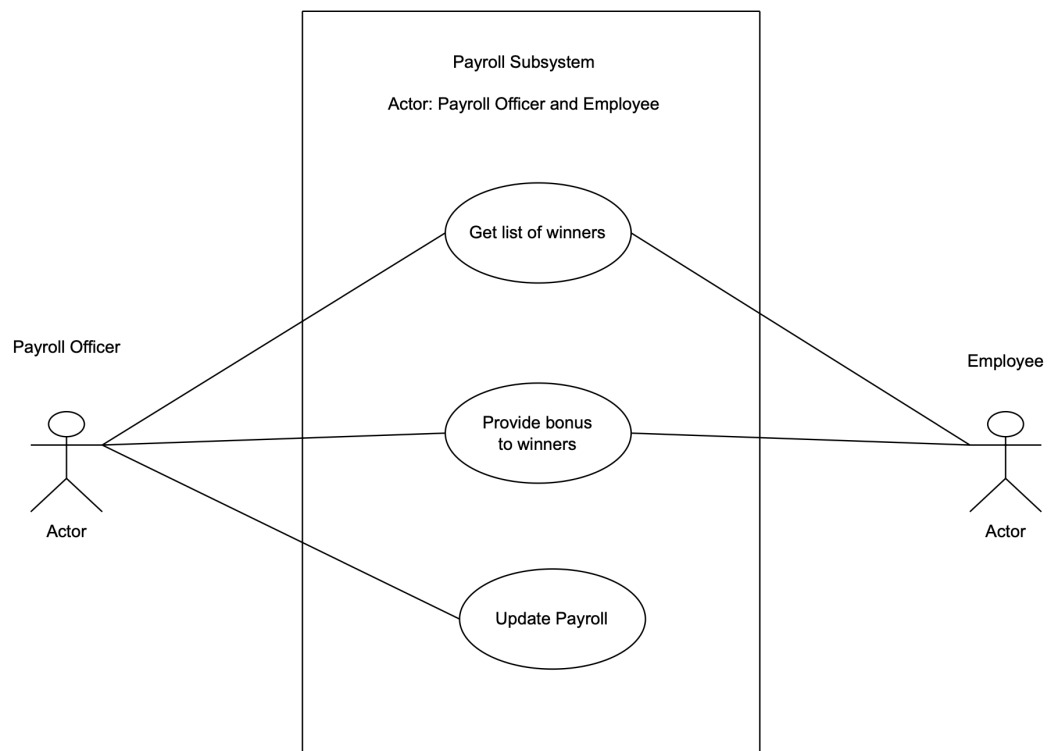


Figure 9.5: Use case diagram for Payroll subsystem

Table 9.5: The Analysis Subsystem Use Cases

RWIP Analysis Subsystem	
Use Cases	Users/Actors
Register as Admin	Analyst
Login as Admin	Analyst
Fetch Data	Analyst
Analyze Data	Analyst
Generate Report	Analyst, Developers
Make Decisions	Analyst

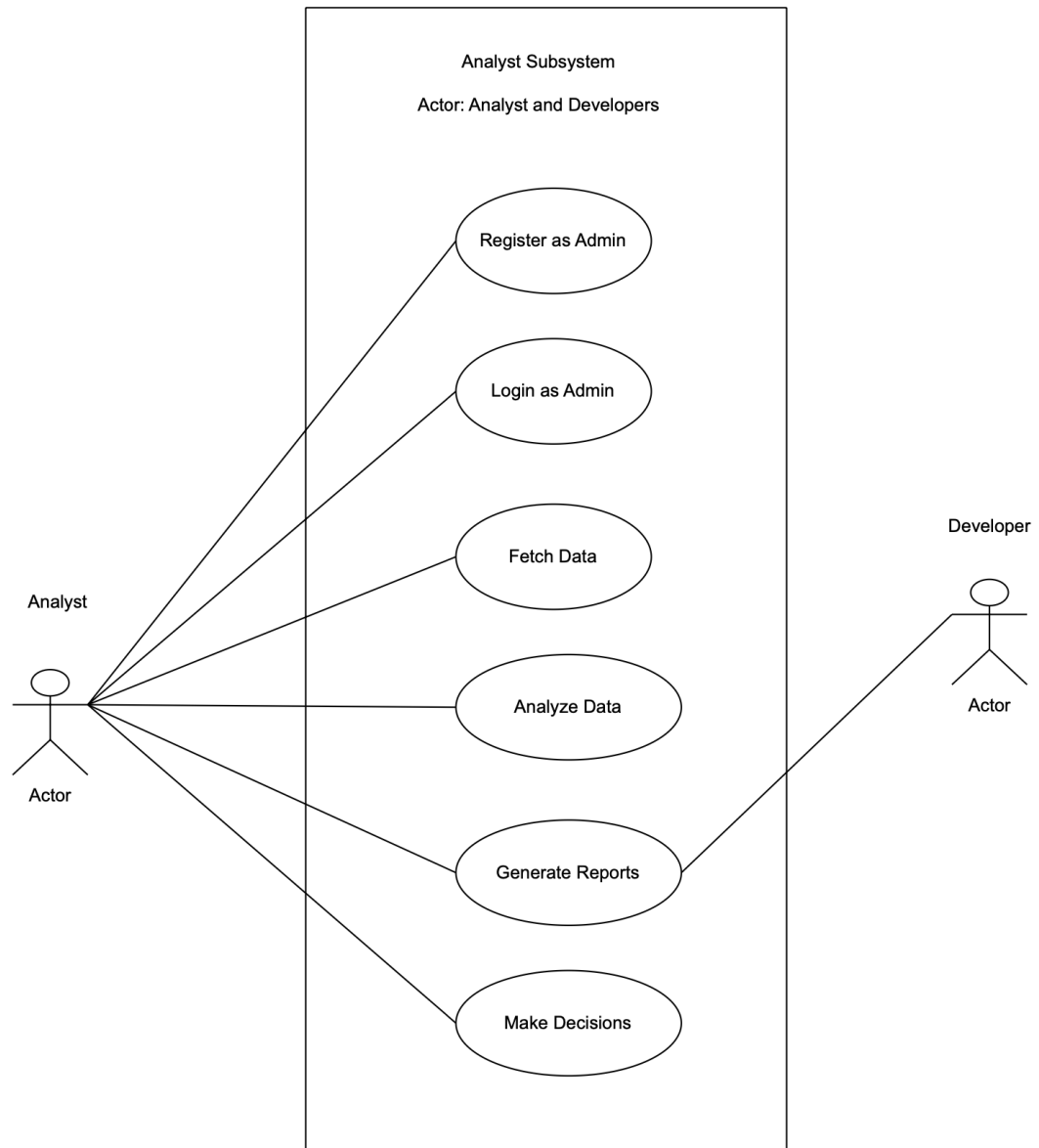


Figure 9.6: Use case diagram for Analysis subsystem

Table 9.6: Register/Create Account

Use case name:	Create employee a
Scenario:	Create online employe
Triggering event:	Employee wants to join the recreation
Brief description:	Employee signs up or creates new account by providing their emplo
Actors:	Employees
Related use cases:	Admin can create account on 1
Stakeholders:	Admin, HR
Pre-conditions:	Registration subsystem mu
Post-conditions:	Employee account must be c
Exception conditions:	Employee might not have email id

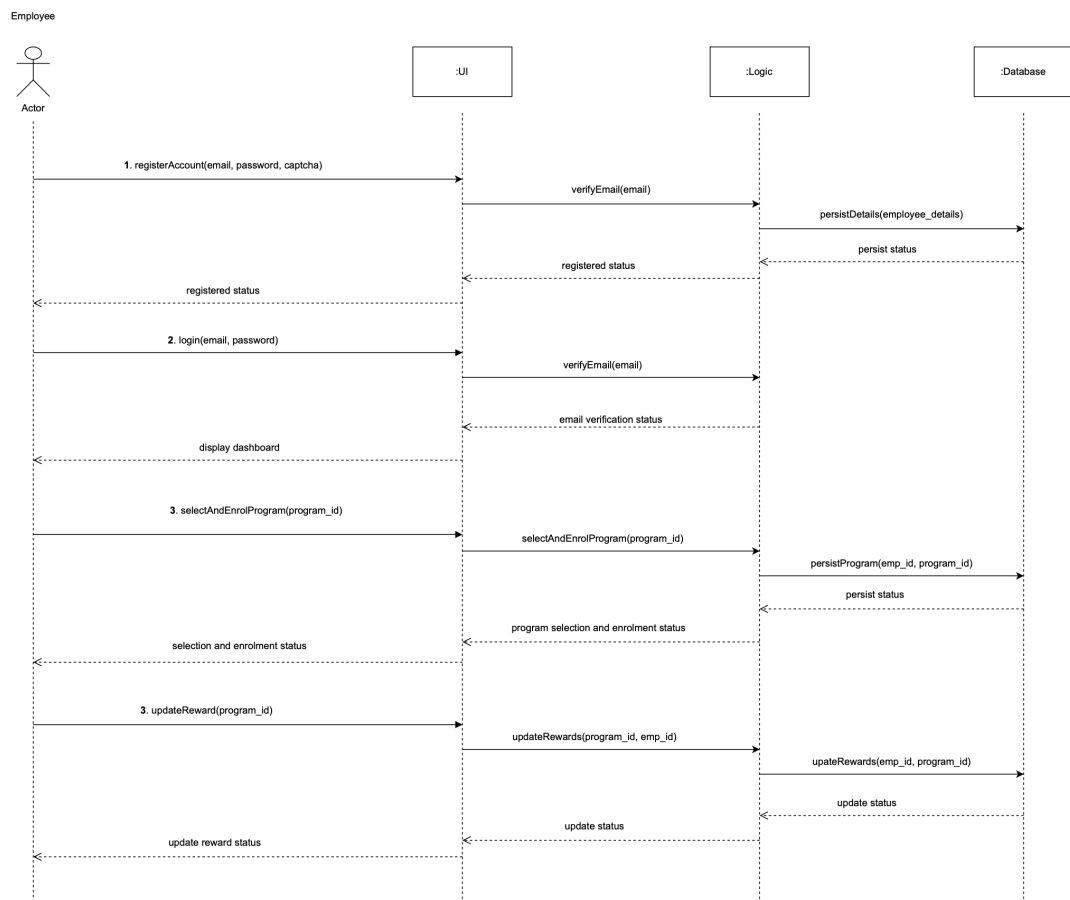


Figure 9.7: Activity Diagram of all the subsystem

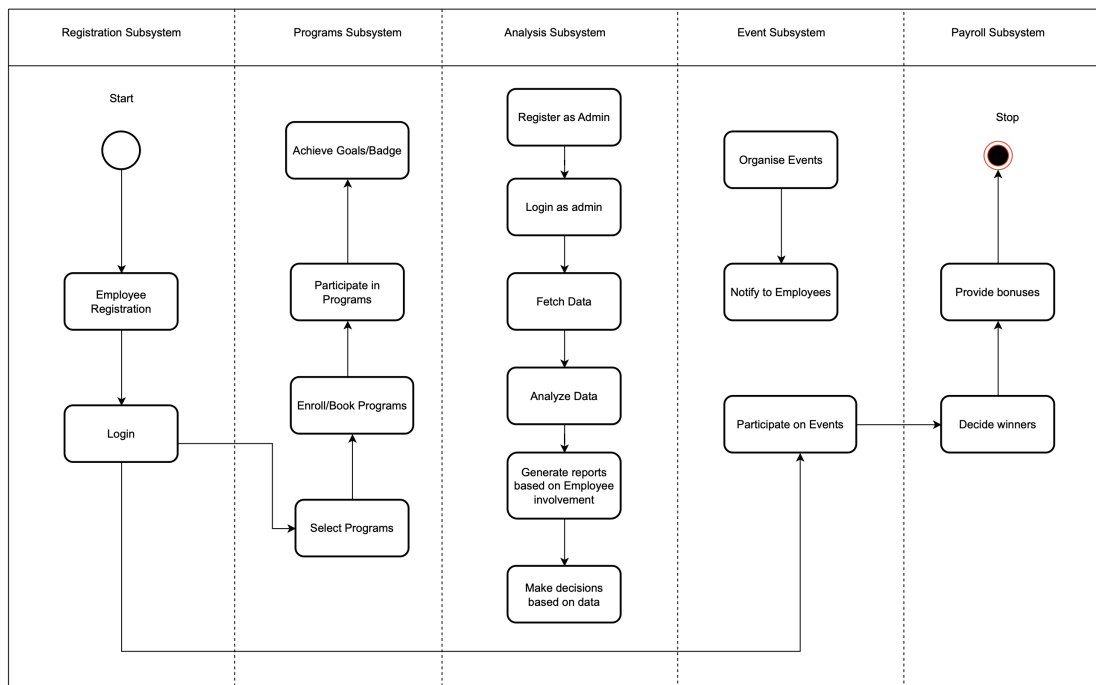


Figure 9.8: Activity Diagram of all the subsystem

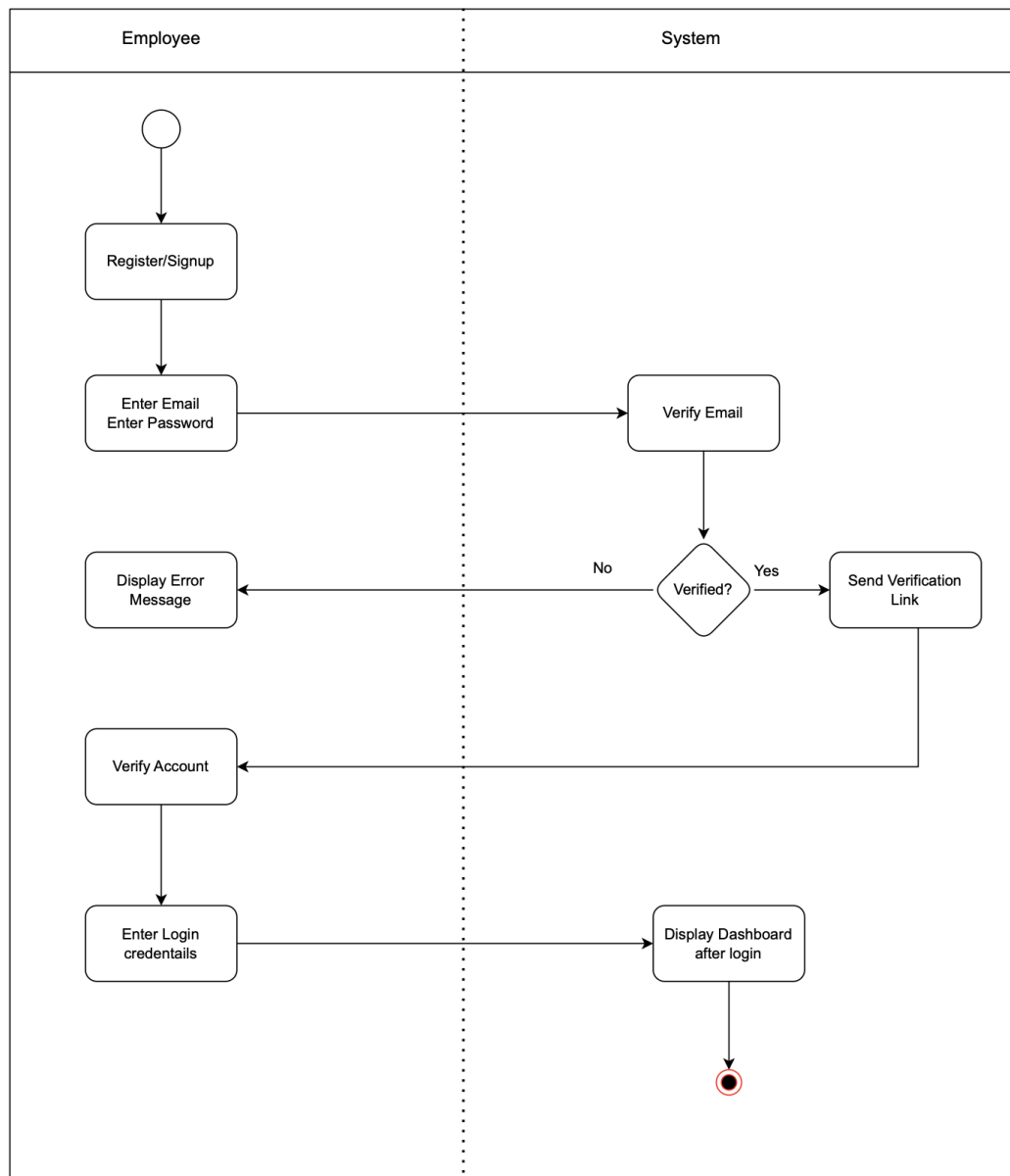


Figure 9.9: Activity Diagram of Create Account use case

Part 10

Presentation

Need to be added

10.1 Section1

Need to be added

10.2 Section2

Need to be added