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

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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. Such programs promote proactive health management among employees, reduce absenteeism, and minimize health-related costs, ultimately leading to higher job satisfaction and productivity. By prioritizing wellness, organizations create a supportive environment that values employees' physical and mental well-being, resulting in long-term benefits for individuals and the business.

Our client, Manage Your Health Inc.(MYH), recognizes the importance of workplace health programs and has tasked us with developing a project that seamlessly integrates a suite of health and wellness modules into their organizational framework. The initiative aims to foster a culture of wellness, improve employee health, and reduce insurance costs, with projected net savings over the next four years.

This report provides a comprehensive overview of system specifications and a detailed blueprint for implementing the project successfully. It presents key components, including system analysis, resource allocation, stakeholder engagement, risk assessment, and UML modeling, which collectively form 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

Part 1

Project Integration Management

Our first step in ensuring the successful delivery of this project for our client 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 client.

Here is a refined version of the section on client case study:

1.1 Client Case Study

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 our client, 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 Manage Your Health, Inc. (MYH), which are summarized in Table 1.1 based on our discussions with the client.

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 are clear, our team conducted a thorough analysis of each proposal to ensure alignment with client goals. We focused on several key metrics and assigned different weights to each criteria.

- Tie to business strategy - 10%

- Upfront cost - 25%

- Potential net savings - 25%

- Realistic technology - 15%

- In-house expertise - 10%

- Potential resistance - 15%

The results of our finding are summarized in Table 1.2.

Table 1.2: Comparison of Project Criteria and Their Impact

Criteria	Weight	Health Coverage Costs Business Model	Web-Enhanced Communications 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 savings	25%	$1,600,000	$6,000,000	$2,400,000
Realistic technology	15%	Data Analysts needed to analyze the premiums of current and past employees linked to 10 different insurance companies.	The project is highly achievable with modern technology, as we all have experience with similar systems.	The project is highly achievable with modern technology, as we all have experience with similar systems.
In-house expertise	10%	Organization might need to hire more experienced 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 management, 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 resistance since the application is relatively easy to build.	Project might not face much resistance since the application is relatively easy to build.	Senior employees might resist involvement in recreational programs due to greater responsibilities like family care. Other employees 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 shown in Figure 1.1 provides a visual representation of the model.

1.2.4 Financial Analysis

Before reaching a final conclusion on project selection, it is crucial to conduct a comprehensive financial analysis to ensure maximum benefit to our client. Our team performed an analysis on the Net Present Value (NPV) and Return on Investment (ROI) to verify that the selected project aligns with financial objectives and delivers optimal returns.
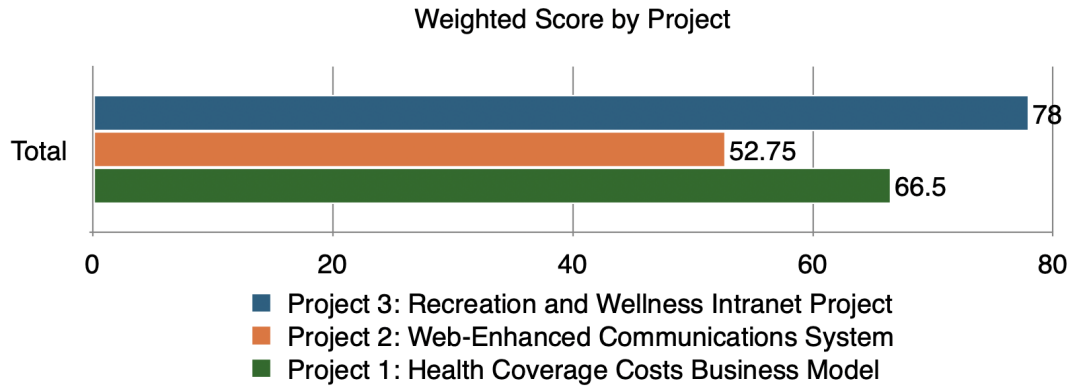
Weighted Score by Project

Figure 1.1: Weighted Score Model

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 for three projects are calculated and summarized in the Table 1.4, providing insights into the financial viability of each.

1.3   Business Case Study

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%**			

Part 2

Project Scope Management

Need to be added

2.1 Section1

Need to be added

2.2 Section2

Need to be added

Part 3

Project Schedule Management

Need to be added

3.1   Section1

Need to be added

3.2   Section2

Need to be added

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

Need to be added

5.1 Section1

Need to be added

5.2 Section2

Need to be added

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

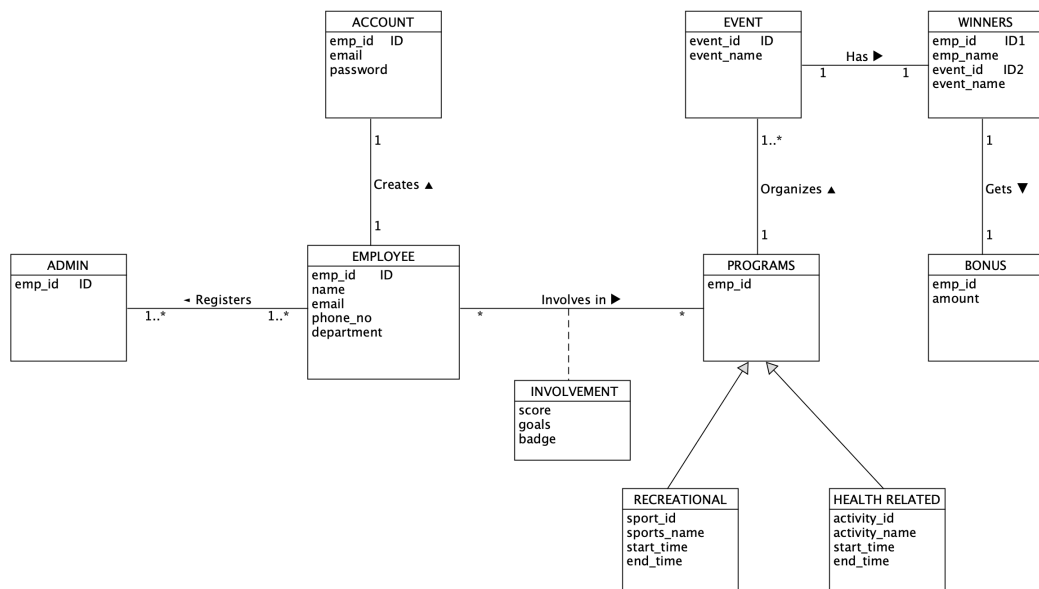Need to be added yet

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

Registration Subsystem

Actor: Employee

Create Account

Employee

Verify Account

Actor

Login to Account

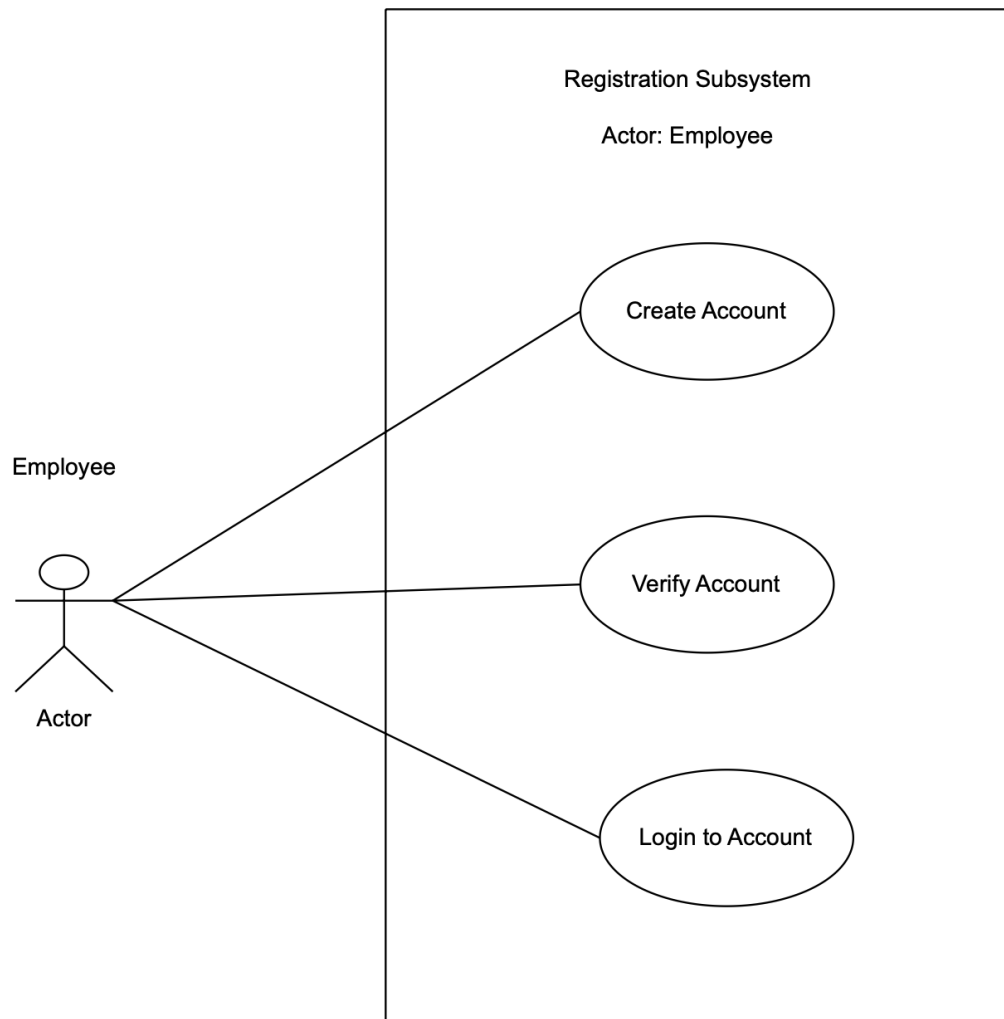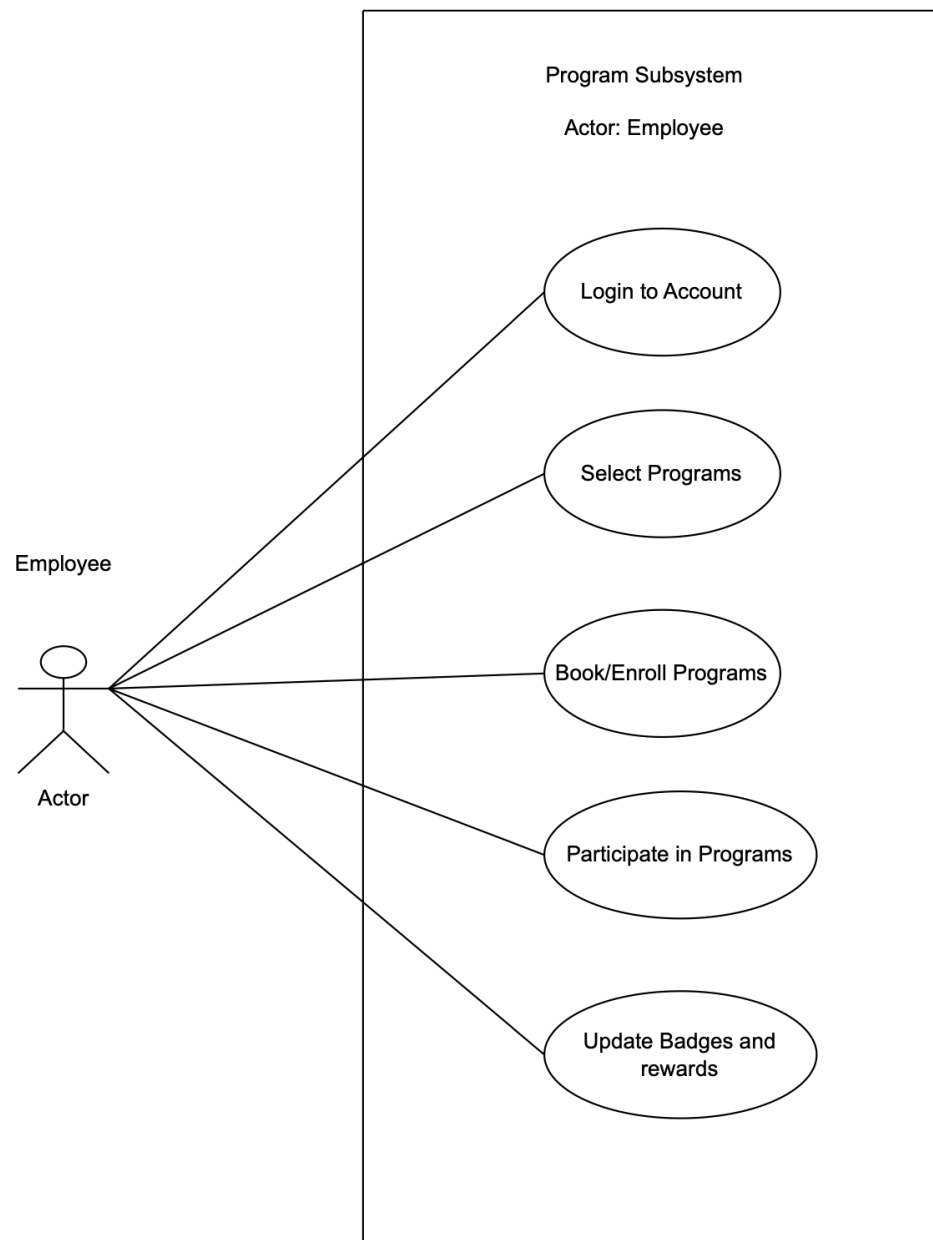Figure 9.2: Use case diagram for Registration subsystem

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

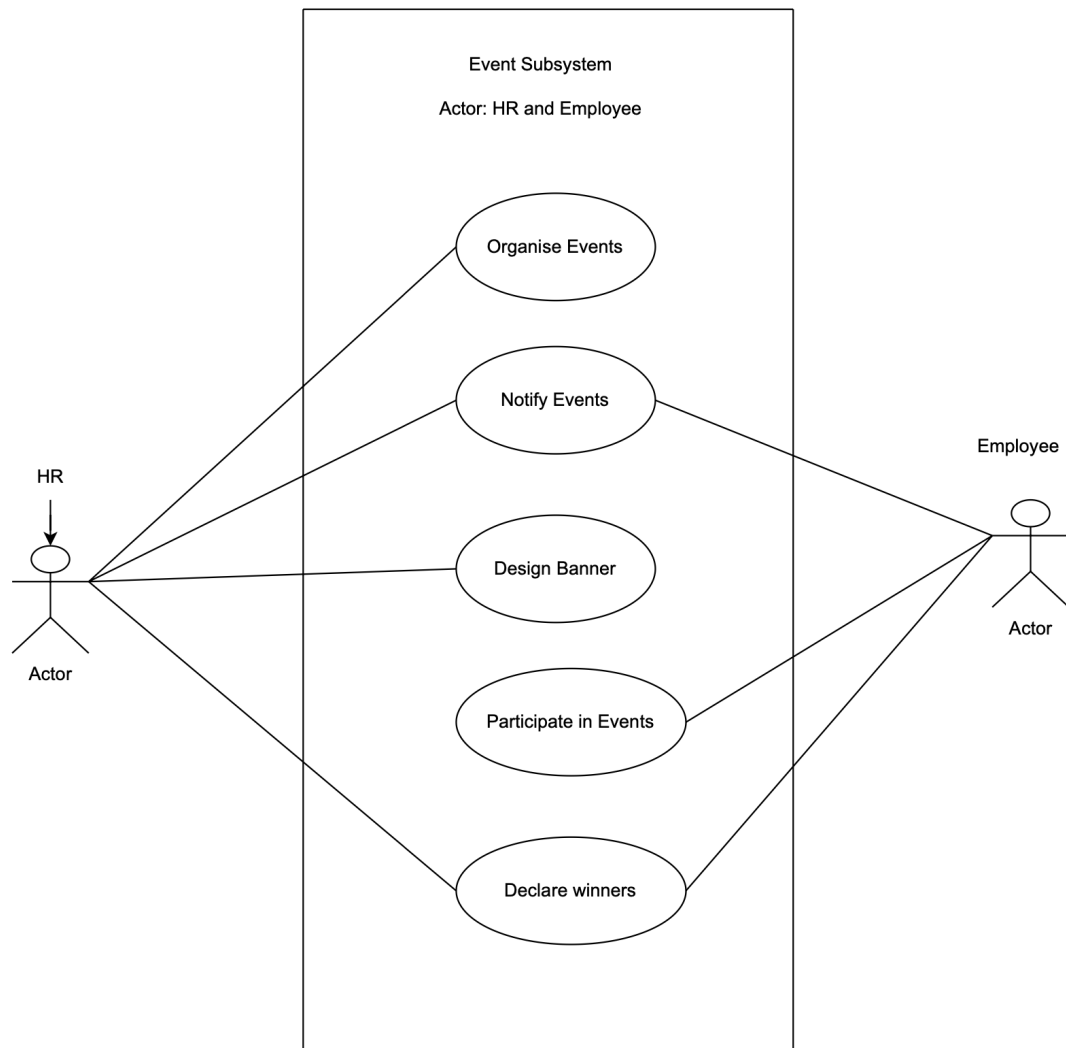| RWIP Payroll Subsystem	
Use Cases	**Users/Actors**
Get the list of winners in different Programs	Payroll Officer, Employee
Provide bonuses	Payroll Officer, Employee
Update Payroll	Payroll Officer

Event Subsystem

Actor: HR and Employee

Organise Events

Notify Events

Employee

Design Banner

HR

Participate in Events

Actor

Actor

Declare winners

Figure 9.4: Use case diagram for Event subsystem

Payroll Subsystem

Actor: Payroll Officer and Employee

Get list of winners

Payroll Officer

Provide bonus
to winners
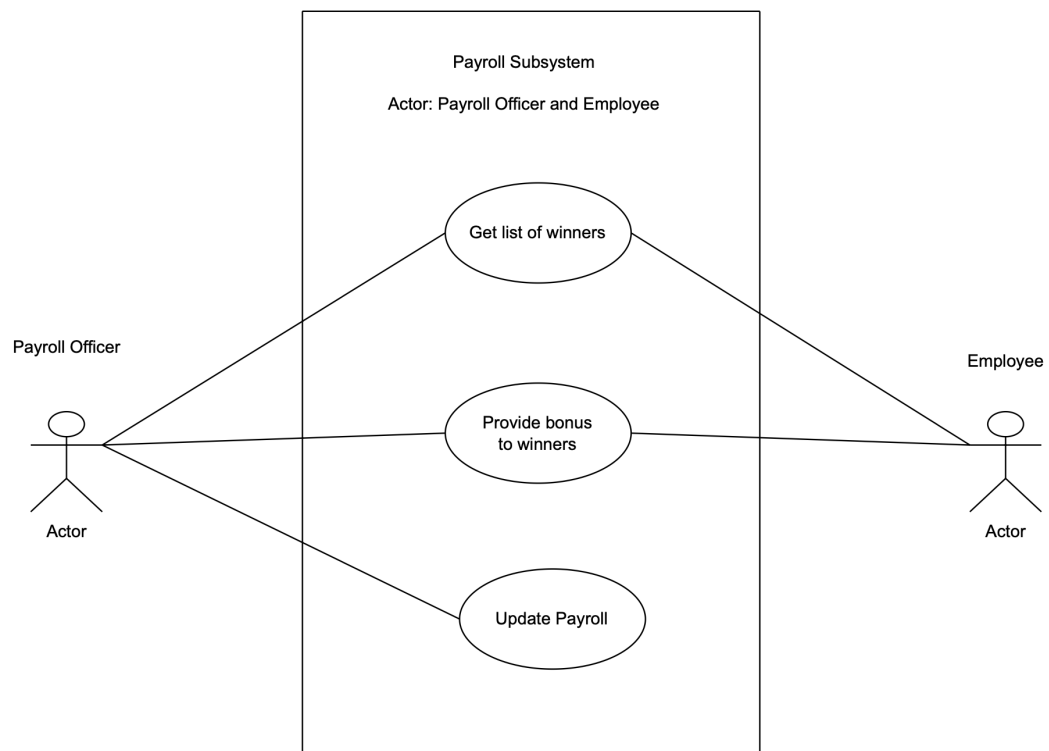
Employee

Actor

Actor

Update Payroll

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
Stakeholders:	Admin, HR
Pre-conditions:	Registration subsystem mu
Post-conditions:	Employee account must be c
Exception conditions:	Employee might not have email id
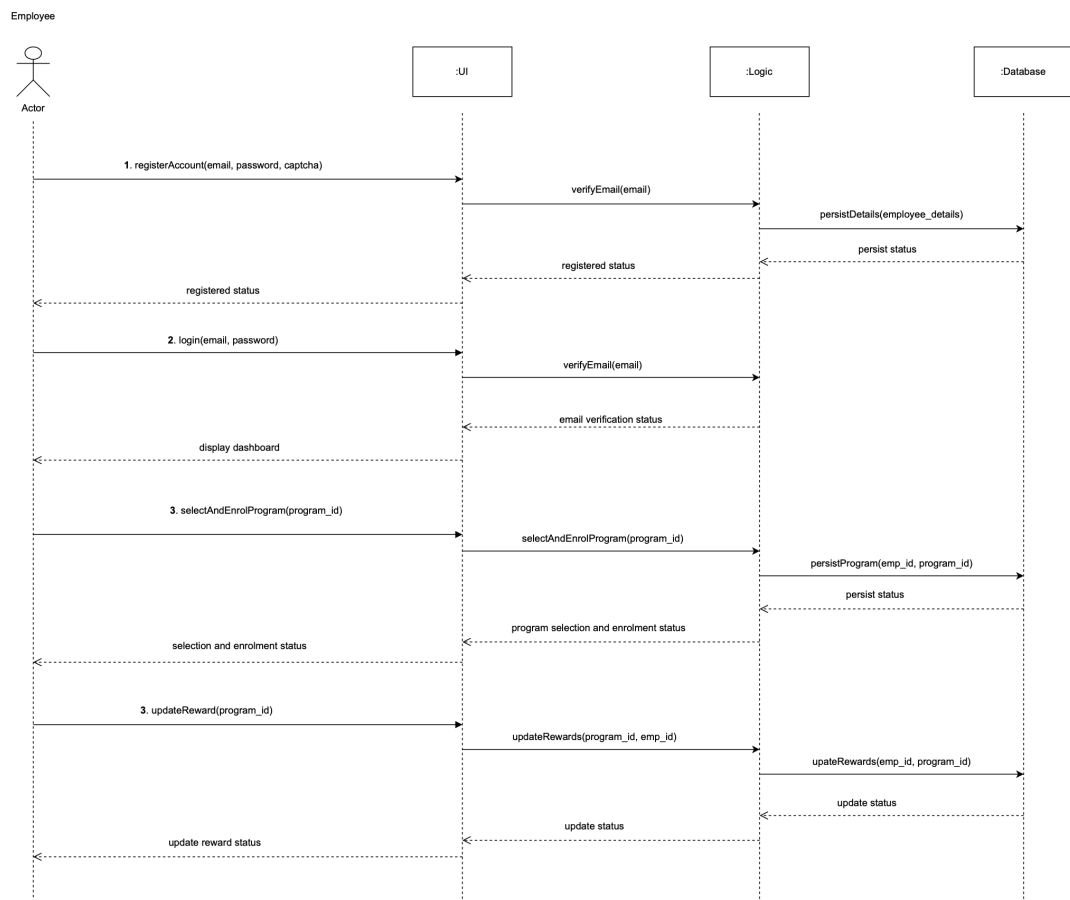
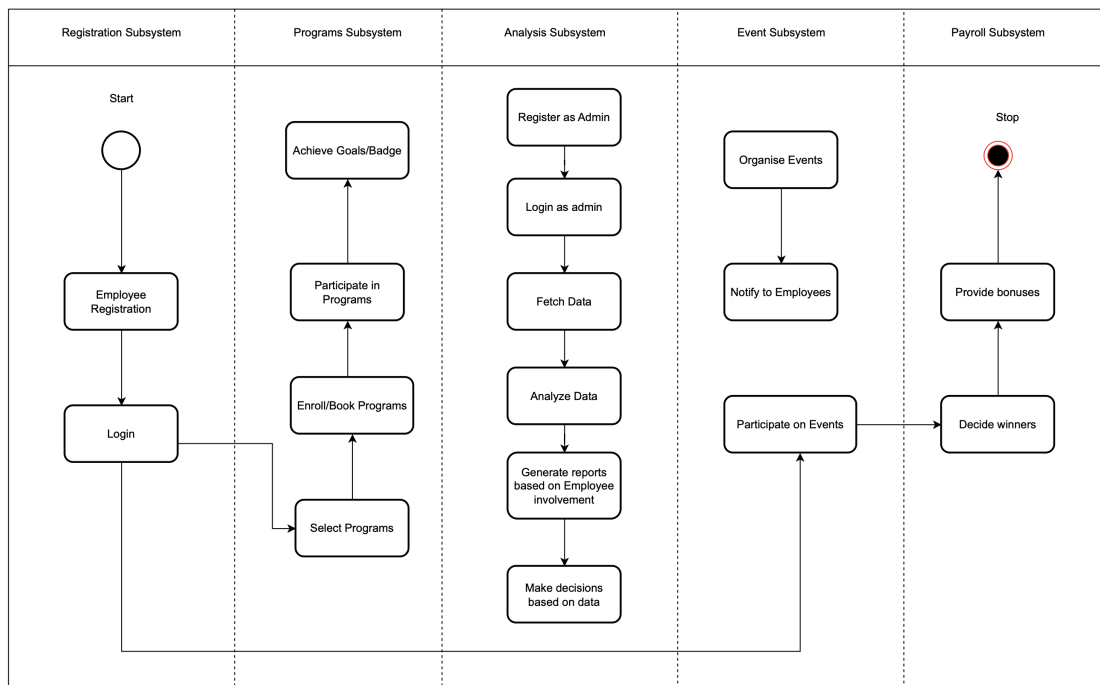Figure 9.7: Activity Diagram of all the subsystem
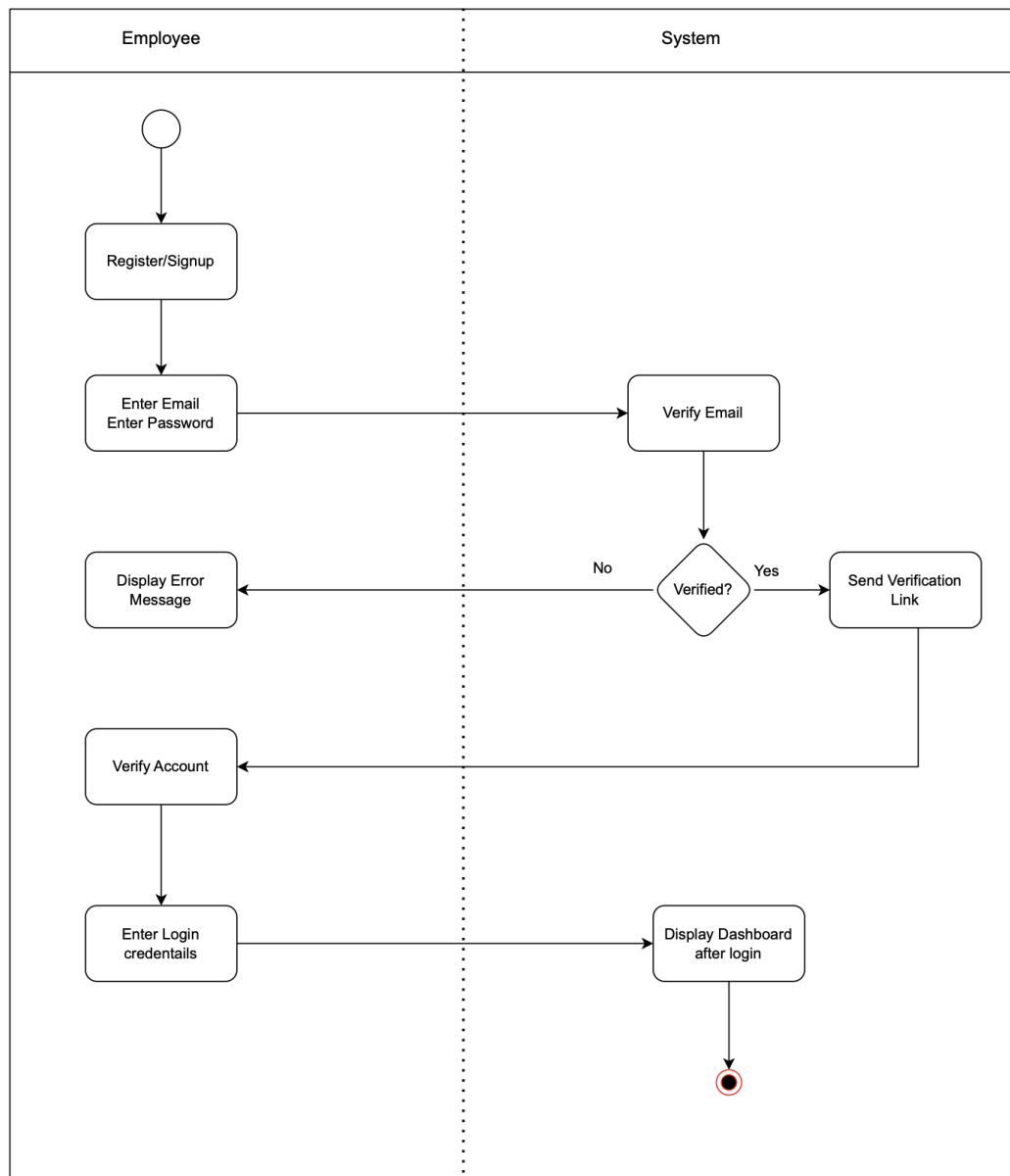
Figure 9.8: Activity Diagram of all the subsystem

Figure 9.9: Activity Diagram of Create Account use case