



OptiTrack: Optimized Time Tracking Software with Productivity Insights

Project Documentation Submitted to the Faculty of the
School of Computing and Information Technologies

Asia Pacific College

In Partial Fulfillment of the Requirements for
Introduction to Optitrack systems and Design for IT

MSYADD1

By

Robyn Dominique Fruto
Rick Laurence Cruz

Sondrick Frondrozo
Kurt Yuri Fegarido
Virgilio Angelo III S.Navarro

Table of Contents

List of Figures.....	iii
List of Tables.....	iv
I. Introduction	1
Project Context.....	1
Statement of the Problem	2
Objectives.....	2
II. Review of Related Literature	4
III. Current Optitrack system	7
Technical Background.....	7
List of Processes	7
SWOT Analysis	8
Target Users and Their Needs.....	9
Prototype (Mock Flow / Wireframe)	10
Prototype.....	13
Project Stack.....	14
Github Repository	14
Project Lean Canvas	14
User Classes and Characteristics	17
Product Backlog.....	17
Data Flow Diagrams	18
Use Case Diagram	24
Use Case Full Description	25
Test Cases.....	38
Activity Diagram with Swimlanes	45
Entity Relationship Diagram	53
IV. Conclusion	55
V. References	55
Appendices	57
Appendix A: Project Vision.....	57
Appendix B: Schedule/Release Plan	57
Appendix C: Product Roadmap	59
Appendix D: Minutes of the Meetings	60

List of Figures

Figure 1 Sign in Wireframe	10
Figure 2 Employee Account	10
Figure 3 OT Request Page Wireframe	10
Figure 4 Analytics Page Wireframe	11
Figure 5 Manage Employee Account - Team Manager Side	11
Figure 6 Manage Recommendation - Team Manager Side Wireframe	12
Figure 7 Log In Page	13
Figure 8 Performance Page	13
Figure 9 Dashboard	14
Figure 10	18
Figure 11	19
Figure 12	20
Figure 13	22
Figure 14	23
Figure 15	24
Figure 18 Use Case Diagram	24
Figure 19	25

List of Tables

Table Target Users and Their detailed needs	9
Table Lean Canvas.....	14
Table User and Characteristics Table	17
Table Product Backlog Table	17
Table Manage Employee Account Use Case Description	25
Table	27
Table Manage Task Use Case Description.....	29
Table Manage OT Use Case Description Table	30
Table OT Approval Use Case Description Table	35
Table View Reports Use Case Description Table	37
Table Release Plan Table	57

I. Introduction

Overtime (OT) management plays a crucial role in workforce efficiency, ensuring fair compensation while optimizing operational productivity. However, the Capgemini Collections team faces significant challenges due to inefficiencies in the existing OT tracking and approval process. The reliance on third-party software such as Replicon has resulted in a lack of transparency, manual data retrieval inefficiencies, and approval delays. Employees struggle to track their OT balance, team leaders encounter bottlenecks in approvals, and operations Team Managers lack real-time visibility into OT data, leading to inefficiencies and potential unnecessary costs.

To address these issues, this project focuses on the development and implementation of an advanced OT tracker integrated with productivity insights. The new Optitrack system aims to enhance transparency, streamline approvals, and provide actionable workforce analytics. By automating OT approvals and improving data visibility, the Optitrack system will facilitate better resource allocation and data-driven decision-making. Employees will gain instant access to their OT balance, team leaders will benefit from an organized and structured approval workflow, and operations Team Managers will have a comprehensive view of OT trends for improved workforce planning.

[1] Aligned with Capgemini's mission of driving operational transformation, this project integrates seamlessly with existing workflows while introducing automated approval processes and real-time analytics. The primary objectives include the creation of a real-time dashboard for tracking OT requests, the automation of approval workflows to expedite decision-making, and the generation of detailed reports to assess productivity and OT utilization. The expected outcomes include reduced operational costs, improved employee morale, enhanced productivity, and strengthened client relationships.

By implementing this advanced OT tracking Optitrack system, Capgemini's Collections team will achieve a more transparent, efficient, and optimized approach to overtime management, ensuring long-term business success and continuous operational improvement.

Project Context

Capgemini, [2] a global leader in business and technology consulting, is committed to empowering clients to achieve organizational transformation and performance improvement through a human-centered approach to technology. This commitment is exemplified in their strategic partnerships with key clients, such as Selecta, where operational efficiency is paramount. Within Capgemini's Collections team, a critical function supporting these client relationships, an operational inefficiency was identified regarding overtime (OT) management. Specifically, Ms. Rochelle, a key stakeholder, observed significant challenges associated with the existing OT process, which relies on the third-party software, Replicon.

The current Optitrack system is characterized by a lack of transparency and an inefficient approval workflow. Employees submit OT requests directly to Replicon, which are then routed to the Operations Team Manager for approval. This process lacks critical contextual information, resulting in approvals often being granted without proper justification. Furthermore, Ms. Rochelle, Team Team Managers and team leaders are required to engage in time-consuming information retrieval to ascertain the necessity of OT requests, creating significant bottlenecks and delays. This lack of visibility impedes effective resource allocation and potentially incurs unnecessary operational costs.

To address these challenges, the project aims to develop and implement an OT tracker with integrated productivity insights. This initiative is strategically aligned with Capgemini's mission to enable client transformation and performance improvement by optimizing internal operational processes. The project goal is to streamline and automate the OT management process, thereby enhancing transparency, efficiency, and productivity within the Collections team. This will be achieved through the development of a software solution that provides real-time visibility into OT requests, automates the approval workflow, and generates actionable productivity insights. The expected outcomes include reduced operational costs, improved employee morale, enhanced productivity, and strengthened client relationships, all of which contribute to Capgemini's continued success in delivering exceptional value to its clients.

Statement of the Problem

The Capgemini Collections team, currently faces inefficiencies in overtime (OT) management due to informal request practices, a manual and unstructured approval process, and limited access to performance data, leading to poor visibility, delayed decisions, and unverified OT usage

- Lack of formal OT request process
- Inefficient and Un streamlined Approval Process
- Limited access to productivity data for OT validation

Addressing these challenges is critical to optimizing the Collections team's performance, reducing operational costs, and reinforcing Capgemini's commitment to delivering exceptional client service.

Objectives

This Optitrack system aims to enhance visibility, streamline approvals, ensure justified OT usage, and provide actionable productivity data. The following objectives will guide the development and implementation process:

- To increase the percentage of documented OT requests from informal to formal channels by 90% within the first three months of system implementation.
- To reduce average OT request approval time by 50% within one quarter through improved process efficiency.
- To ensure 80% of team managers regularly review OT-related productivity data for informed decision-making within two months of implementation.

Significance of the Project

Capgemini is deploying an OT time tracker with embedded AI productivity insights to better manage overtime. Automation of approval workflow reduces intervention, enabling good decision-making. It also helps the employees by granting them real-time visibility into the OT allocation and approvals.

Who Benefits and How?

- **Employees** – Gain improved transparency and control over their overtime (OT) requests. The new Optitrack system provides real-time access to OT balances, request statuses, and approval updates, ensuring a fair and efficient process. Employees can also justify their OT usage, fostering accountability and work-life balance.

- **Team Leads** – Experience reduced delays in OT approvals through an automated, structured workflow. By incorporating justifications for OT requests, team leaders can make informed decisions, ensuring OT is utilized efficiently while reducing unnecessary workload.
- **Operations Team Managers** – Gain comprehensive visibility into OT patterns and productivity insights. The Optitrack system streamlines OT approvals, minimizes approval bottlenecks, and ensures that OT hours are allocated based on justified business needs. This enhances workforce planning and resource distribution.
- **Team Team Manager** – Benefits from optimized overtime management, leading to reduced operational costs, increased efficiency, and improved compliance with labor policies. The project supports Capgemini's commitment to digital transformation and operational excellence, reinforcing its ability to deliver value to clients by maintaining a well-managed and productive workforce.

Alignment with SDGs

[3] SDG #8: Decent Work and Economic Growth

This can be accomplished by developing a more sustainable and productive workforce through promoting fair wages, reducing employees, and ensuring transparency in labor practices.

SDG #9: Industry, Innovation, and Infrastructure

This is accomplished by leveraging technology to increase productivity, streamline labor management, and optimize resource allocation across industries.

Scope and Limitations

The Overtime (OT) Tracking Optitrack system for Capgemini's Collections team is designed to streamline approvals and provide real-time productivity insights. This Optitrack system will enable employees to instantly track their OT, allowing for greater transparency and accountability. Team leaders will benefit from an efficient approval process, reducing administrative overhead and ensuring timely authorizations. Additionally, operations Team Managers will have access to advanced analytics, helping them optimize workforce planning and resource allocation. By enhancing visibility and efficiency, this Optitrack system aims to improve overall productivity and decision-making within the Collections team.

Scope:

- Weekly productivity and OT reports.
- Employees need to report details of work done during OT hours.
- Enhanced visibility to reduce redundant of the employees OT approvals.
- All functionalities include deployment of the dashboard and automation of workflows.

Limitations:

- The Optitrack system requires employees to enter proper reasons for OT requests.
- Although automation will make approvals easier, some special OT cases might need to be handled manually

II. Review of Related Literature

The advancement of technology has significantly influenced how businesses track employee work hours, particularly in managing overtime (OT). Traditional manual timekeeping methods, often prone to errors and inefficiencies, have gradually evolved into automated Optitrack systems that enhance accuracy, streamline payroll processes, and improve overall operational efficiency. This review explores the historical evolution of time tracking, the impact of automated Optitrack systems on business operations, the role of technology in workforce management, and the importance of effective overtime tracking. Additionally, emerging trends in time management, particularly in the context of remote work, are discussed to provide insights into future developments in this field.

The Evolution of Time Tracking

[4] The transitions from manual to digital time-tracking Optitrack systems marked a pivotal shift in workforce management. Initially, businesses relied on manual timekeeping methods, such as punch cards and paper-based records, which were often labor-intensive and error-prone. The introduction of digital timesheets, particularly in spreadsheet form, allowed for easier calculations and improved reporting. Over time, specialized time-tracking software emerged, offering features like automated calculations, payroll integration, and real-time monitoring. With the rise of cloud-based platforms, companies gained the ability to access employee work-hour data remotely, improving flexibility and collaboration across multiple locations. These technological advancements have laid the foundation for the widespread adoption of automated time-tracking Optitrack systems in modern organizations.

Automated Timesheets and Their Impact on Business Operations

[5] Automated timesheet Optitrack systems have revolutionized payroll and billing processes, significantly reducing manual data entry errors and ensuring fair compensation for employees. These Optitrack systems facilitate real-time tracking of work hours, enabling businesses to maintain accurate records and improve resource allocation. Research has shown that organizations that implement automated time-tracking solutions experience notable increases in productivity. According to Harvard Business Review, businesses utilizing automated tracking tools report an 8% to 15% increase in workforce efficiency. Additionally, automation simplifies compliance with labor regulations, reducing the risks associated with payroll mismanagement and overtime disputes.

The Role of Technology in Time Management

[6] The integration of advanced technology into time management has significantly enhanced business operations by improving accuracy and efficiency. Automated timekeeping Optitrack systems ensure precise tracking of employee attendance, reducing payroll discrepancies and eliminating the risks associated with manual time entry errors. Businesses that adopt these technologies report improved workflow management and streamlined payroll processes. Furthermore, cloud-based solutions allow companies to manage workforce data remotely, supporting hybrid and remote work environments. The ability to generate real-time reports and analytics further strengthens decision-making, helping businesses optimize workforce efficiency and cost-effectiveness.

The Importance of Overtime Tracking

[7] Effective overtime tracking plays a critical role in managing labor costs and ensuring compliance with employment regulations. Many businesses struggle with optimizing work schedules while controlling overtime expenses. Automated overtime tracking Optitrack systems help address this challenge by providing accurate, real-time records of employee work hours, allowing Team Managers to make data-driven scheduling decisions. Additionally, automated Optitrack systems ensure adherence to labor laws, preventing potential legal disputes related to overtime pay. Research suggests that efficient overtime management can help businesses reduce labor costs while maintaining productivity. By implementing automated overtime tracking, companies can improve workforce management strategies while ensuring employee well-being and fair compensation.

The Future of Time Management: Emerging Trends

[8] As remote and hybrid work models continue to expand, businesses are increasingly relying on cloud-based and mobile-accessible time-tracking solutions. The growing need for secure and flexible workforce monitoring has prompted improvements in data encryption, access control measures, and compliance with data privacy regulations. Furthermore, artificial intelligence (AI) and machine learning are being integrated into time-tracking Optitrack systems, allowing companies to automate workforce scheduling, predict staffing needs, and optimize employee workload distribution. These advancements highlight the continuous evolution of time management technologies, emphasizing the importance of adaptability in workforce optimization.

Review of Related Optitrack systems

Time Doctor

[9] Time Doctor is a robust time-tracking and staff monitoring application made to assist companies in effectively managing work schedules. It has payroll integration, overtime computation, productivity tracking, and automated time tracking. For remote teams and businesses looking for in-depth information on employee work habits, Time Doctor is very helpful. Its surveillance functions, however, can be overly invasive for certain customers, and its cost might not be affordable for smaller companies. Our OT tracking Optitrack system will offer options for tracking and monitoring overtime while striking a balance.

Wrike

[10] Wrike is a time-tracking and project management application with tools for controlling overtime and keeping track of employee work hours. Teams that must oversee projects while guaranteeing working-hour policies will find it very helpful. Wrike is a great option for companies with project-based workflows since it provides time tracking, task management, reporting, and collaboration features. Businesses may want further customization to completely integrate overtime monitoring, though, as Wrike might be more geared toward project management than specific OT tracking. Our OT tracking Optitrack system will be user-friendly while integrating extensive OT management capabilities.

Timecamp

[11] TimeCamp is a versatile time-tracking tool known for its AI-driven tracking and automated timesheet management. It offers overtime monitoring, project tracking, budget management, and invoicing features. TimeCamp's strong integration options make it ideal for project-based work and freelancers. However, its mobile functionality is somewhat limited, and some key features require premium subscription plans. Our OT tracking Optitrack system will ensure seamless mobile compatibility to support businesses that rely on remote access.

Connecteam

[12] Connecteam is complete workforce management software designed for deskless workers. OT management Optitrack system is required, though one that improves real-time decision-making, approval speed, and transparency features like GPS time tracking, automated scheduling, real-time communication, task management, mobile training, HR document. These gaps would be filled by incorporating AI-powered insights into Capgemini's operations, which would be consistent with the business's dedication to operational transformation. A data-driven workforce management plan would be fueled by this clever solution, which would benefit team leaders, employees, and the company.

Clockify

[13] Clockify, a time-tracking program, has an Overtime Tracker function that helps employers and workers track overtime. It interfaces with timesheets, reports, and payroll processing for precise computations. Clockify also allows businesses to set overtime thresholds and interfaces with payroll software for easier compensation computations. The proposed AI-powered OT tracking and approval solution for Capgemini's Collections team aims to improve overtime management, make it more open, equitable, and effective, aligning with Capgemini's objectives of operational transformation and corporate success.

This literature review explores the evolution of time tracking from manual methods to automated Optitrack systems, highlighting the benefits of increased accuracy, streamlined processes, and real-time data analysis, particularly for managing overtime (OT). The review emphasizes the importance of accurate OT tracking for cost management and legal compliance, and it discusses the need for adaptable and secure solutions in response to trends like AI integration and remote work. Additionally, it examines existing time-tracking Optitrack systems (Time Doctor, Wrike, Timecamp, Connecteam, and Clockify), noting their strengths and limitations, to inform the development of a proposed AI-powered OT tracking Optitrack system for Capgemini that aims to improve efficiency, transparency, and alignment with company objectives.

III. Current Optitrack system

Technical Background

The organization relies on [14] Replicon, a cloud-based time tracking and resource management software, as its primary Optitrack system for managing employee overtime (OT). However, the current OT approval process, while utilizing Replicon, suffers from a critical issue: **limited visibility for all stakeholders involved.**

The process begins with employees seeking initial OT approval from their Team Leads, typically through Microsoft Teams meetings or email exchanges. This initial step, while necessary for coordination, adds a layer of manual communication outside the main Optitrack system. Once approved by the Team Lead, employees use Replicon to log their OT hours and submit their requests, inputting the time and reason directly into the Optitrack system.

From this point, visibility becomes fragmented. The Operations Team Manager receives notifications of new OT requests via [15] Microsoft Outlook. Once received, they log in to Replicon to approve the OT requests. This necessitates switching between platforms and manually reviewing requests in Replicon. Furthermore, any necessary consultations with Team Team Managers and Team Leads occur through Outlook and/or [16] Microsoft Teams via a live meeting or chat further obscuring the process and hindering real-time tracking.

This lack of centralized visibility creates several challenges. Employees have no insights into the status of their requests once submitted and can only receive an update once approved. Team Leads and Team Team Managers lack a clear overview of pending or approved overtime within their teams. The Operations Team Manager, despite being the central approver, faces a cumbersome process of tracking requests across multiple platforms. This ultimately hinders efficiency, potentially leading to delays, errors, and employee dissatisfaction due to a lack of transparency and control over the OT process.

List of Processes

Table 1 List of Processes in the Current Optitrack system

Process ID	Process Name	Process Details
P0001	Employee Requests Overtime from Team Lead	Employee requests overtime approval from their Team Lead via a Live meeting or Outlook. This request includes the overtime hours and reason.
P002	Team Lead Approves Overtime	Team Lead reviews the request and approves the overtime
P002.1	Team Lead informs Team Team Manager	Occasionally, Team Lead informs the Team Team Manager of Employee OT request
P003	Employee Submits OT Request	Employees encode in Replicon their OT request, including overtime hours and reason for the overtime.
P004	Operations Team Manager Receives Request	Operations Team Manager receives the OT request email via Microsoft Outlook
P005	Operations Team Manager Reviews Request	Operations Team Manager manually reviews the request ON Replicon
P005.1	(Optional) Operations Team Manager Consults with Team Team Manager	If necessary, the Operations Team Manager contacts the Team Team Manager (who has already pre-approved the overtime) via Outlook or Microsoft Teams to discuss the request.
P005.2	(Optional) Team Team Manager Consults with Team Leader	If necessary, the Team Team Manager contacts the Team Leader via Outlook or Microsoft Teams to discuss the request.
P006	Operations Team Manager Approves/Rejects Request	Operations Team Manager makes the final decision to approve or reject the overtime request on Replicon

This table outlines the current process for approving overtime requests within the organization, highlighting the manual steps and communication flow

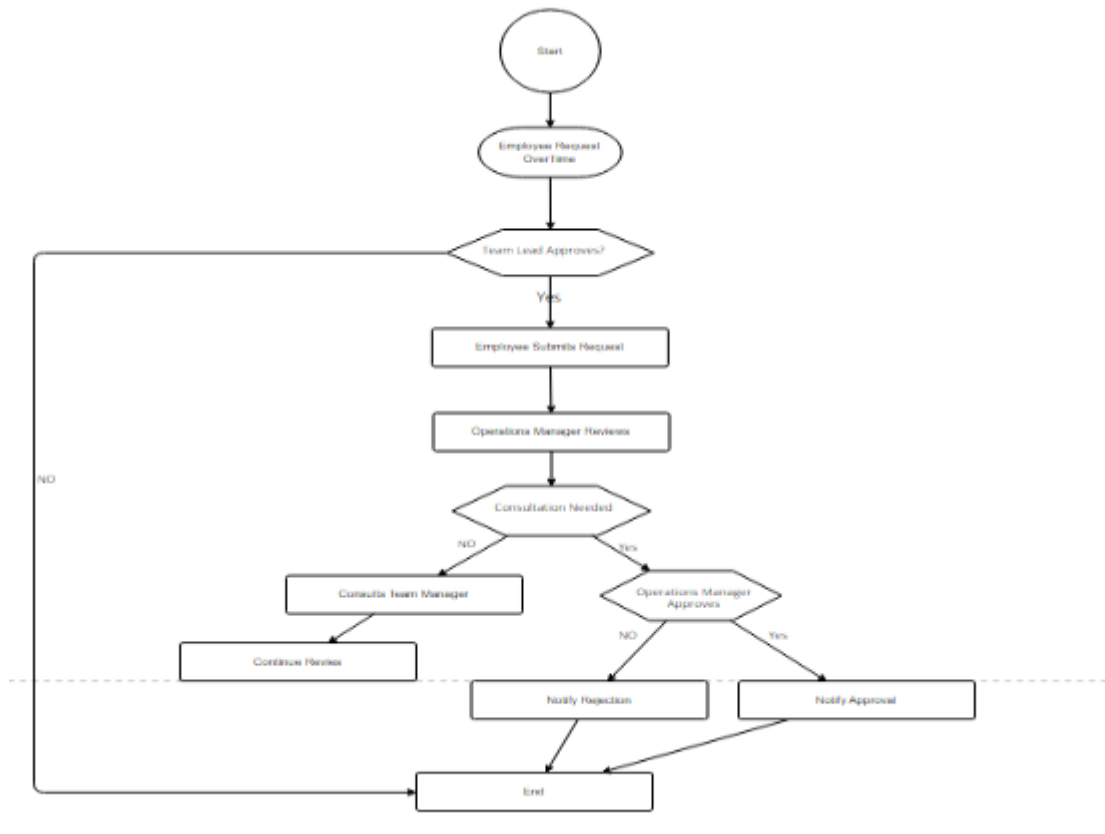


Figure 1 List of Processes Flowchart

SWOT Analysis

Figure SWOT Analysis of the Current Optitrack system



This figure outlines the SWOT Analysis of the current process for approving overtime requests within the organization.

Strengths

The good news is that the organization has a solid foundation with Replicon. It's like having a reliable toolbox with all the essential tools for tracking time and managing overtime. Employees can easily log their overtime hours, and the Optitrack system keeps a record of all the requests, which is a great starting point.

Weaknesses

However, the current process feels a bit like a bumpy road. It relies heavily on emails and messages flying back and forth, with the Operations Team Manager having to manually check and approve each request. Imagine a busy traffic junction with no traffic lights – things can get chaotic and slow. But the biggest issue is the lack of visibility. It's like everyone is driving with a foggy windshield; employees don't know what's happening with their requests, and Team Managers lack a clear view of the overall overtime situation. This can lead to frustration, delays, and even mistakes in payments.

Opportunities

The good news is that there's a lot of room for improvement! Replicon has some fantastic features that are currently underutilized. It's like having a powerful car with a built-in GPS and cruise control, but you're still driving manually. By automating the approval process, it's like switching on that cruise control and letting the Optitrack system handle the routine tasks, freeing up the Operations Team Manager to focus on more important things.

But beyond just utilizing Replicon's features, the organization needs to create a process where everyone has a clear view of what's happening. Imagine a traffic management Optitrack system with real-time updates on traffic flow and road conditions, accessible to all drivers. This is what's needed for overtime management – a transparent Optitrack system where employees, Team Leads, and Team Managers can all track the status of requests and have a shared understanding of the overtime landscape.

Threats

If these issues aren't addressed, it's like driving with a flat tire – you might eventually reach your destination, but it will be a bumpy and frustrating ride. Employees might become unhappy with the lack of transparency and potential delays in getting paid. Errors in calculations can also occur, leading to payroll headaches. Moreover, inconsistent practices might even lead to compliance issues with labor laws, which is like getting a speeding ticket. Finally, with sensitive information being shared through emails, there's always a risk of data breaches, like leaving your car unlocked in a busy parking lot.

In a nutshell, the organization has the right tools in Replicon, but it needs to establish a clear and transparent process with full visibility for all stakeholders. This, combined with optimizing Replicon's features, will create a smoother, more efficient overtime management Optitrack system, benefiting everyone involved.

Target Users and Their Needs

Table 1 Target Users and Their detailed needs

User Role	Needs and Expectations
Employee	Easy access to OT balance, seamless request submission, timely updates.
Team Lead	Efficient review process, ability to monitor team OT trends.
Operations Team Manager	Full visibility into OT requests, data-driven decision-making tools.
Team Team Manager	Supervises workload distribution, ensures smooth OT processes.
Developers	Ensure a reliable, secure, and efficient OT tracking Optitrack system with seamless integration, automation, and user driven improvements.

IV. Proposed Solution

Prototype (Mock Flow / Wireframe)

Figure 1 Sign in Wireframe

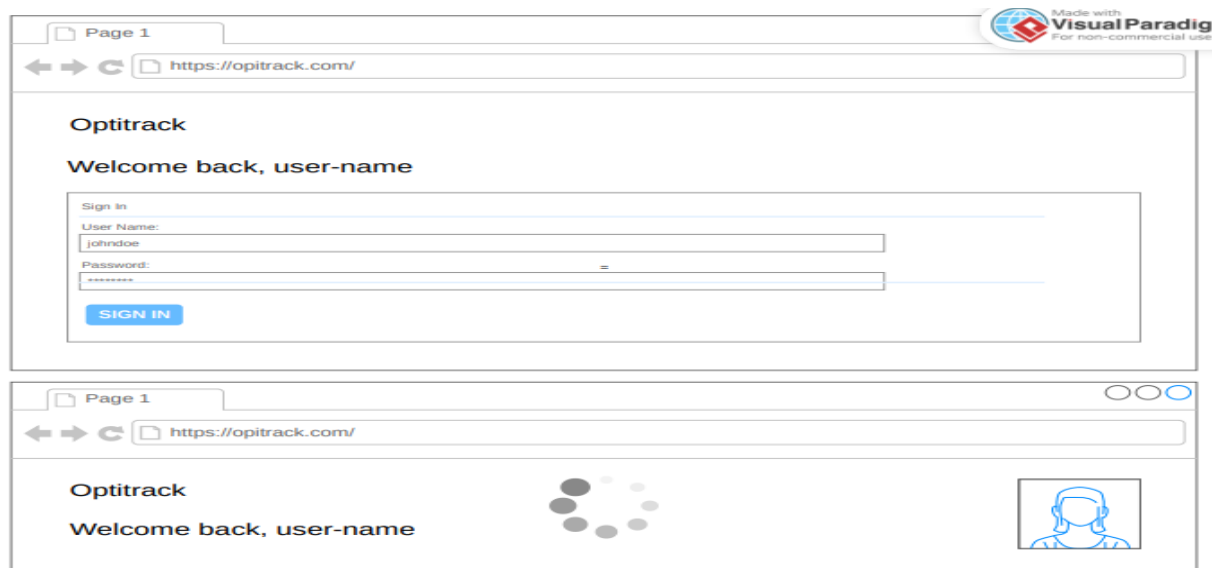


Figure 2 Employee Account

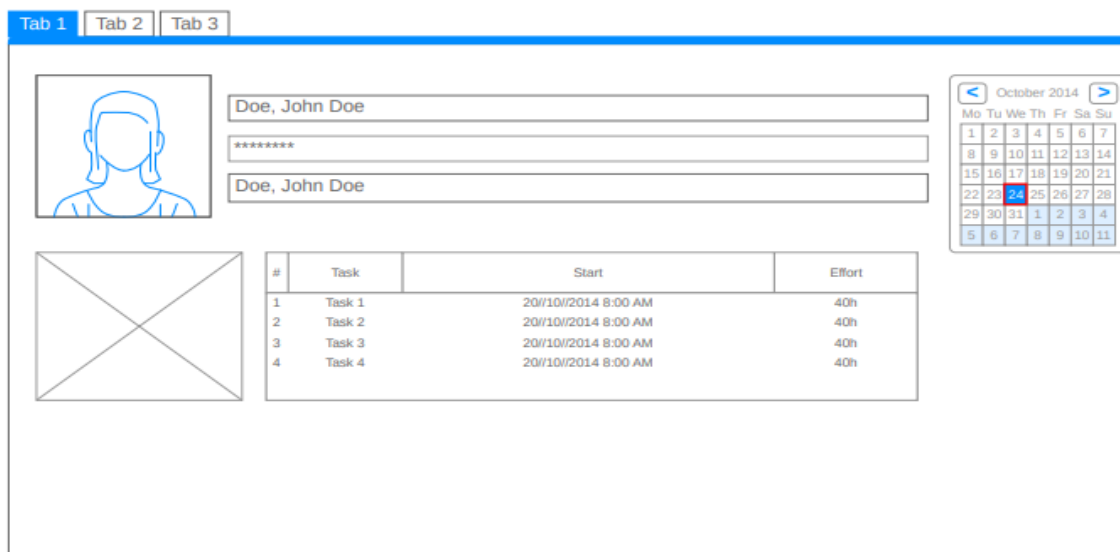


Figure 3 OT Request Page Wireframe

Tab 1 Tab 2 Tab 3

Date

OT requested

Approval

Have you finalized all the details?

Cancel OK

Awaiting Approval

Your Team Leader has been alerted to your request.

OK

Submit

Figure 4 Analytics Page Wireframe

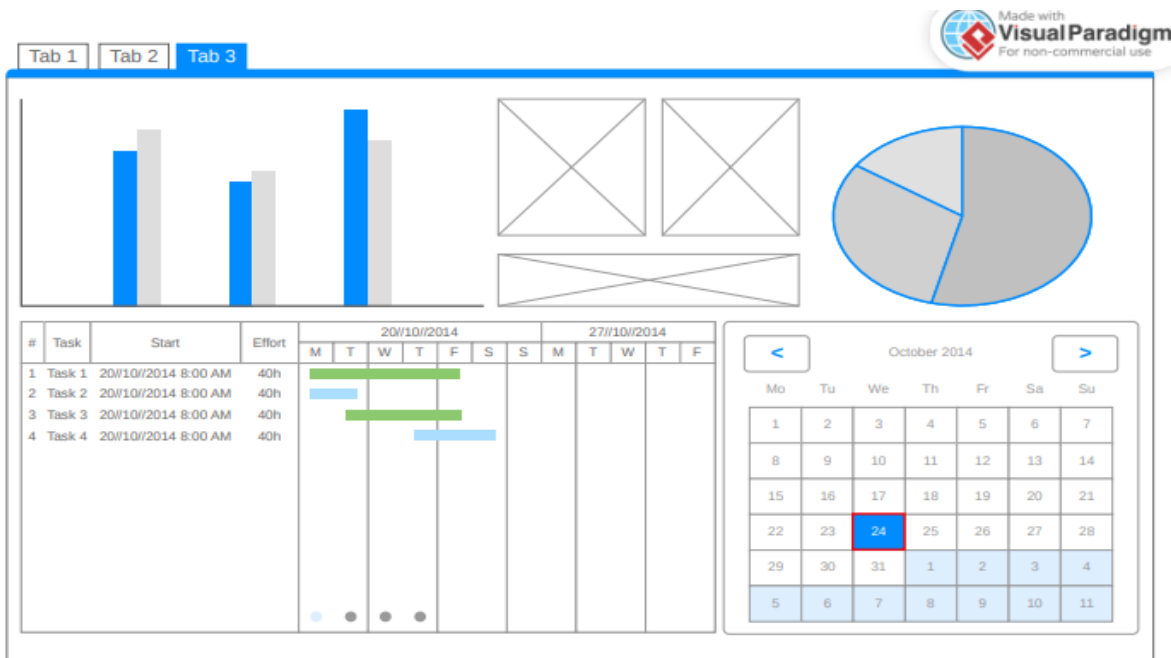


Figure 5 Manage Employee Account - Team Manager Side

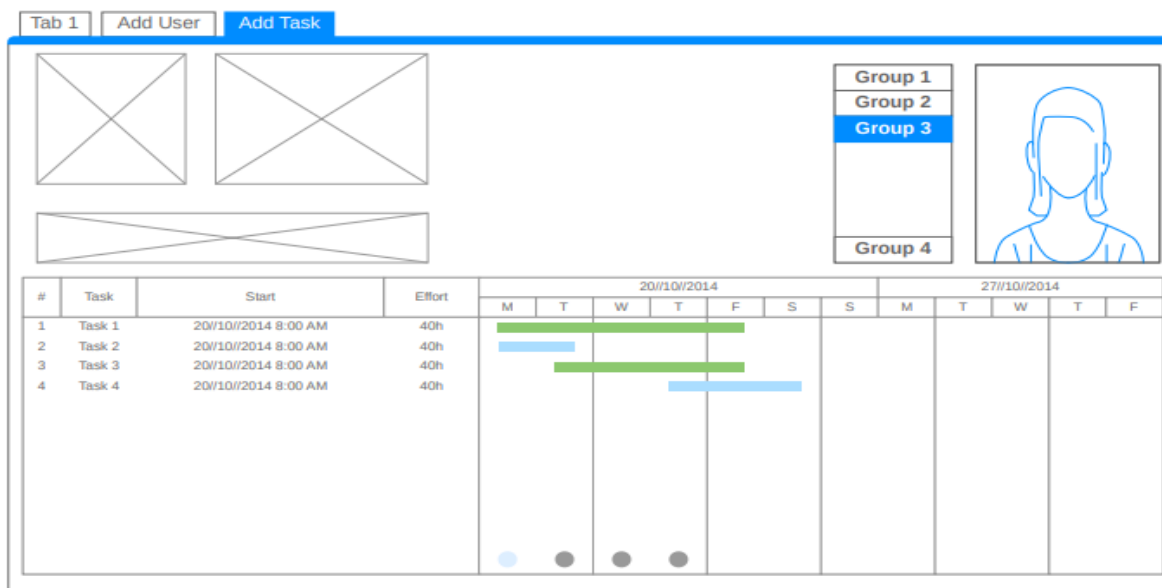
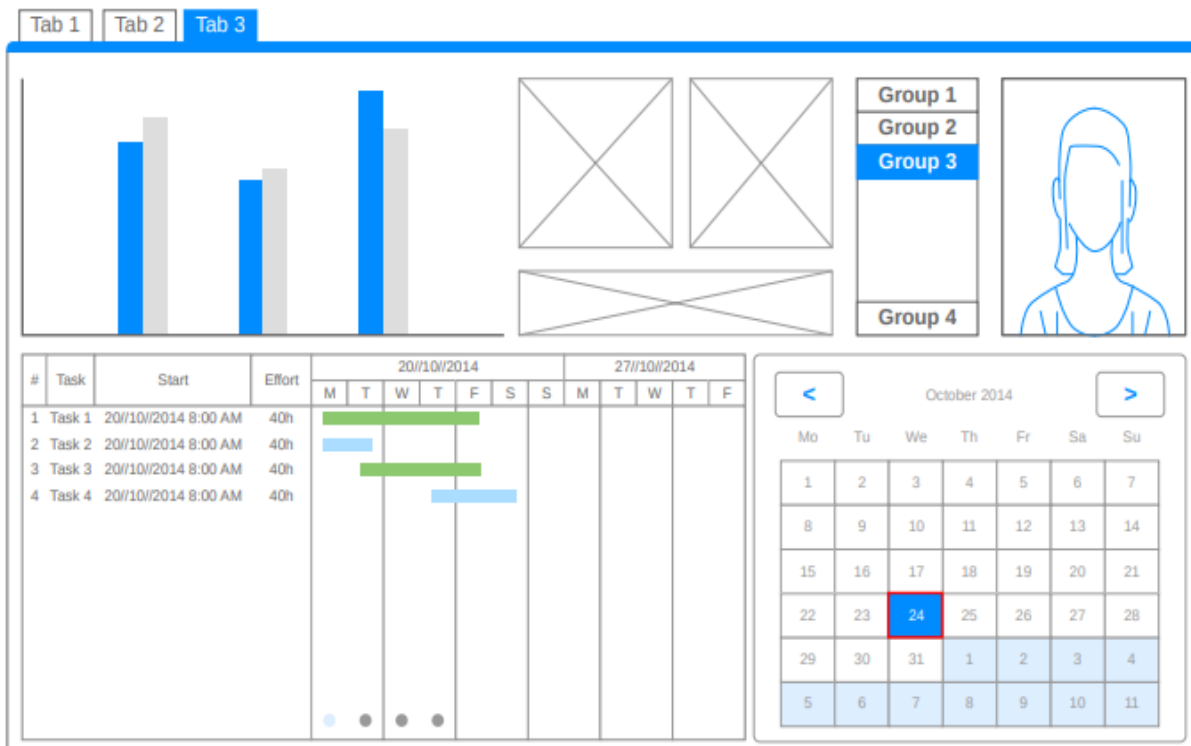


Figure 6 Manage Recommendation - Team Manager Side Wireframe



Prototype

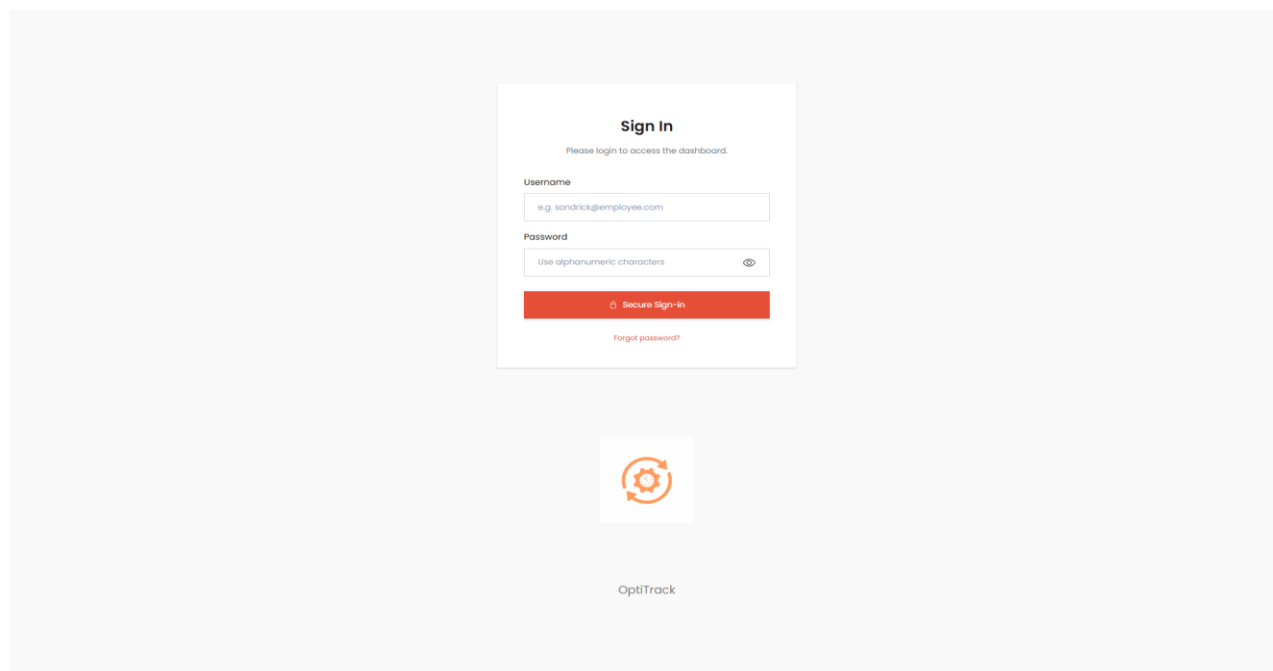


Figure 8 Log In Page

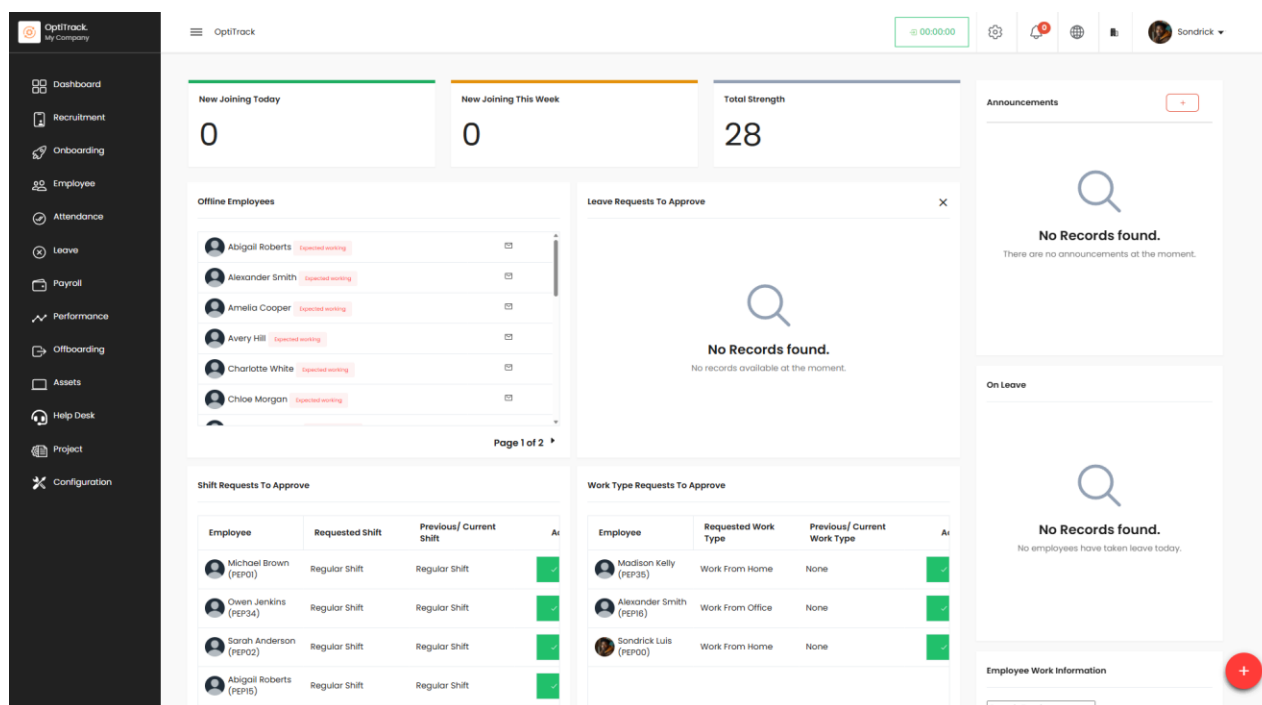


Figure 7 Performance Page

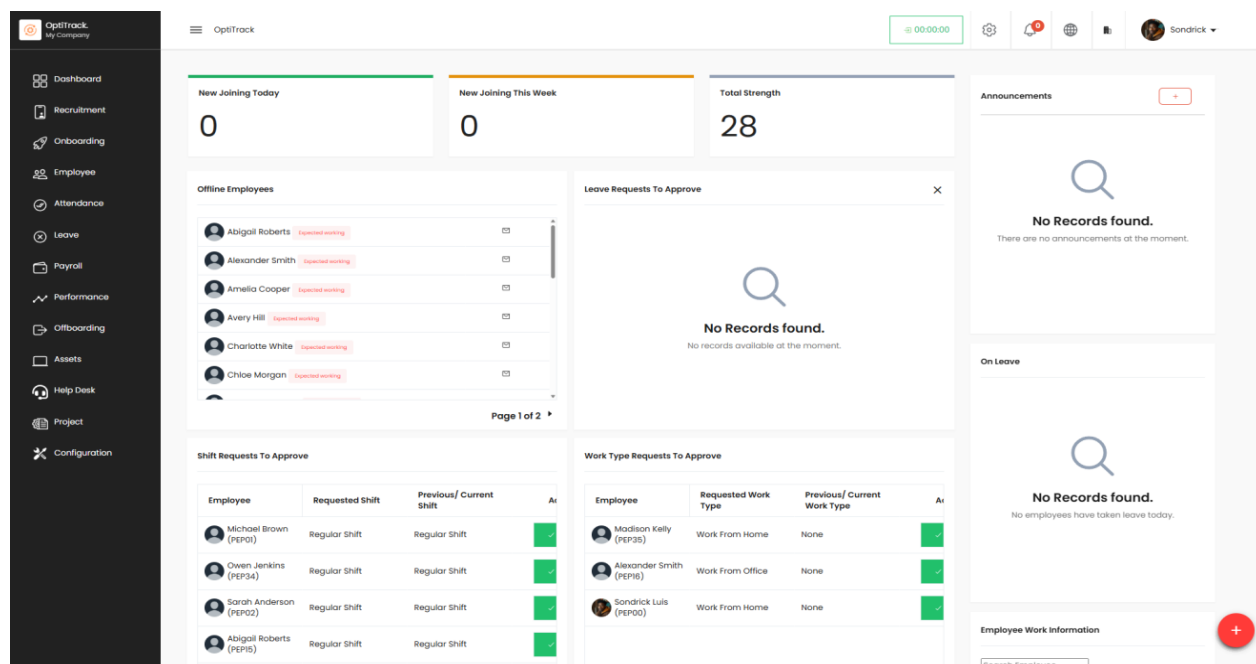


Figure 9 Dashboard

Project Stack

The project runs entirely within **GitHub Codespaces**, which provides a preconfigured development environment in the cloud. The backend is built using **Go (Golang)** and the lightweight **Horilla** framework, which relies on **Gorilla Mux** for routing and Go's built-in html/template package for server-side rendering. Version control and collaboration are handled through **Git** and **GitHub**, making it easy to track changes and work with a team. To run the application, developers simply open the Codespace and use the command `go run main.go`. For the frontend, standard **HTML**, **CSS**, and **JavaScript** are used, with **Bootstrap** optionally included for faster UI development. This minimal tech stack ensures quick setup and easy maintenance, ideal for simple, independently deployed web apps.

GitHub Repository

<https://github.com/APC-SoCIT/APC-2024-2025-T3-Optitrack>

Project Lean Canvas

Table 2 Lean Canvas

Lean Canvas		Designed for: Capgemini	Designed by: Group 1	Date: 2/28/25	Version 2.0
Problem	Solution	Unique Value Proposition	Unfair Advantage	Customer Segments	

<ul style="list-style-type: none"> • Lack of visibility into OT requests across the team. • Inefficient and time-consuming manual OT approval process. • Approvals granted without proper justification, leading to potential overspending. 	<ul style="list-style-type: none"> • A comprehensive OT management Optitrack system with: <ul style="list-style-type: none"> ○ Real-time dashboard for tracking OT requests. ○ Automated approval workflow with customizable levels. ○ Mandatory field for detailed justification of OT. ○ Automated reports on team productivity and OT utilization. ○ Employee self-service portal 	<p>A streamlined, AI assisted OT management Optitrack system that increases efficiency, transparency, and employee satisfaction while optimizing resource utilization and reducing administrative overhead.</p>	<ul style="list-style-type: none"> • Ensures a user-friendly and intuitive Optitrack system for all stakeholders. • Streamlines implementation, data flow, and reduces onboarding friction. This pre-existing infrastructure is difficult for competitors to match. 	<ul style="list-style-type: none"> • Employees needing to log and track OT. • Team leads responsible for approving OT requests. • Operations Team Managers monitoring OT usage and trends. • HR and administrative departments managing compliance and employee satisfaction.
--	---	---	---	---

		for tracking OT balance.			
Existing Alternatives	Key Metrics	High-Level Channels	Early Adopters		
<ul style="list-style-type: none"> Manual OT logging using spreadsheets or paper forms. Basic time-tracking software without AI capabilities. Traditional approval processes involving emails or physical documents. 	<ul style="list-style-type: none"> Reduction in OT approval time. Decrease in unjustified OT costs. Improvement in employee satisfaction with OT process. Increase in Team Manager visibility and control over OT. Adoption rate of the new Optitrack system. Frequency and quality of productivity insights generated. 	<p>The Optitrack system is like a combination of Jira and Tableau for overtime management - providing structured workflows and powerful data visualization.</p> <ul style="list-style-type: none"> Direct communication with Ms. Rochelle and key stakeholders. Presentations and demonstrations to management. Pilot program within the Collections team. 	<ul style="list-style-type: none"> Companies with high OT usage and a need for better resource management. Organizations seeking to leverage AI for operational efficiency. HR departments looking to improve employee satisfaction and compliance. 		
Cost Structure		Revenue Structure			

- | | |
|--|--|
| <ul style="list-style-type: none"> • Software development and implementation costs. • Ongoing maintenance and support. • Training and onboarding for users. • Potential integration costs with existing Optitrack systems. • servers and related hardware | <ul style="list-style-type: none"> • No concrete projections yet, but estimate potential cost savings and revenue based on: <ul style="list-style-type: none"> ○ Current OT spending. ○ Number of potential users. ○ Market pricing for similar solutions. ○ Gross Margin: |
|--|--|

User Classes and Characteristics

Table 3 User and Characteristics Table

Roles	Description
Employee	Requests overtime through the Optitrack system, tracks OT balance, and submits justifications.
Team Lead	Reviews and approves/disapproves OT requests before forwarding them to the operations Team Manager.
Operations Team Manager	Has full visibility of OT requests, oversees approvals, and manages resource allocation.
Team Team Manager	Supervises workload distribution, ensures smooth OT processes.
Developers	Ensure a reliable, secure, and efficient OT tracking Optitrack system with seamless integration, automation, and user driven improvements.

Product Backlog

Table 4 Product Backlog Table

ID	As a...	I want to be able to...	So that...	Priority
1	Employee	Log in securely	I can access my OT records	Must
2	Employee	Submit OT requests easily	I can ensure timely approvals	Must
3	Employee	Track my OT balance in real-time	I know my available OT hours	Must
4	Team Lead	Approve or reject OT requests efficiently	I can manage team overtime effectively	Must

5	Operations Team Manager	Access OT trend analysis	I can optimize workforce planning	Should
6	Operations Team Manager	Get AI-driven OT predictions	I can proactively manage workloads	Could
7	Team Manager	Detect unusual OT requests	I can ensure compliance with policies	Should
9	Employee	Access the Optitrack system from my phone	I can check my OT status on the go	Could
10	User	Receive real-time notifications	I am informed about request status	Must
11	Admin	Track all OT requests and approvals	I can maintain compliance	Must
12	Employee	View a dashboard of my OT requests	I can track my request statuses	Must

Data Flow Diagrams

Data Flow Diagram Level 0

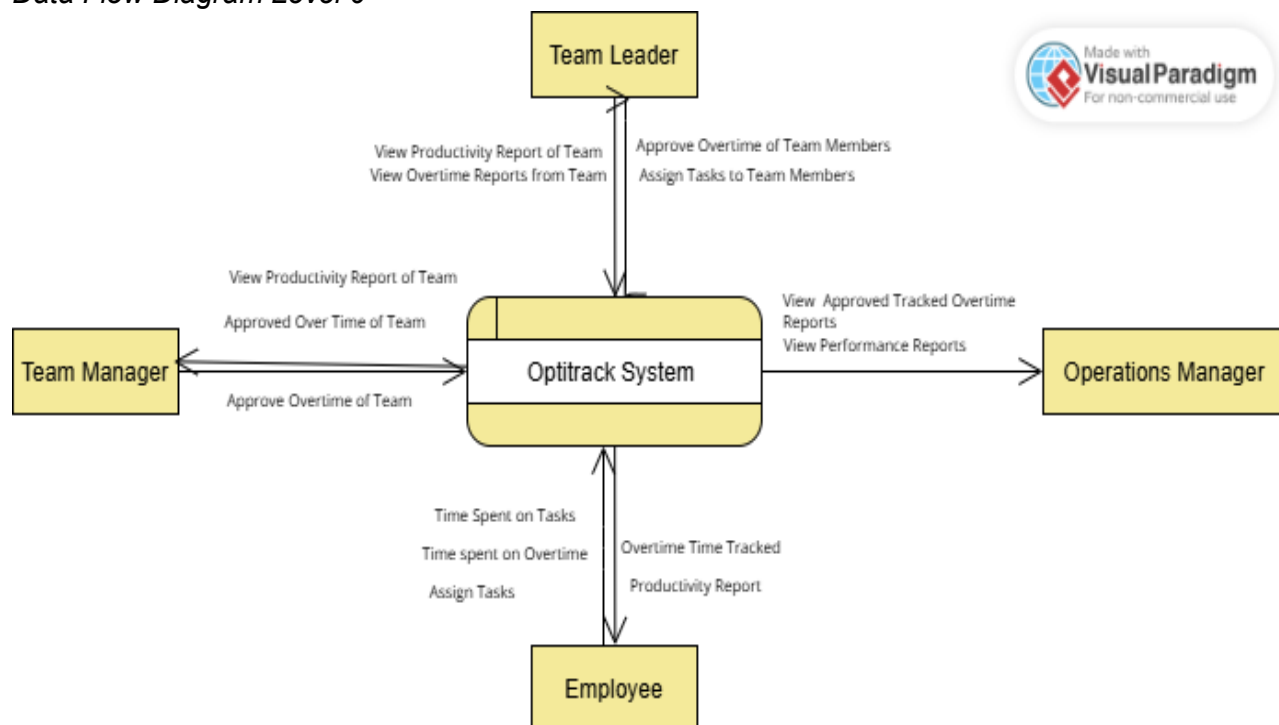


Figure 10

Data Flow Diagram Level 1

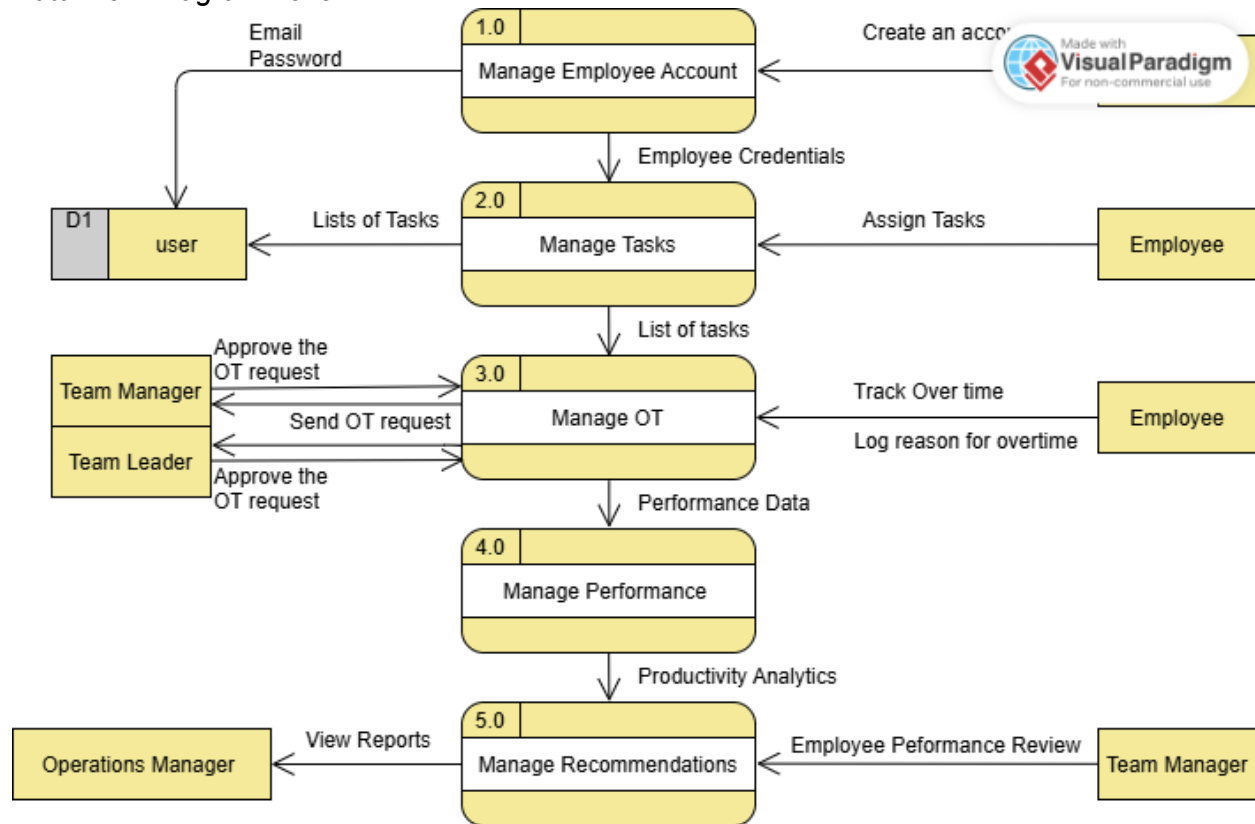


Figure 11

Data Flow Diagram Level 2 Process 1 (Manage Employee Account)

Manage Employee Account DataFlow Level 2,
Process 1

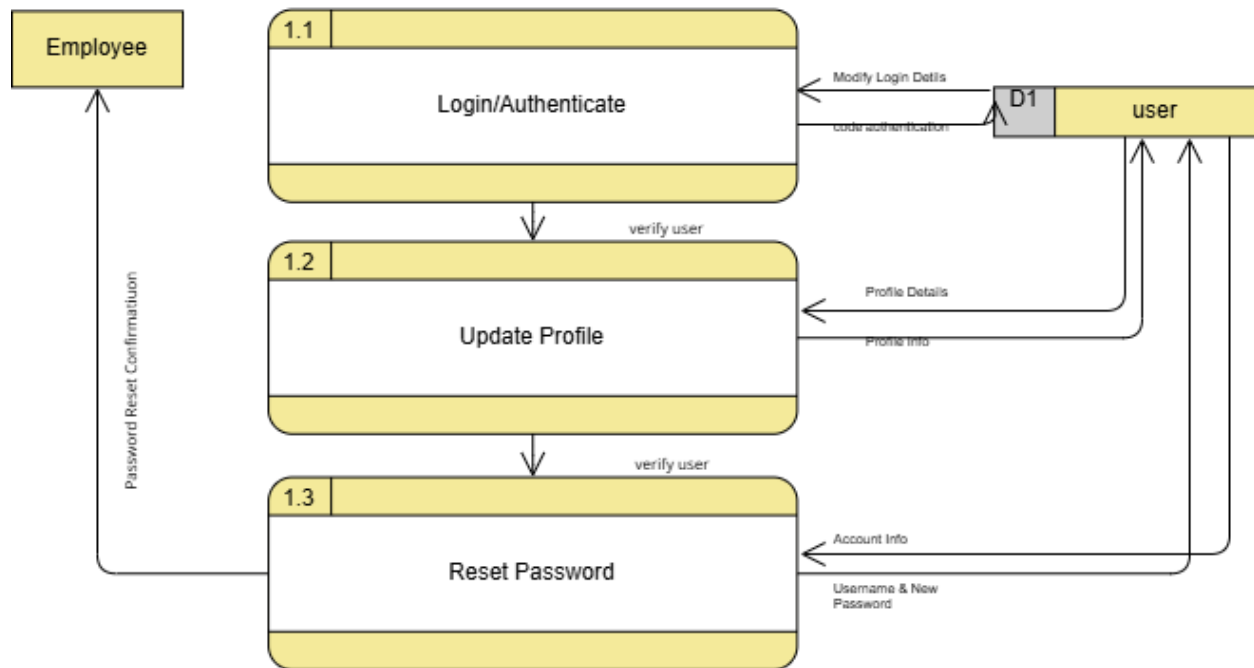
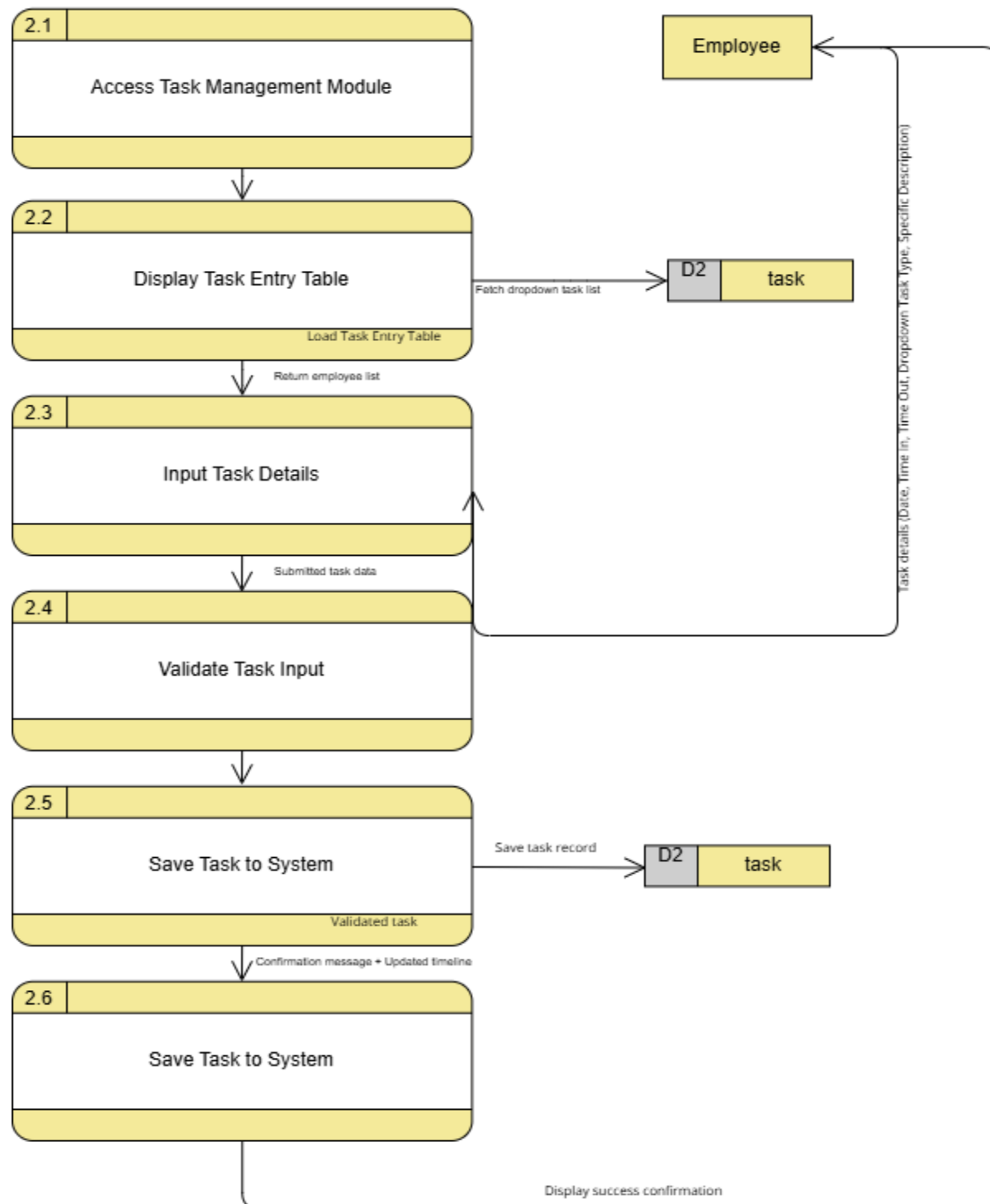


Figure 12

Data Flow Diagram Level 2 Process 2 (Manage Tasks)

Manage Task DataFlow Level 2, Process 2



Data Flow Diagram Level 2 Process 3 (Manage Performance)

Manage Performance DataFlow Level 2, Process 3

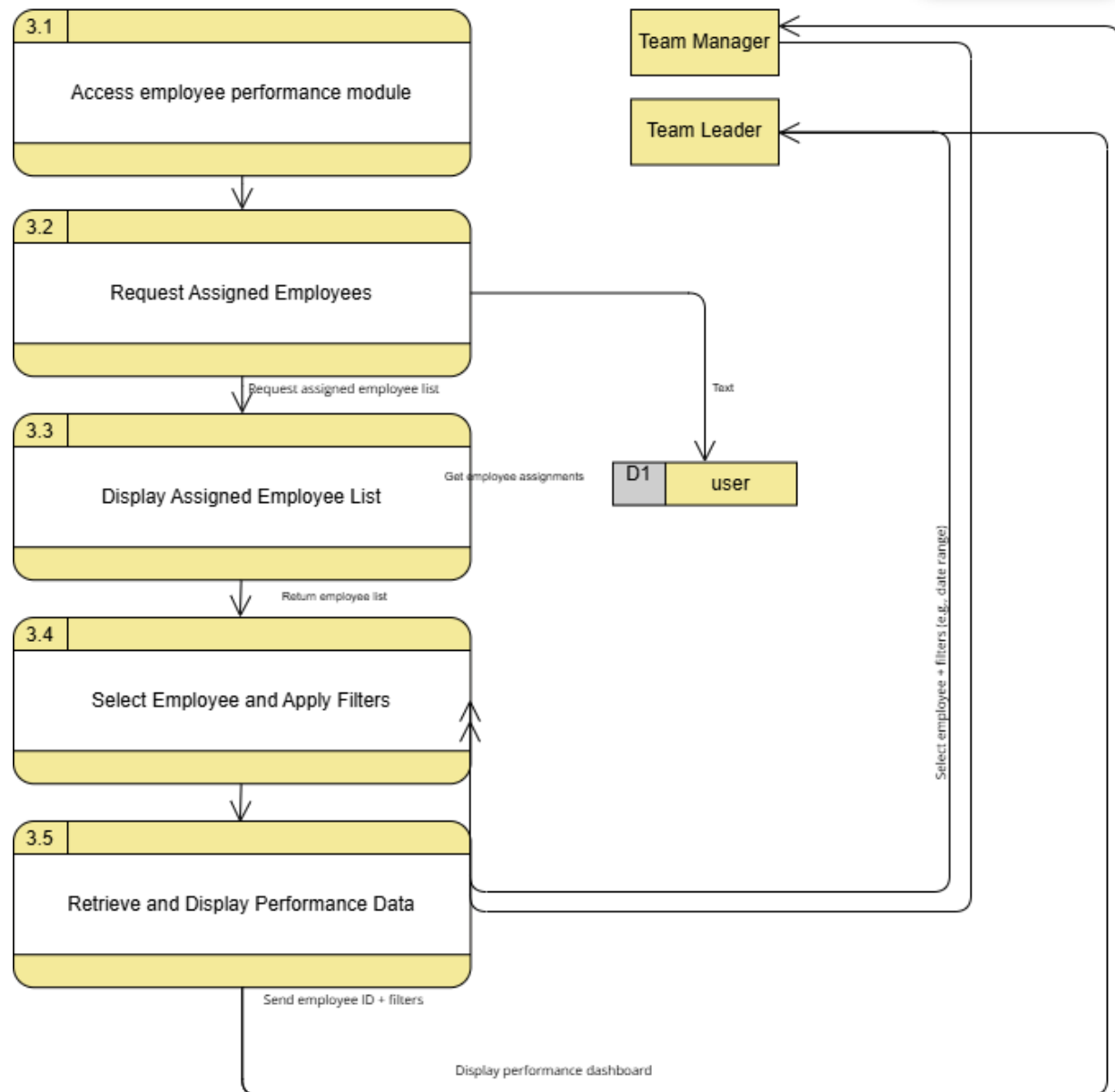


Figure 13

Data Flow Diagram Level 2 Process 4 (Manage Recommendations)

Manage Task DataFlow Level 2, Proces

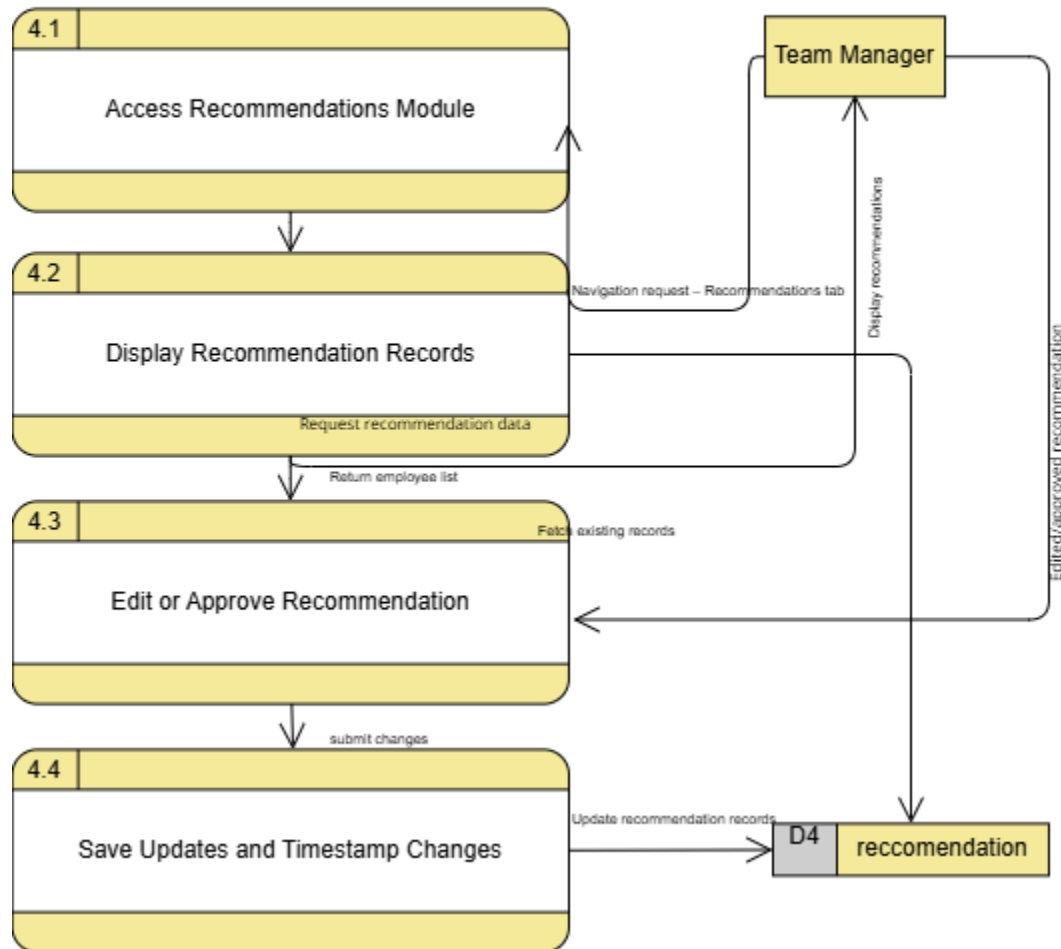


Figure 14

Data Flow Diagram Level 2 Process 5 (Manage OT)

Manage OT DataFlow Level 2, Process 5

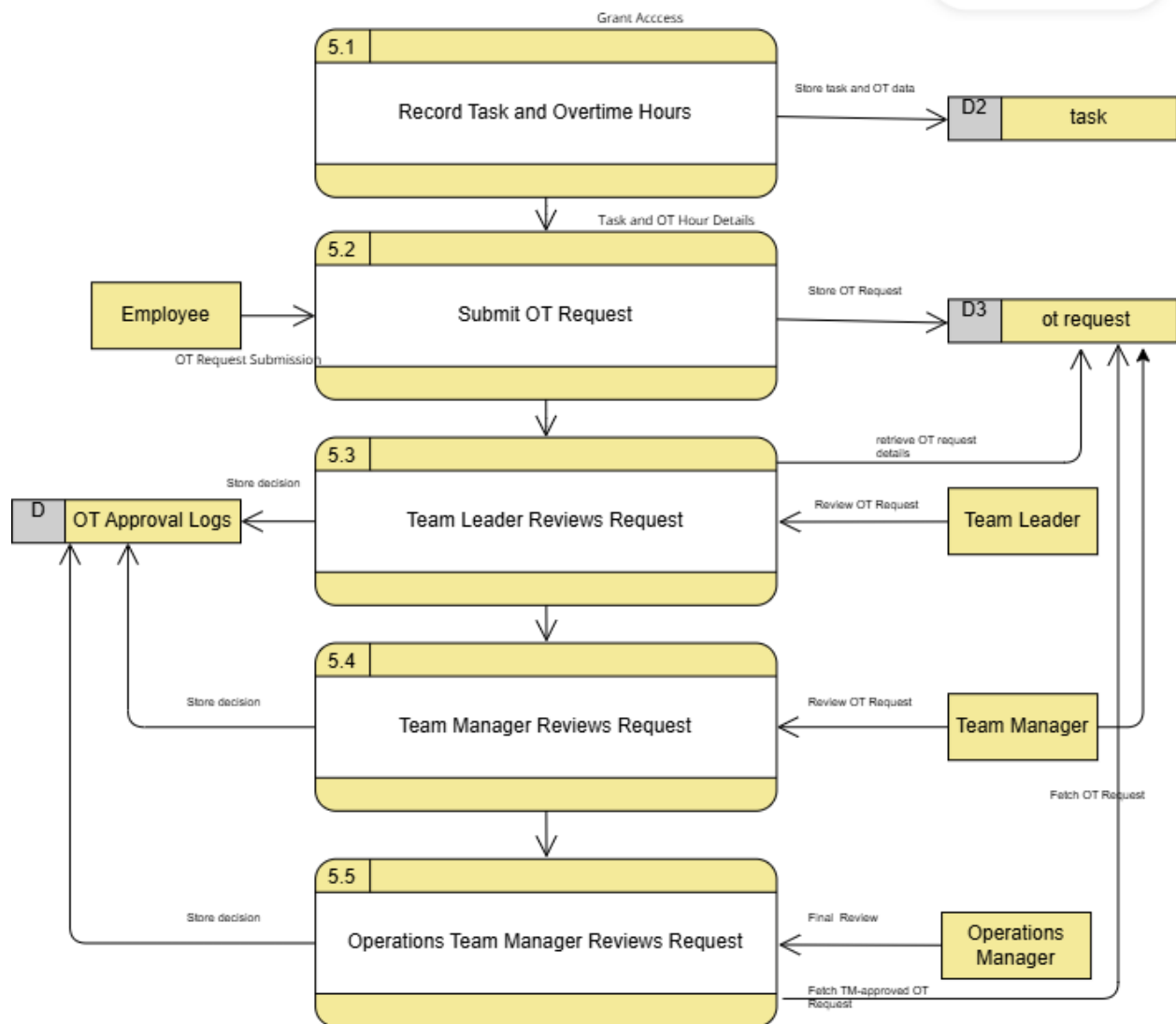


Figure 15

Use Case Diagram

Figure 16 Use Case Diagram

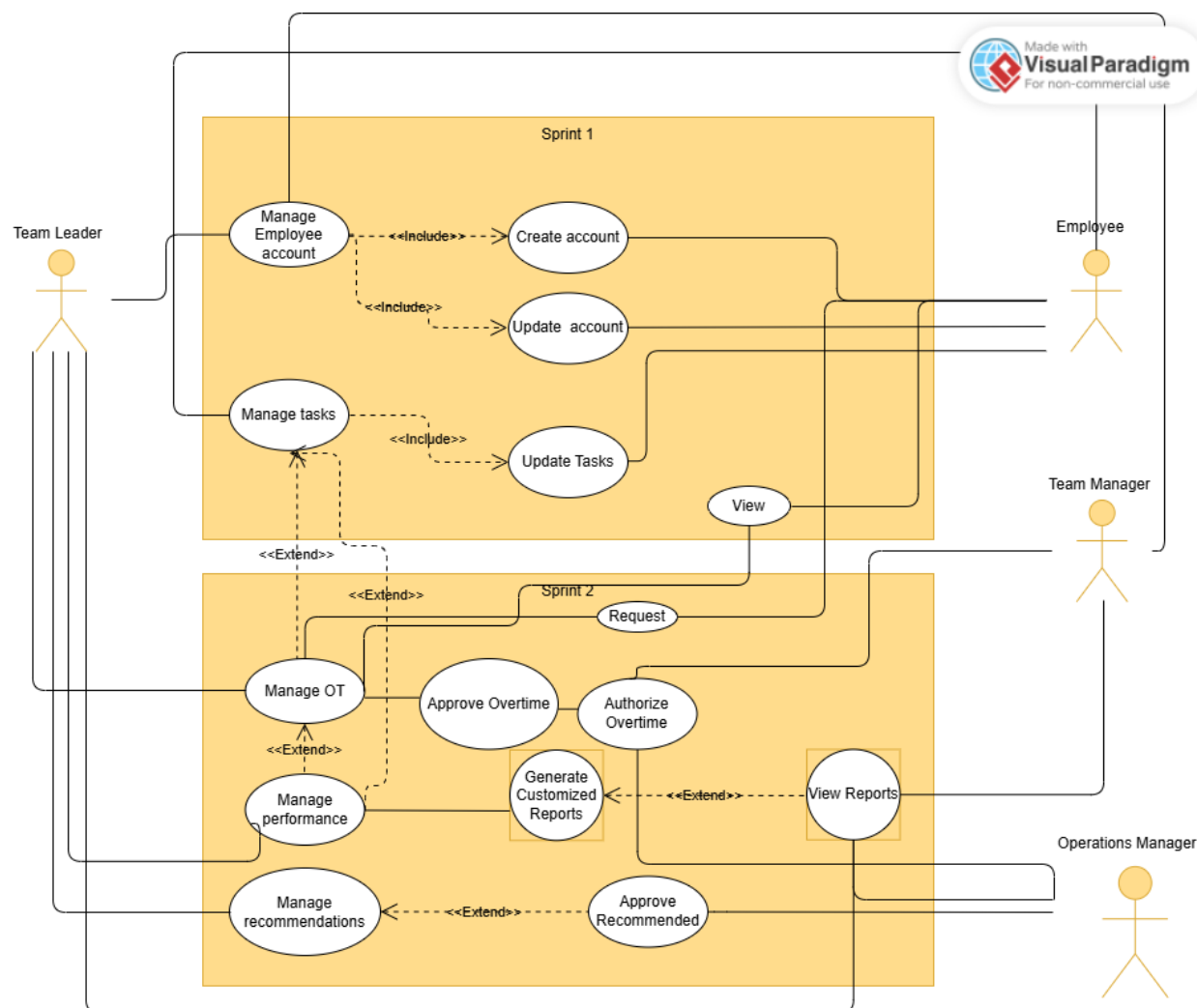


Figure 17

Use Case Full Description

Table 5 Manage Employee Account Use Case Description

Use Case ID	OT_UC_1
Use Case Name	Create Account
Created By	Kurt Yuri C. Fegarido
Description	This use case enables a Team Leader to register a new account on the Optitrack website on behalf of an employee, granting the employee access to its features.
Primary Actor	Employee
Secondary Actor	None
Include Use Case	None

Preconditions	<ul style="list-style-type: none"> The user must not already have an existing account. <p>The Optitrack system is accessible online.</p>
Postconditions	<ul style="list-style-type: none"> Success: The user is successfully registered, and a confirmation email is sent. Failure: The user is notified of the failure reason and prompted to retry.
Triggers	<ul style="list-style-type: none"> The user wants to create an account on the Optitack to access its features.
Main Flow	<ol style="list-style-type: none"> User navigates to the registration page. Optitrack system prompts the user to enter details such as: <ol style="list-style-type: none"> Username Name Age Address Email Address Contact Number Password (meeting security requirements) User submits the registration form. Optitrack system validates the information. Optitrack system sends a confirmation email. User clicks the confirmation link in the email. <ul style="list-style-type: none"> The Optitrack system activates the account and displays a success message.
Alternate Flows	<p>4a. Invalid Input:</p> <ol style="list-style-type: none"> If the user provides invalid or incomplete information, the Optitrack system notifies the user. The user is prompted to correct the input. <p>4b. Duplicate Username:</p> <ol style="list-style-type: none"> Optitrack system notifies the user that the Username is already taken. User is prompted to use a different Username. <p>4c. Duplicate Email Address:</p>

	<ol style="list-style-type: none"> 1. Optitrack system notifies the user that the email is already registered. 2. User is prompted to use a different email. <p>4d. Password Requirements Not Met:</p> <ol style="list-style-type: none"> 1. Optitrack system notifies the user that the password did not meet the security requirements. 2. User is prompted to use a different password. <p>5a. Email Not Received</p> <ol style="list-style-type: none"> 7. User requests the Optitrack system to resend the confirmation link.
Special Requirements	<ol style="list-style-type: none"> 1. Email verification links should expire after 5 minutes.
Assumptions	<ul style="list-style-type: none"> • Users have access to a valid email address.
	<ul style="list-style-type: none"> •

Table 6

Use Case ID	OT_UC_2
Use Case Name	Update Account
Created By	Kurt Yuri C. Fegarido
Description	This use case allows users to update their account details, such as personal information, email, or password.
Primary Actor	Employee
Secondary Actor	None
Include Use Case	None
Preconditions	<ul style="list-style-type: none"> • The user must already have an existing account. • The user must be logged in to the Optitrack system. • The Optitrack system is accessible and online.
Postconditions	<ul style="list-style-type: none"> • Success: The account details are updated, and the user receives a notification confirming the changes. • Failure: The user is notified of the failure reason (e.g., invalid input, session timeout) and prompted to retry
Triggers	<ul style="list-style-type: none"> • The user wants to modify their account information.

Main Flow	<ol style="list-style-type: none"> 1. User navigates to the account settings page. 2. Optitrack system displays the current account details. 3. User edits the desired fields (e.g., username, name, age, address, contact number, email address, password). 4. User submits the updated details. 5. Optitrack system validates the input and applies the changes. 6. User receives a confirmation notification about the update.
Alternate Flows	<p>4a. Invalid Input:</p> <ol style="list-style-type: none"> 1. If the user provides invalid or incomplete information, the Optitrack system notifies the user. 2. The user is prompted to correct the input. <p>4b. Duplicate Username:</p> <ol style="list-style-type: none"> 1. Optitrack system notifies the user that the Username is already taken. 2. User is prompted to use a different Username. <p>4c. Duplicate Email Address:</p> <ol style="list-style-type: none"> 1. Optitrack system notifies the user that the email is already registered. 2. User is prompted to use a different email. <p>4d. Password Requirements Not Met:</p> <ol style="list-style-type: none"> 1. Optitrack system notifies the user that the password did not meet the security requirements. 2. User is prompted to use a different password. <p>5a. Session Timeout:</p> <ol style="list-style-type: none"> 1. If the user's session expires during the update process, the Optitrack system redirects the user to the login page. 2. User logs in again and restarts the update process.
Special Requirements	<ul style="list-style-type: none"> • Sensitive information (e.g., passwords) must be encrypted during transmission and storage.
Assumptions	<ul style="list-style-type: none"> • Users know their current account credentials for sensitive updates like password changes.

Table 7 Manage Task Use Case Description⁸

Use Case ID	OT_UC_3
Use Case Name	Manage Tasks
Created by	Virgilio Angelo III S.Navarro
Revised By	Robyn Dominique Fruto
Description	This use case describes the process by which employees log, update, and manage their own tasks using a structured task entry table. Each task includes date, time in and out, a generalized task selected from a dropdown menu, and a specific description written by the employee.
Primary Actor	Employee
Secondary Actor	None
Include Use Case	-
Preconditions	The employee is logged into the Optitrack system The Optitrack system supports task table entry and dropdown selections
Postconditions	Success: The task is logged with all required details The Optitrack system saves the task entry and displays it in the employee's task timeline Failure: Incomplete or invalid input prevents saving the task The employee is prompted to correct and resubmit.
Triggers	The employee performs work that needs to be logged The employee starts or ends a task session
Main Flow	<ol style="list-style-type: none"> 1. The employee logs into the Optitrack system 2. The employee navigates to the task management section 3. The system displays a task table with the following fields: <ol style="list-style-type: none"> a. Date (calendar picker) b. Time In (time picker) c. Time Out (time picker) d. Volume (Generalized Task) – dropdown menu of common task types (e.g., Documentation, Review, Development, Meeting) e. Specific Task Description – text field where the employee types exactly what they did 4. The employee fills in the task details

	<p>5. The employee clicks “Save” or “Submit”</p> <p>6. The Optitrack system validates the input and saves the task</p> <p>7. The system updates the timeline or task list and displays a success message</p>
Alternate Flows	<p>3A. Invalid Input</p> <p>The system highlights missing or incorrect fields</p> <p>The employee is prompted to revise the entry before saving</p>
Special Requirements	<p>Dropdown values for "Volume" must be customizable by the admin</p> <p>"Specific Task Description" must allow free-form text input</p> <p>Entries should update in real time and appear in the employee’s task timeline</p> <p>System should support sorting/filtering by date, volume, or keyword</p>
Assumptions	<p>Employees regularly log their tasks</p> <p>Employees are aware of the difference between general task type (dropdown) and specific task description (manual entry)</p>

Table 9 Manage OT Use Case Description Table

Use Case ID	OT_UC_4
Use Case Name	Manage OT
Created By	Rick Laurence Cruz
Description	This case covers the workflow for OT requests, from employee submission to approval by the Team Leader, Team Team Manager, and Operations Team Manager.
Primary Actor	Employee
Secondary Actor	Team Leader, Team Team Manager, Operations Team Manager
Include Use Case	<p>Request OT</p> <p>View OT</p> <p>OT Approval</p>
Preconditions	<p>All employees log into the Optitrack system.</p> <p>Employees must have recorded their task.</p>
Postconditions	OT requests are approved and recorded. The employee is notified.

	OT request is rejected, and the employee is notified.
Triggers	The employee works or works overtime hours and submit a request for approval.
Main Flow	<ol style="list-style-type: none"> 1. Employee logs into the Optitrack system. 2. Employees record their task and overtime hours. 3. Employees submit the OT request. 4. Team Leader reviews the OT request. 5. Team Leader approves or rejects the OT request. 6. If approved, the Team Manager reviews the OT request. 7. The Team Manager approves or rejects the OT request.
Alternate Flows	<p>4a. Overtime exceeds:</p> <ol style="list-style-type: none"> 1. The request is automatically rejected by Team Leader. <p>4b. Team Leader Rejected for Approval</p> <ol style="list-style-type: none"> 1. The Optitrack system will record the rejected and notify the employee.
Special Requirements	Audit for all OT submissions and approvals.
Assumptions	<p>Employees enter activity and overtime data.</p> <p>Team Leaders, Team Team Managers, and Operations Team Managers review OT requests.</p>

Use Case ID	OT_UC_5
Use Case Name	OT Approval
Created By	Rick Laurence Cruz
Description	This case describes the process where the Operations Team Manager reviews, approves, or rejects overtime (OT) requests that have been approved by the Team Leader and Team Team Manager.
Primary Actor	Operations Manager
Secondary Actor	Team Leader, Team Manager, Employee
Include Use Case	<ul style="list-style-type: none"> • OT approval
Preconditions	<ul style="list-style-type: none"> • Overtime requests must have been approved by both the Team Leader and Team Team Manager.

Postconditions	<ul style="list-style-type: none"> The OT request is approved or not approved; the Optitrack system updates the request status and notifications are sent to the Employee and Team Leader. If no action is taken, the OT request remains pending.
Triggers	<ul style="list-style-type: none"> A Team Leader recommends an OT request for final approval or rejection.
Main Flow	<ol style="list-style-type: none"> The Operations Team Manager logs into the Optitrack system. The Operations Team Manager accesses for approval. The Optitrack system displays a list of pending OT requests. The Operations Team Manager reviews each OT request. The Operations Team Manager approves or rejects the OT request.
Alternate Flows	<p>5a. No Pending Requests:</p> <ol style="list-style-type: none"> The Optitrack system displays a message, "No pending OT requests available for review."
Special Requirements	<ul style="list-style-type: none"> Notifications must be sent to the Employee and Team Leader. The Optitrack system must allow the Operations Team Manager to view the full request history, including previous approvals.
Assumptions	<ul style="list-style-type: none"> All overtime requests reached by the Operations Team Manager have been validated by prior approval.

Use Case ID	OT_UC_6
Use Case Name	View Assigned Employee Performance
Created By	Robyn Dominique Fruto
Description	This use case allows Team Leaders and Team Team Managers to access performance data of their assigned employees to monitor work trends, productivity, and performance-related changes.
Primary Actor	Team Leader
Secondary Actor	Team Manager
Include Use Case	None
Preconditions	<ul style="list-style-type: none"> The actor must be logged into the Optitrack system. The actor must have assigned employees.

Postconditions	<ul style="list-style-type: none"> • Success: The actor successfully views performance analytics of their assigned employees. • Failure: The Optitrack system informs the actor that they do not have access or assigned employees.
Triggers	<ul style="list-style-type: none"> • Start of a scheduled performance review cycle. • A need to analyze team or individual productivity. • Detection of a significant performance change.
Main Flow	<ol style="list-style-type: none"> 1. Actor logs into the Optitrack system. 2. Actor navigates to the Employee Performance module. 3. Optitrack system authenticates access and displays a list of assigned employees. 4. The actor selects an employee from the list. 5. Optitrack system displays the performance analytics of the selected employee.
Alternate Flows	<p>3a. No Assigned Employees: Optitrack system displays a message: "No employees assigned to your account."</p> <p>3b. Unauthorized Access: Optitrack system displays a message: "You do not have permission to access this data."</p>
Special Requirements	<ul style="list-style-type: none"> • Real-time data visualization for productivity trends.
Assumptions	<ul style="list-style-type: none"> • Team Leaders and Team Managers only see data for employees assigned to them.

Use Case ID	OT_UC_7
Use Case Name	Manage Employee side – Team Manager side
Created By	Sondrick Frondoza
Revised by	Robyn Dominique Fruto
Description	Allows the Team Manager to add users, assign tasks, and monitor the employee's progress and task efforts via a visual timeline.
Primary Actor	Team Manager

Secondary Actor	None
Include Use Case	None
Preconditions	Team Manager must be logged into the Optitrack system. Employee accounts exist in the Optitrack system.
Postconditions	New tasks are assigned to employees. Updates to employee information or assignments are saved.
Triggers	Team Manager selects a user or adds a new task.
Main Flow	1. Team Manager logs into the Optitrack system. 2. Team Manager selects an employee from the group list. 3. Team Manager views employee task timelines. 4. Team Manager clicks "Add User" to add a new employee. 5. Team Manager clicks "Add Task" to assign a new task. 6. Team Manager saves the change.
Alternate Flows	If no employees exist, the Optitrack system prompts the Team Manager to add a new user first. If no tasks are assigned, the timeline appears empty.
Special Requirements	Timeline view must update in real time. Optitrack system must show task duration and effort clearly.
Assumptions	Employees and tasks are regularly updated by the Team Manager.

Use Case ID	OT_UC_8
Use Case Name	Manage recommendations
Created By	Sondrick N. Frondozo
Revised By	Robyn Dominique Fruto
Description	This use case allows the Team Manager to view, update, and manage employee recommendations within the Optitrack system.
Primary Actor	Team Manager
Secondary Actor	None
Include Use Case	None
Preconditions	Team Manager must be logged into the Optitrack system. Recommendation data must be available.

Postconditions	<p>Success:</p> <p>Employee recommendations are viewed, updated, or approved.</p> <p>All changes are saved in the system.</p> <p>Failure:</p> <p>The system displays an error message if data is missing or cannot be updated.</p>
Triggers	The Team Manager accesses the "Recommendations" tab to manage recommendations.
Main Flow	<ol style="list-style-type: none"> 1. Team Manager logs into the Optitrack system. 2. Team Manager clicks the "Recommendations" tab. 3. Optitrack system displays existing recommendations. 4. Team Manager edits or approves a recommendation. 5. The system saves the updates and confirms success.
Alternate Flows	<p>3a. No Recommendation Data Available</p> <ul style="list-style-type: none"> • Optitrack system displays: "No recommendation data available." <p>4a. Invalid Recommendation Entry</p> <ul style="list-style-type: none"> • Optitrack system prompts the Team Manager to complete or correct the required fields.
Special Requirements	<ul style="list-style-type: none"> • All recommendation updates must be timestamped. • The system must store who made each change.
Assumptions	<ul style="list-style-type: none"> • The Team Manager is responsible for managing recommendation records. • Recommendation data is regularly updated and maintained.

Table 10 OT Approval Use Case Description Table

Use Case ID	OT_UC_9
Use Case Name	Approval OT Request
Created By	Rick Laurence Cruz
Description	This case details the workflow of approval, which employee submit their OT request. It includes the review of approval and rejection by Team Leader, Team Team Manager and Operation Team Manager
Primary Actor	Team Leader

Secondary Actor	Team Manager, Operations Team Manager
Include Use Case	<ul style="list-style-type: none"> • Request OT • OT Approval
Preconditions	<ul style="list-style-type: none"> • All employees log into the Optitrack system. • The employee has submitted a complete OT request with tasks recorded. • All approved are verified by the Optitrack system.
Postconditions	<ul style="list-style-type: none"> • The OT request is either approved or rejected. • The employee is notified.
Triggers	<ul style="list-style-type: none"> • The OT request is submitted by an employee for approval.
Main Flow	<ol style="list-style-type: none"> 1. Optitrack system receives the OT request submitted by the employee. 2. Optitrack system receives the OT request to the designated Team Leader. 3. Team Leader logs into the Optitrack system and views the OT request. 4. Team Leader reviews the OT recorded tasks. 5. Team Leader approves the request. 6. Optitrack system sends the OT request to the Team Team Manager. 7. Team Manager logs into the Optitrack system and reviews the request. 8. The Team Manager approves the request. 9. Optitrack system sends the OT request to the Operations Team Manager. 10. Operations Team Manager logs into the Optitrack system and reviews the request. 11. Operations Team Manager approves the request. 12. Optitrack system updates the OT request status to "Approved". 13. Optitrack system sends a notification to the employee about approval.
Alternate Flows	4a. Team Leader Rejects Request

	<ol style="list-style-type: none"> 1. Team Leader rejects the OT request. 2. Optitrack system updates the request status to "Rejected". 3. Optitrack system sends a rejection notification to the employee. 4. Optitrack system logs the rejection with reason.
Special Requirements	<ul style="list-style-type: none"> • A notification Optitrack system must be in place for real-time updates for employees.
Assumptions	<ul style="list-style-type: none"> • Optitrack system Access <p>All employees, Team Leaders, Team Team Managers, and Operations Team Managers, have valid login credentials and access to the OT Optitrack system.</p> <ul style="list-style-type: none"> • Data Entry <p>Employees are responsible for accurately entering their work tasks and overtime hours before submitting an OT request.</p>

Table 11 View Reports Use Case Description Table

Use Case ID	OT_UC_10
Use Case Name	Generate Customized Reports
Created By	Robyn Dominique Fruto
Description	This use case enables the Operations Team Manager or Team Team Manager to generate a customized report based on selected criteria such as date range or specific report type.
Primary Actor	Operations Manager
Secondary Actor	Team Manager
Include Use Case	Access Report Generation Module
Preconditions	<ol style="list-style-type: none"> 1. Team Manager and Operations Manager must have access to the "View Reports" module. 2. Relevant data must exist for the selected criteria.
Postconditions	<p>Success: The requested report is generated and displayed on the Optitrack system.</p> <p>Failure: An error message is displayed if data is unavailable or a Optitrack system error occurs during report generation.</p>
Triggers	<ul style="list-style-type: none"> • Actor customizes and submits report generation parameters (e.g., date range, report type).

Main Flow	<ol style="list-style-type: none"> 1. Team Manager and Operations Manager selects customization criteria for the report (e.g., date, type of report). 2. Team Manager and Operations Manager clicks "Generate Report." 3. Optitrack system processes the request. 4. Optitrack system displays the generated report to the actor.
Alternate Flows	<p>4a. No Data Available: Optitrack system displays: "No data available for the selected criteria."</p> <p>4b. Error During Generation: Optitrack system displays: "An error occurred while generating the report. Please try again."</p>
Special Requirements	<ul style="list-style-type: none"> • Reports should be exportable to PDF or Excel formats. • Reports must load within 5 seconds after submission
Assumptions	<ul style="list-style-type: none"> • Optitrack system is connected to the latest database updates.

Test Cases

Test Case ID	BU_001	Test Case Description	Test the Access of Team Manager and Team Leader to View Assigned Employee			
Created By	Robyn	Reviewed By	Robyn	Version		1.1
QA Tester's Log						
Tester's Name	Robyn	Date Tested	April 30, 2025	Test Case (Pass/Fail/Not		
S #	Prerequisites:		S #	Test Data		
1	Access to Optitrack Software		1	Userid =		
2	Valid Team Manager or Team Leader		2	Pass =		
3	Assigned employees exist in the database		3			
4	User is logged into the system		4			
Test Scenario						
Verify that on entering valid credentials, the Team Leader/Manager can access the Employee Performance module and view assigned employee data						
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended	
1	Navigate to Optitrack Dashboard	Dashboard should open				
2	Click on "Employee	Module should be				
3	System authenticates the	Access granted if valid role				
4	System displays list of	List of employees is shown				
5	Click on an employee name	Performance analytics are				

Test Case ID	BU_002	Test Case Description	Verify the system shows an error when no employees are assigned to the user.			
Created By	Robyn	Reviewed By	Robyn	Version	1.1	

QA Tester's Log

Tester's Name	Robyn	Date Tested	April 30, 2025	Test Case (Pass/Fail/Not)	
----------------------	-------	--------------------	----------------	----------------------------------	--

S #	Prerequisites:	S #	Test Data
1	Access to Optitrack Software	1	Valid Team Leader login
2	Valid Team Manager or Team Leader	2	No employees assigned to the user
3	Assigned employees exist in the database	3	
4	User is logged into the system	4	

Test Scenario Verify the system shows an error when no employees are assigned to the user.

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Log in as a Team Leader	System logs in and loads dashboard		
2	Navigate to Employee	Module opens but shows a		
3	Observe system response	"No employees assigned to		
4	Verify that no performance	User is restricted from		
5				

Test Case ID	BU_003	Test Case Description	Successfully Filter and Sort Performance Metrics by Time Range and KPI			
Created By	Robyn	Reviewed By	Robyn	Version	1.1	

QA Tester's Log

Tester's Name	Robyn	Date Tested	April 30, 2025	Test Case (Pass/Fail/Not)	
----------------------	-------	--------------------	----------------	----------------------------------	--

S #	Prerequisites:	S #	Test Data
1	Access to Optitrack Software	1	Valid Team Leader login
2	Valid Team Manager or Team Leader	2	Employee performance includes KPIs like productivity
3	Assigned employees exist in the database	3	At least one employee with performance data
4	User is logged into the system	4	Performance data for at least 30 days

Test Scenario Verify that the Team Manager can apply filters to sort performance metrics by date range and KPI (e.g., "Last 30 Days" and "Exceeds Targets").

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Log in as a Team Leader	System loads successfully		
2	Navigate to performance	Module loads with filter		
3	Select filters "Last 30 Days"	Filter options selected		
4	Click "Apply"	System displays sorted		
5				

Test Case ID	BU_003	Test Case Description	No Results Found When Filtering by KPI with No Matching Data			
Created By	Robyn	Reviewed By	Robyn	Version	1.1	
QA Tester's Log						
Tester's Name	Robyn	Date Tested	April 30, 2025	Test Case (Pass/Fail/Not		
S #	Prerequisites:		S #	Test Data		
1	Access to Optitrack Software		1	Valid login credentials		
2	Valid Team Manager or Team Leader		2	No data matching specific KPI filter		
3	Assigned employees exist in the database		3	Filter criteria exist (e.g., "Missed Deadlines")		
4	User is logged into the system		4			
Test Scenario	Verify that the system displays a message when no data matches the selected filter					
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended	
1	Log in as a Team Manager or Team Leader	System logs in successfully				
2	Navigate to performance	Module opens with filtering				
3	Select KPI filter with no	Filter selected successfully				
4	Click "Apply"	System displays: "No data				
5						

Test Case ID	BU_003	Test Case Description	Filtering by Anomaly Detection Criteria		
Created By	Robyn	Reviewed By	Robyn	Version	1.1
QA Tester's Log					
Tester's Name	Robyn	Date Tested	April 30, 2025	Test Case (Pass/Fail/Not	
S #	Prerequisites:		S #	Test Data	
1	Access to Optitrack Software		1	Valid login credentials	
2	Valid Team Manager or Team Leader		2	Employee with abnormal performance fluctuations	
3	Assigned employees exist in the database		3	"Anomalies" filter is present and enabled in the system	
4	User is logged into the system		4		
Test Scenario					
Verify that the system correctly filters employee performance data when the "Anomalies" filter is selected (e.g., sudden drops in productivity).					
Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended	
1	Log in as a Team Manager or Team Leader	System logs in successfully			
2	Navigate to performance	Module opens with filtering			
3	Select KPI filter with no	Filter selected successfully			
4	Click "Apply"	System displays: "No data			

Test Case ID		BU_003	Test Case Description		No Results Found When Filtering by KPI with No Matching Data				
Created By		Robyn	Reviewed By		Robyn	Version		1.1	
QA Tester's Log									
Tester's Name		Robyn	Date Tested		April 30, 2025	Test Case (Pass/Fail/Not			
S #		Prerequisites:			S #		Test Data		
1		Access to Optitrack Software			1		Valid login credentials		
2		Valid Team Manager or Team Leader			2		No data matching specific KPI filter		
3		Assigned employees exist in the database			3		Filter criteria exist (e.g., "Missed Deadlines")		
4		User is logged into the system			4				
Test Scenario		Verify that the system displays a message when no data matches the selected filter							
Step #		Step Details		Expected Results		Actual Results		Pass / Fail / Not executed / Suspended	
1		Log in as a Team Manager or Team Leader		System logs in successfully					
2		Navigate to performance		Module opens with filtering					
3		Select KPI filter with no		Filter selected successfully					
4		Click "Apply"		System displays: "No data					
5									

Test Case ID	BU_004	Test Case Description	No Results Found When Filtering by KPI with No Matching Data			
Created By	Robyn	Reviewed By	Robyn	Version	1.1	
QA Tester's Log						
Tester's Name	Robyn	Date Tested	April 30, 2025	Test Case (Pass/Fail/Not		
S #	Prerequisites:		S #	Test Data		
1	User is an Operations Manager		1	Valid Operations Manager login credentials		
2	User must be logged into the system		2	System is functional and online		
3	User must have access rights to View		3			
4	System responds within 3 seconds		4			
Test Scenario: Verify that the Operations Manager can successfully access the "View Reports" module from the dashboard and see report customization options.						
Step #	Step Details	Expected Results	Actual Results		Pass / Fail / Not executed / Suspended	
1	Log in as Operations Manager	Login successful				
2	Click "View Reports" on the	System opens the "View				
3	Observe customization	Options like report type,				
4						
5						

Test Case ID	BU_003	Test Case Description	System Displays Error When Report Module Is Unavailable			
Created By	Robyn	Reviewed By	Robyn	Version	1.1	

QA Tester's Log

Tester's Name	Robyn	Date Tested	April 30, 2025	Test Case (Pass/Fail/Not)	
----------------------	-------	--------------------	----------------	----------------------------------	--

S #	Prerequisites:	S #	Test Data
1	System is temporarily unavailable	1	Valid Team Manager login
2	Team Manager is logged in	2	Module status: unavailable
3	User has access rights to View Reports	3	
4		4	

Test Scenario Verify that the system displays an appropriate error message when the "View Reports" module is down or inaccessible

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Log in as Team Manager	Login successful		
2	Click "View Reports" from	System attempts to load the		
3	Module is unavailable	System displays: "The		
4				

Test Case ID	BU_003	Test Case Description	Successfully Generate a Customized Report by Date and Type		
Created By	Robyn	Reviewed By	Robyn	Version	1.1

QA Tester's Log

Tester's Name	Robyn	Date Tested	April 30, 2025	Test Case (Pass/Fail/Not)	
----------------------	-------	--------------------	----------------	----------------------------------	--

S #	Prerequisites:	S #	Test Data
1	User must be logged in	1	Valid login (Operations Manager)
2	User has access to "View Reports"	2	Data exists for selected date and report type
3	User has access rights to View Reports	3	Example report type: "Employee Overtime Summary"
4		4	Valid date range (e.g., last 7 days)

Test Scenario Verify that the Operations Manager can generate a report by selecting valid customization parameters (e.g., date range and report type), and that the report loads within 5 seconds.

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Log in as Operations Manager	User is successfully logged in		
2	Navigate to "View Reports"	Report customization		
3	Select valid criteria: report	Criteria accepted		
4	Click "Generate Report"	Report is displayed within 5		
5				

Test Case ID	BU_003	Test Case Description	Handle "No Data Available" for Selected Criteria				
Created By	Robyn	Reviewed By	Robyn	Version		1.1	
QA Tester's Log							
Tester's Name		Robyn	Date Tested	April 30, 2025	Test Case (Pass/Fail/Not		
S #	Prerequisites:			S #	Test Data		
1	System is temporarily unavailable			1	Valid Team Manager login		
2	Team Manager is logged in			2	Module status: unavailable		
3	User has access rights to View Reports			3			
4				4			

Test Scenario Verify that the system displays an appropriate message when there is no data for the selected report criteria.

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	User must be logged in	Valid login (Team Manager)		
2	User has access to "View	No performance/overtime		
3	System is functional	Report type: "Task		
4				
5				

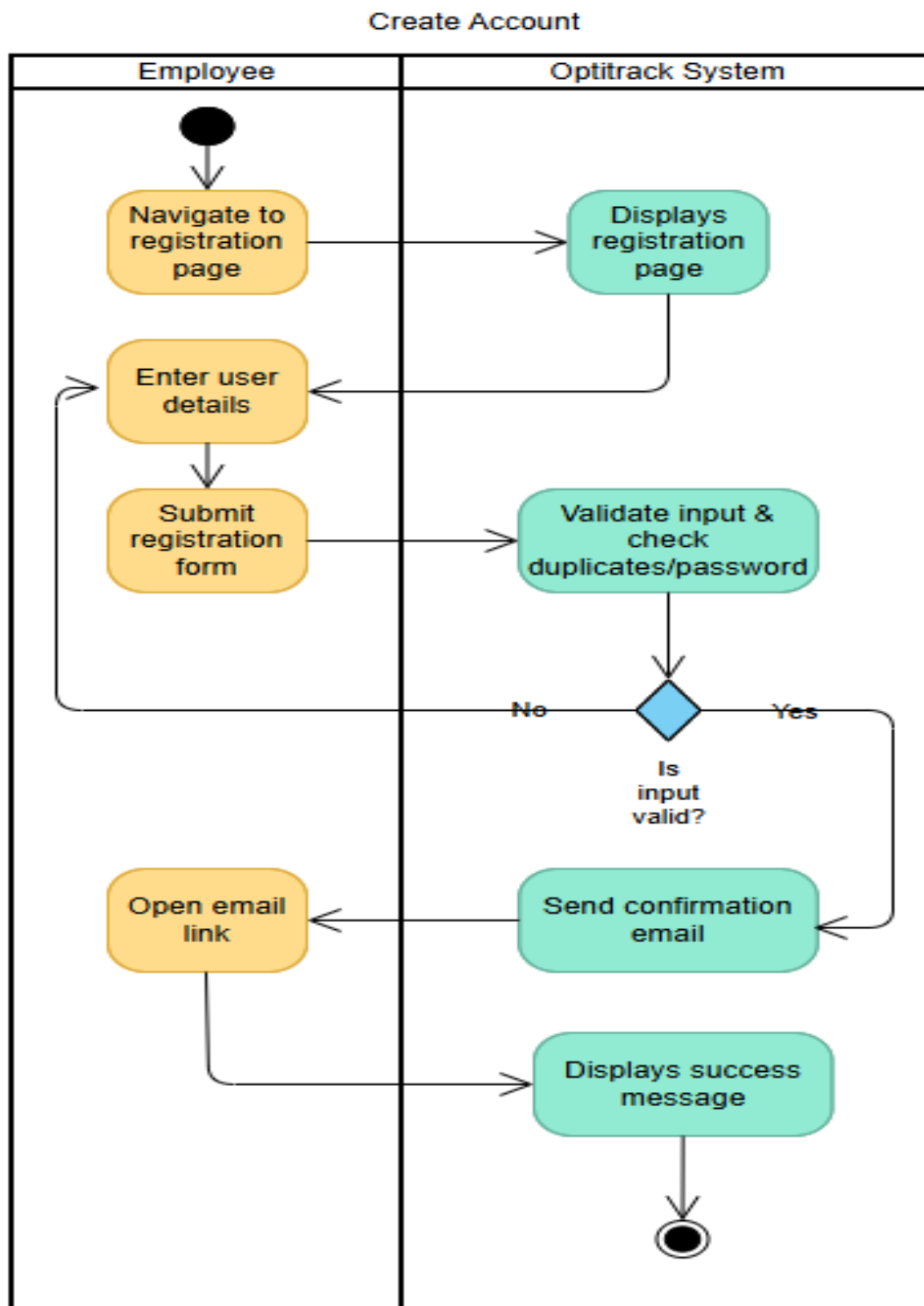
Tester's Name	Rick Laurence	Date Tested	May 4, 2025	Test Case (Pass/Fail/Not Executed)	
S #	Prerequisites:		S #	Test Data	
1	Employee must be registered in the system		1	Valid employee login credentials	
2	Employee must log in		2	Task records for the work day	
3	Task must be recorded for the work day		3		
4	Overtime hours must be input accurately		4		

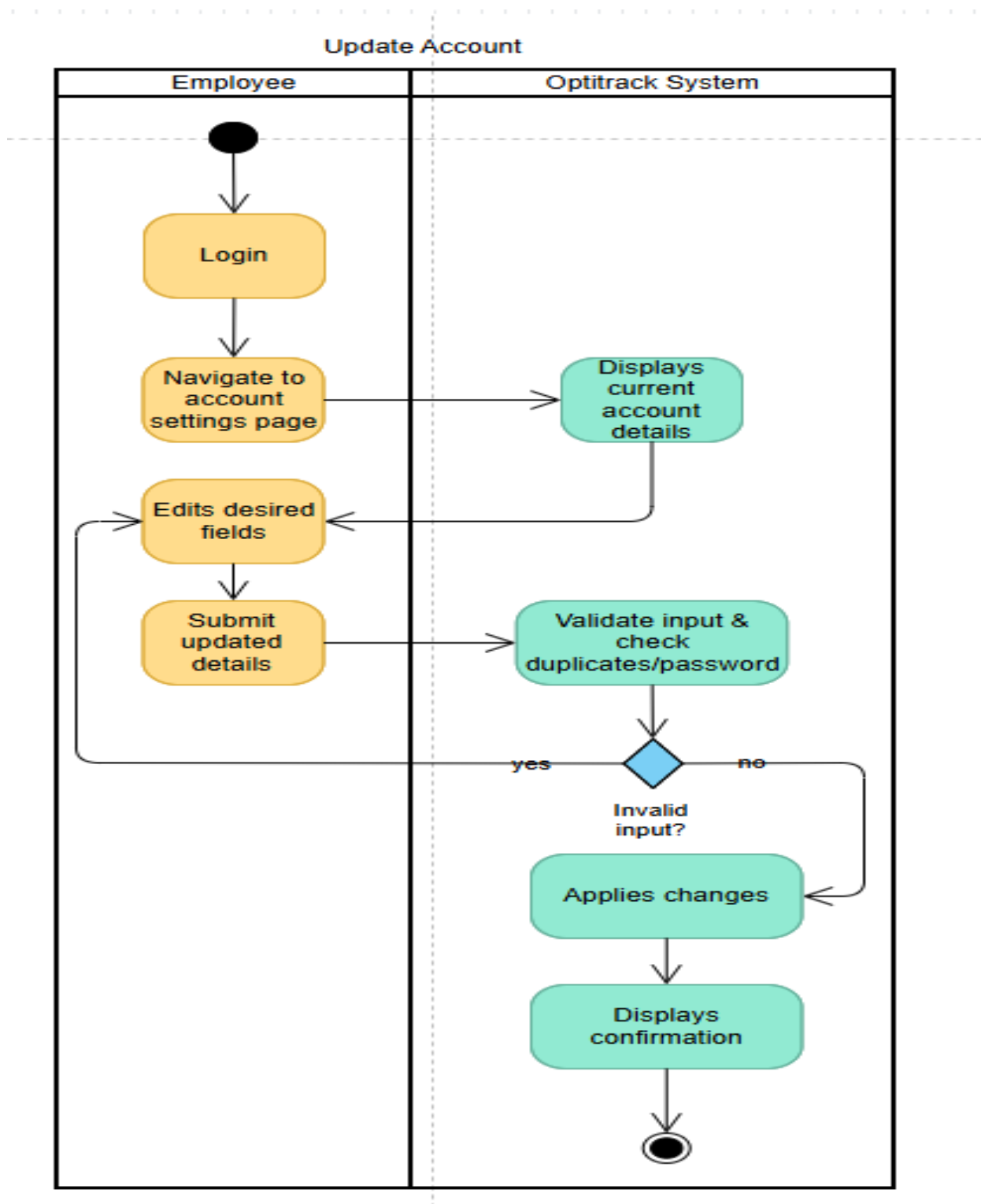
Test Scenario Verify the submit and approve OT request.

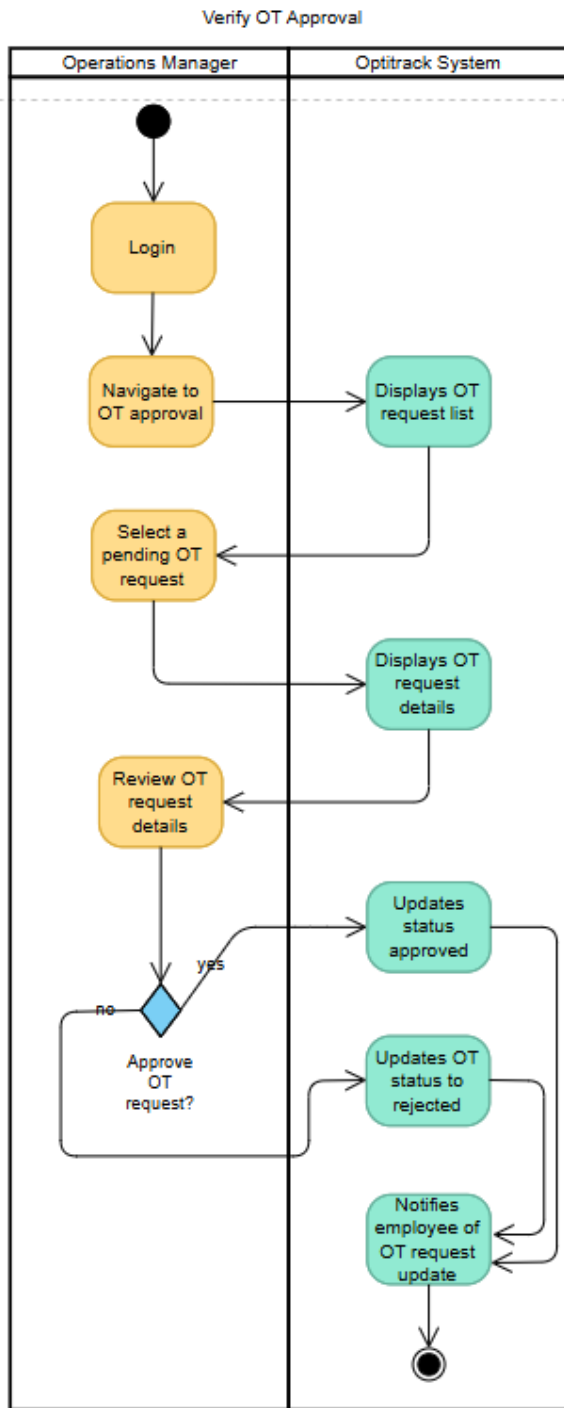
Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Employee logs in	Employee is verify		
2	Employee records task and	Task and OT recorded		
3	Employee submits OT	Request is sent to Team		
4	Team Leader reviews	Team Leader approves or		
5	If approved, Team Manager	Team Manager approves or		
6	If approved, Operation	The Operation Manager		

Test Case ID		MR_001	Test Case Description		Test Manager's ability to view and update employee recommendations					
Created By		Frondozo	Reviewed By		Frondozo		Version		1.1	
QA Tester's Log										
Tester's Name		Frondozo	Date Tested		May 4, 2025		Test Case (Pass/Fail/Not)			
S #		Prerequisites:		S #		Test Data				
1		Access to Optitrack Software		1		Manager user ID = [insert ID]				
2		Valid Manager account exists credentials		2		Recommendation ID = [insert ID]				
3		Recommendations data exists in the system		3						
4		System modules are working		4						
Test Scenario		Verify that the Manager can view recommendations, filter them by calendar, and update/approve a recommendation.								
Step #		Step Details		Expected Results		Actual Results		Pass / Fail / Not executed / Suspended		
1		Log in as Manager		Dashboard is displayed						
2		Click on "Recommendations" tab		Recommendations module						
3		View list of recommendations		Recommendations display						
4		Click "Filter by Date" and choose a		List is filtered by selected						
5		Select a recommendation and click		Update form appears						
6		Modify recommendation and click		Data saved and status						

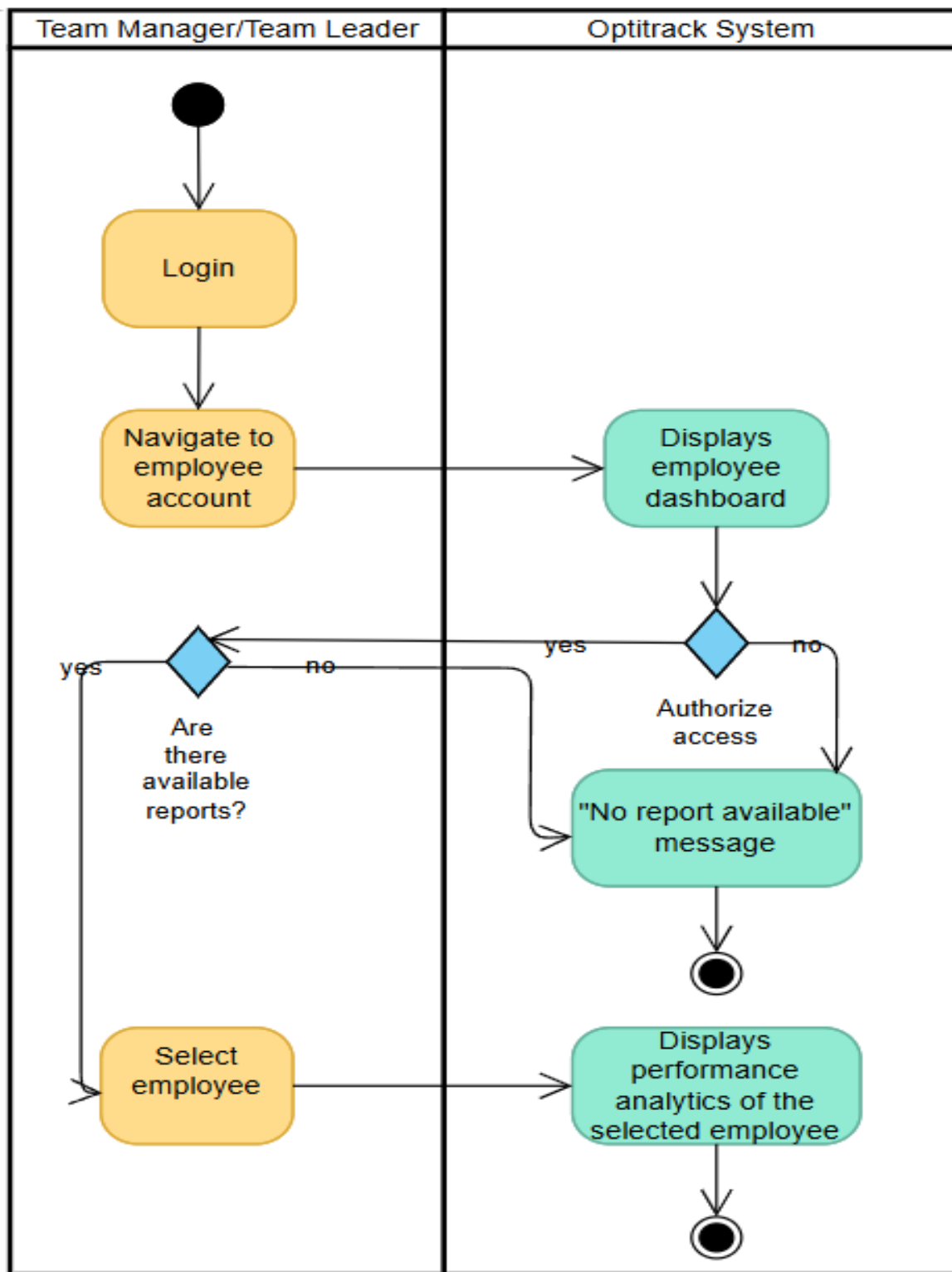
Activity Diagram with Swim lanes



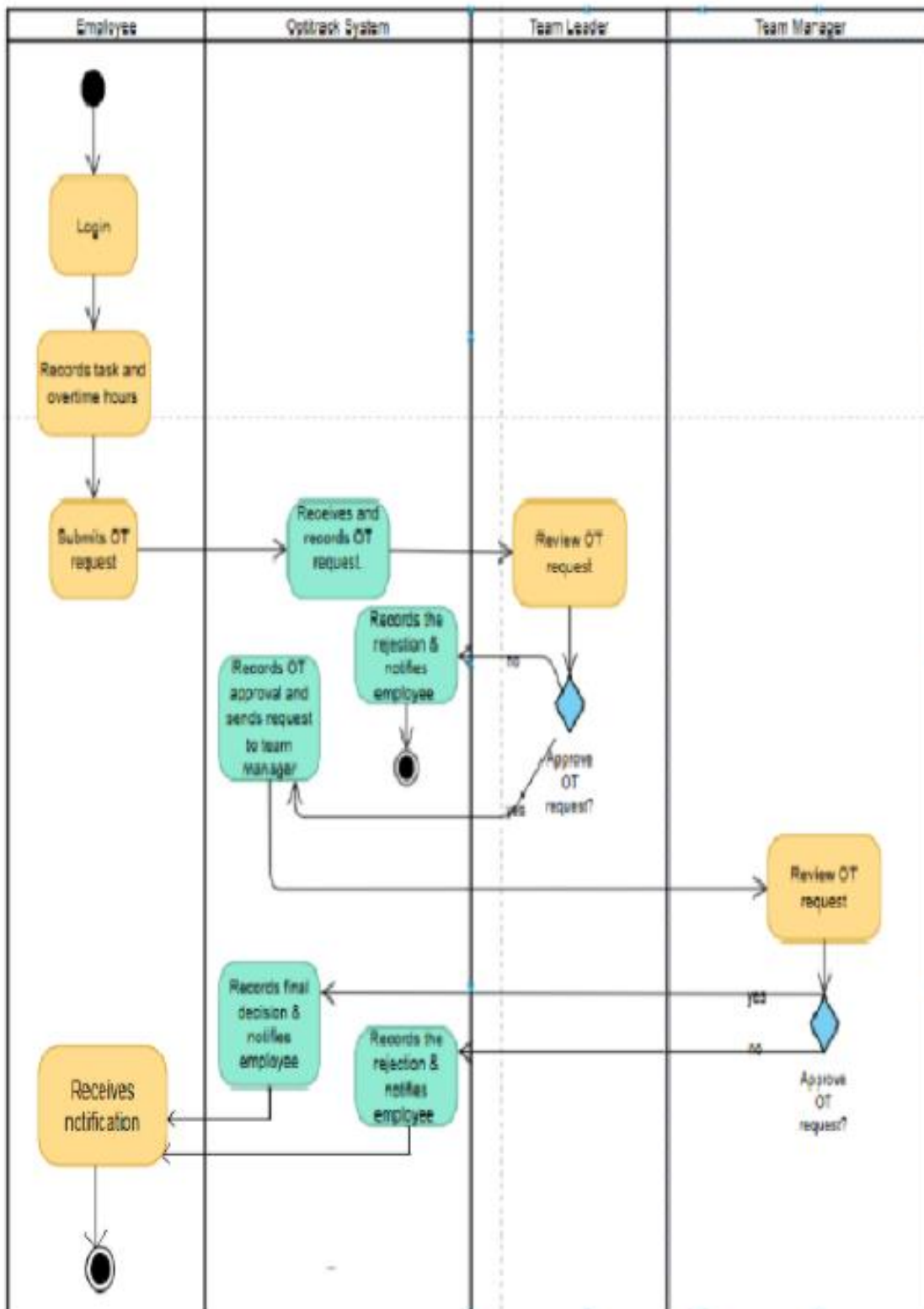




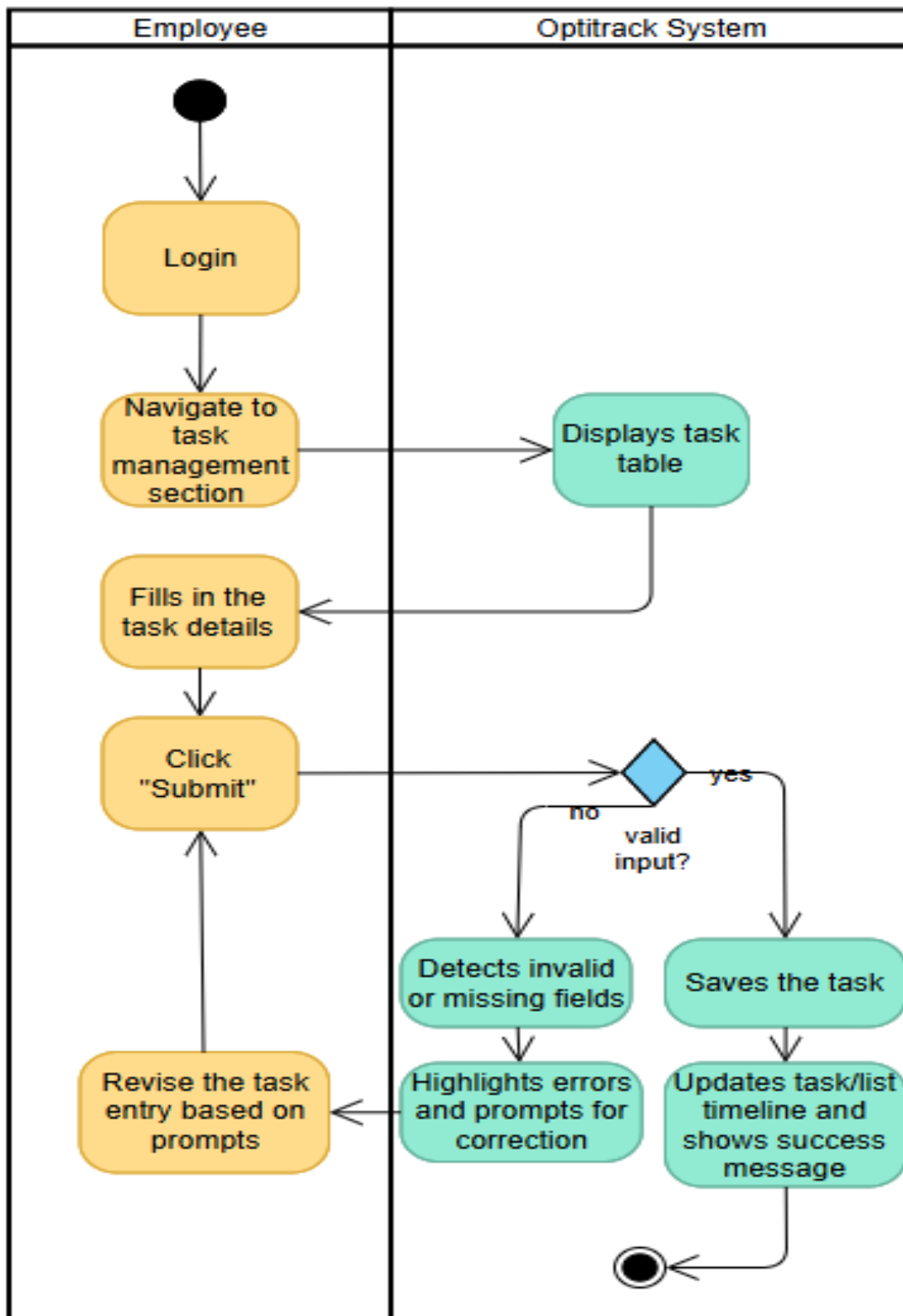
View Assigned Employee Performance

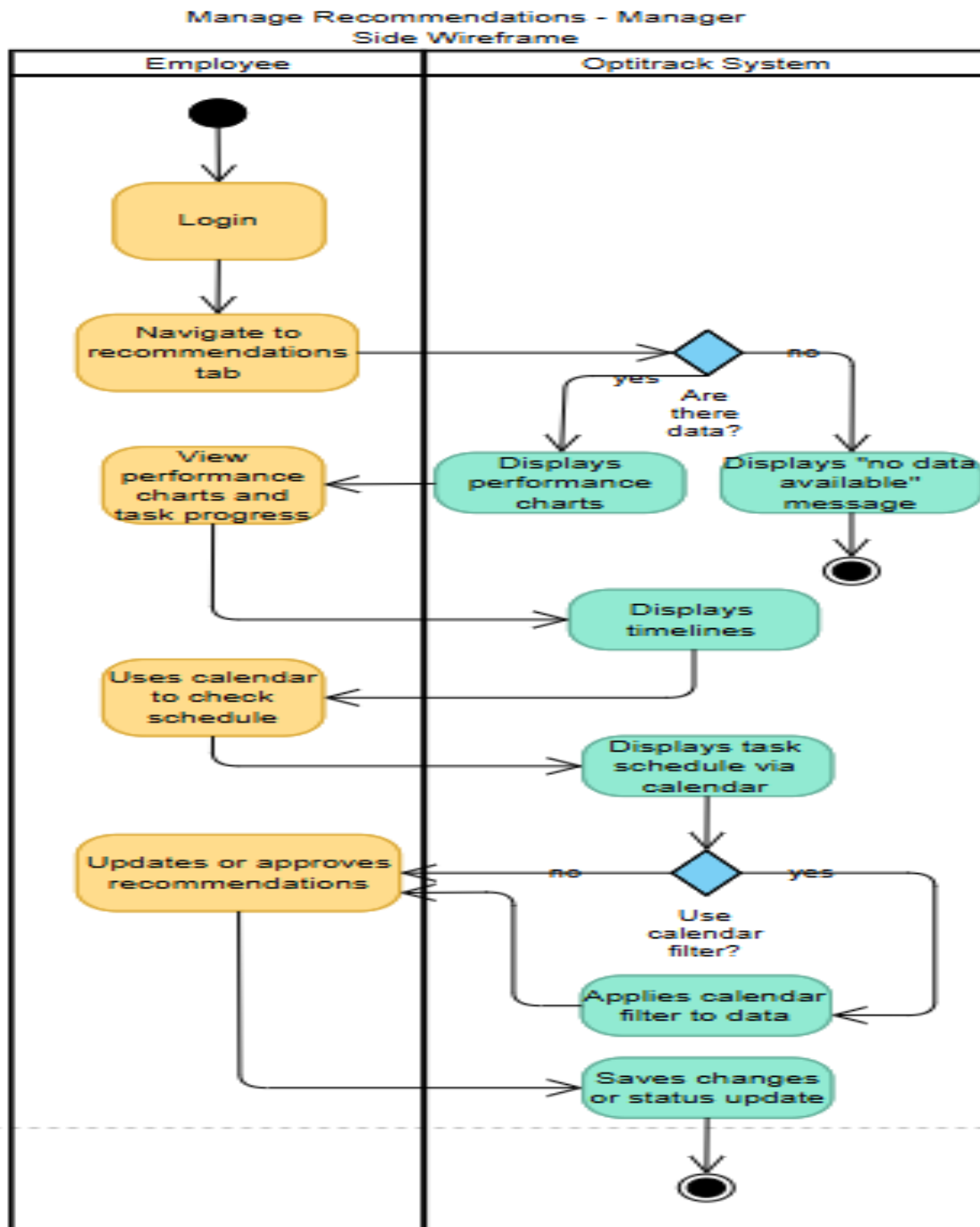


Manage OT

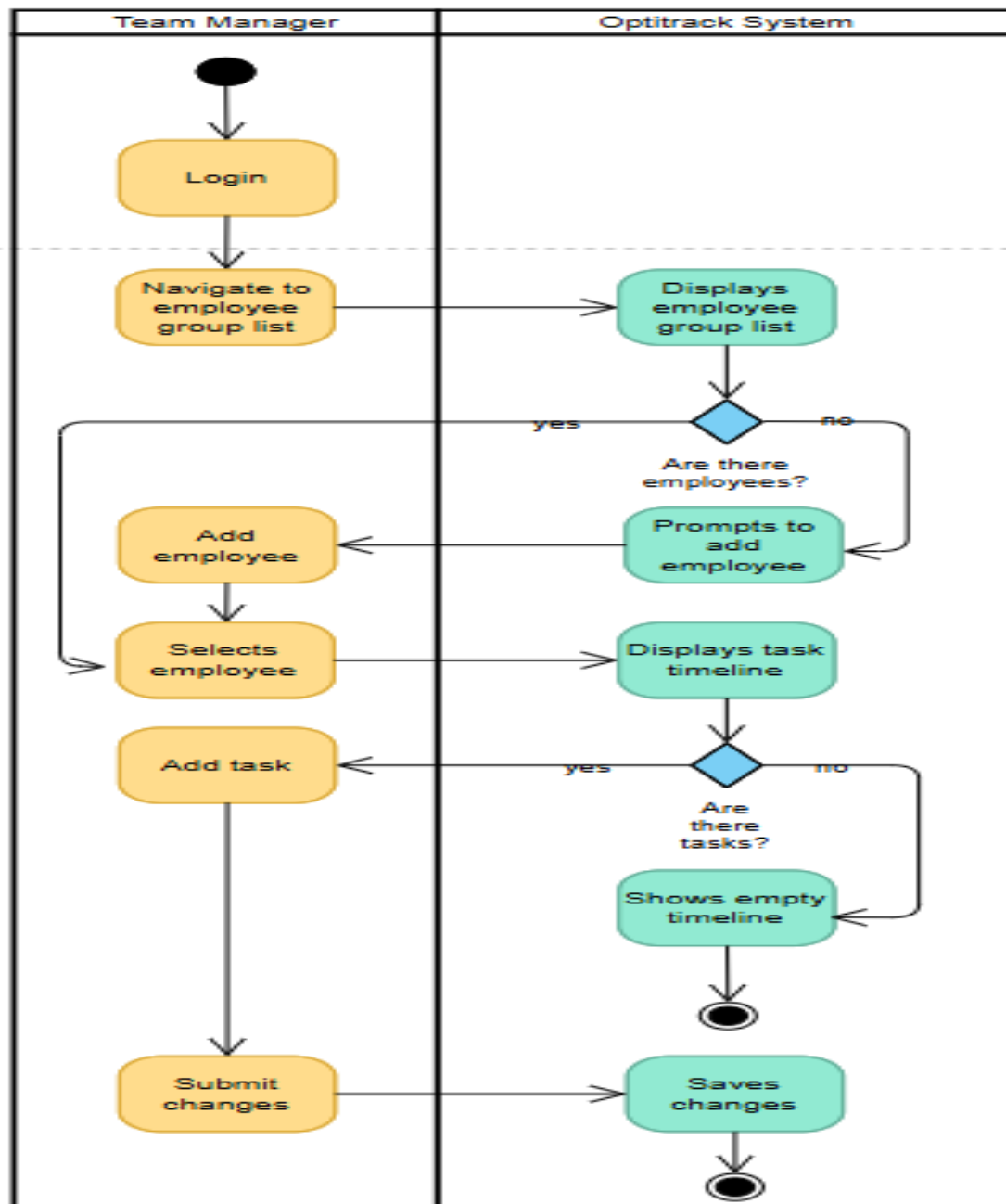


Manage Task

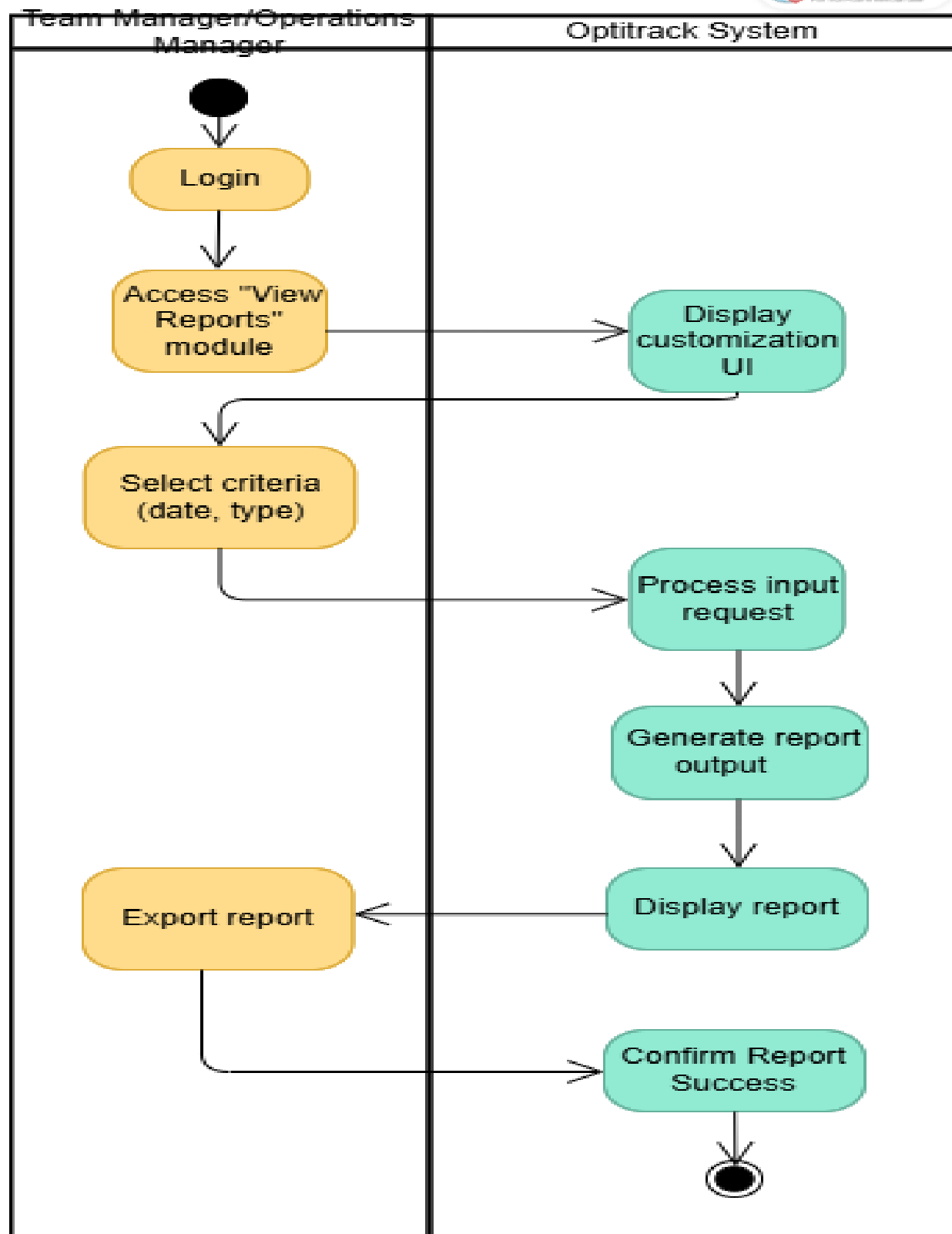




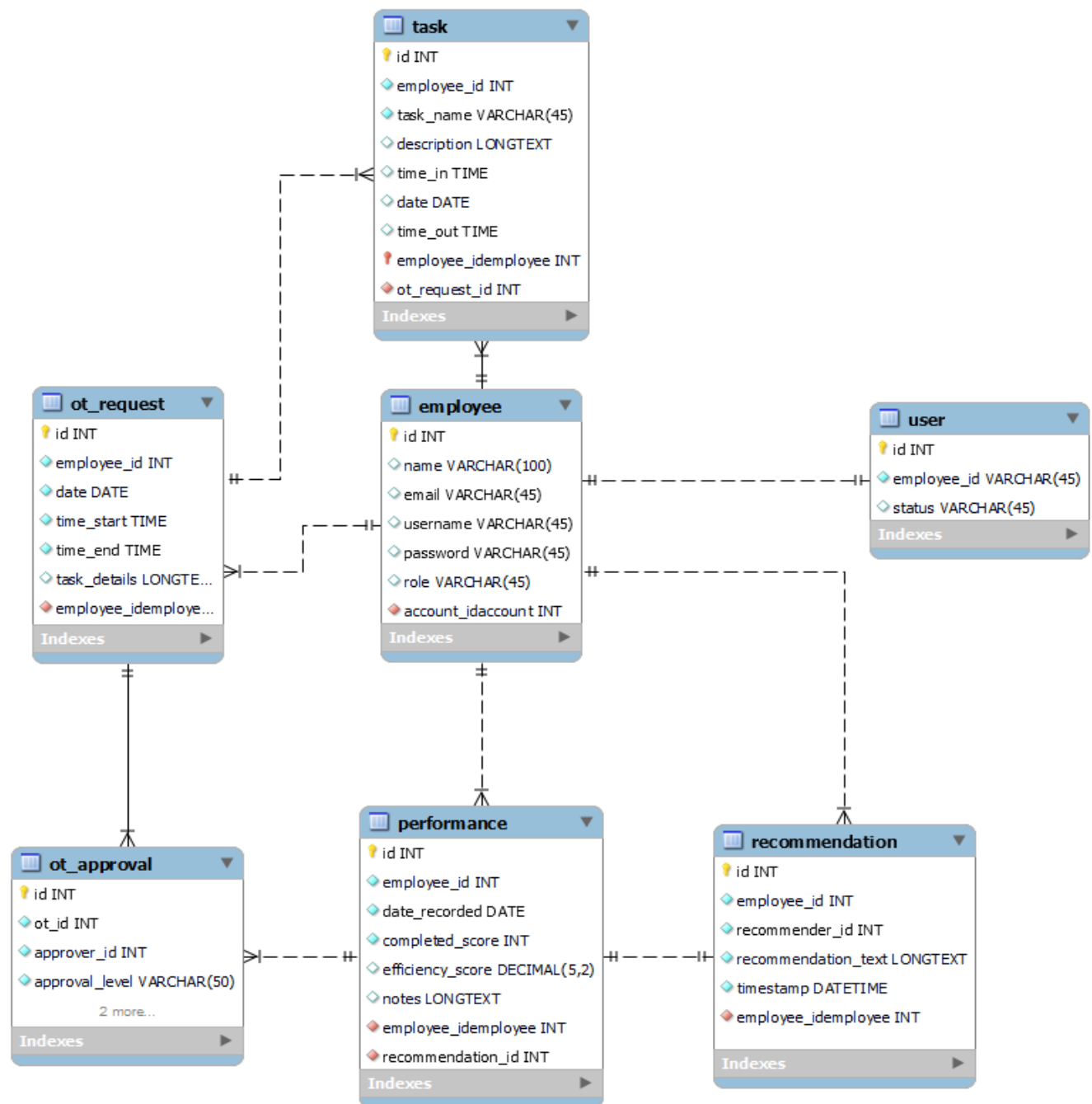
Manage Employee Side – Team Manager Side



Generate Customized Reports



Entity Relationship Diagram



V. Conclusion

This phase of the project focused on the analysis and design of the Manage OT functionality within the Optitrack system. We examined the complete overtime management process, starting from how employees log their tasks and submit OT requests, to how these requests are reviewed and approved by the Team Leader, Team Manager, and Operations Team Manager. By developing detailed use cases and Level 2 data flow diagrams, we clarified each actor's role, identified the required data stores, and mapped the entire approval workflow. This allowed us to better understand how information flows through the system and what features are necessary to support a reliable and efficient OT management process.

The main objective was to enhance transparency, streamline multi-level approvals, and ensure that OT requests are handled in a structured and accountable manner. Special focus was placed on outlining how decisions are logged, how notifications are triggered, and how the system can support efficient tracking of requests. With this groundwork completed, we now have a strong foundation to move into the next phase of the project. This will involve finalizing the technical architecture, refining the database schema, and developing a functional prototype of the Optitrack system. The next steps will also include user interface improvements and initial testing to ensure the system meets user needs and integrates smoothly with existing workflows.

VI. References

- [1] "Our Vision and Mission," *Capgemini Australia*. <https://www.capgemini.com/au-en/insights/research-library/our-vision-and-mission/>
- [2] "What we do," *Capgemini*. <https://www.capgemini.com/about-us/who-we-are/what-we-do/>
- [3] United Nations, "The 17 Sustainable Development Goals," *United Nations*, 2025. <https://sdgs.un.org/goals>
- [4] "Unlocking Efficiency: How Automated Timesheets Transform Business Time Management | Monitask," *Monitask*, Jul. 15, 2024. <https://www.monitask.com/en/blog/unlocking-efficiency-how-automated-timesheets-transform-business-time-management?utm> (accessed Mar. 06, 2025).
- [5] I. S. Chain, "How Does Timesheet Software Affect Productivity Long Term? - IT Supply Chain," *IT Supply Chain*, Feb. 08, 2025. <https://itsupplychain.com/how-does-timesheet-software-affect-productivity-long-term/?utm> (accessed Mar. 06, 2025).
- [6] "Boost Business Efficiency with Automated Timekeeping," *Timeandpay.com*, 2022. <https://www.timeandpay.com/boost-business-efficiency-with-automated-timekeeping?utm> (accessed Mar. 06, 2025).
- [7] "DSpace," *Wichita.edu*, 2025. <https://soar.wichita.edu/bitstreams/1d68257a-9803-4164-bf20-5acf96362836/download?utm> (accessed Mar. 06, 2025).
- [8] E. Staff, "What Are Automated Timesheets? Benefits & How To Implement It," *Tackle*, Dec. 30, 2024. <https://www.timetackle.com/automated-timesheets/?utm> (accessed Mar. 06, 2025).
- [9] "Smart Employee Time Tracking Software with Screenshots | Time Doctor," *www.timedoctor.com*. <https://www.timedoctor.com/>
- [10] Wrike, "Wrike," Wrike, 2019. <https://www.wrike.com/>

[11] “Time Tracking Software - Free Automated Time Tracker TimeCamp,” www.timecamp.com.
<https://www.timecamp.com/>

[12] “Connecteam: The All-in-One Employee App for Deskless Teams,” *Connecteam*.
<https://connecteam.com/>

[13] CAKE.com Inc, “Free Employee Overtime Tracker — Clockify,” *Clockify*, 2025.
<https://clockify.me/overtime-tracker> (accessed Mar. 05, 2025).

[14] “Time Tracking Software Suite,” *Replicon*. <https://www.replicon.com>

[15] “What is Outlook?,” support.microsoft.com. <https://support.microsoft.com/en-us/office/what-is-outlook-10f1fa35-f33a-4cb7-838c-a7f3e6228b20>

[16] Microsoft, “What is microsoft teams?,” support.microsoft.com, 2022.
<https://support.microsoft.com/en-us/topic/what-is-microsoft-teams-3de4d369-0167-8def-b93b-0eb5286d7a29>

Appendices

Appendix A: Project Vision

The AI-powered Overtime (OT) Tracking and Approval Optitrack system is designed to revolutionize workforce management within Capgemini by creating a streamlined, transparent, and data-driven approach to OT approvals. This Optitrack system is not just a tracking tool, but a strategic solution aimed at enhancing operational efficiency, improving employee experience, and optimizing business processes through advanced automation and AI-driven insights.

By integrating intelligent automation, the Optitrack system will reduce administrative burdens associated with OT approvals, ensuring a seamless and structured workflow. Employees will benefit from real-time access to their OT balance, reducing uncertainty and delays. Team leaders and operations Team Managers will gain deeper insights into workforce trends, enabling them to allocate resources more effectively and minimize unnecessary costs.

A key component of this vision is predictive analytics, which will help forecast workload patterns and proactively manage OT requirements. AI-driven anomaly detection will flag unusual or excessive OT requests, preventing compliance issues and optimizing labor costs. Additionally, the Optitrack system will integrate with existing payroll and workforce management platforms, ensuring data accuracy and alignment with company policies.

Ultimately, this initiative reflects Capgemini's commitment to leveraging cutting-edge technology to drive operational transformation. By implementing an AI-powered OT management Optitrack system, Capgemini aims to foster a more efficient, data-driven, and employee-centric work environment, ensuring long-term business sustainability and success.

Appendix B: Schedule/Release Plan

MNTSDEV	MSYADD1	MCSPROJ
<ul style="list-style-type: none"> • Project Proposal: Define project scope, objectives, and deliverables. • Product Vision: Articulate the overall goal and value proposition of the OT management Optitrack system. • Backlog: Create and prioritize a list of features and user stories. • Product Roadmap: Develop a high-level timeline visualizing releases and key features. 	<ul style="list-style-type: none"> • Design Diagrams: <ul style="list-style-type: none"> • Structure Diagrams: Create Data Flow Diagrams (DFD) and Entity-Relationship Diagrams (ERD) to model data and processes. • Object-Oriented Diagrams: Develop Use Case Diagrams, Class Diagrams, and Activity Diagrams to represent Optitrack system behavior and structure. 	<ul style="list-style-type: none"> • Increment Release 3 (MVP): <ul style="list-style-type: none"> • Payroll Sync • Compliance Tracking • Advanced Reporting and Analytics Features • Development: Complete development of all remaining features and MVP releases. • CI/CD Pipeline: Implement a Continuous Integration/Continuous Deployment pipeline for automated building,

Table
12

<ul style="list-style-type: none"> • Release Plan: Outline features for each Minimum Viable Product (MVP) release. • Increment Release 1 (MVP): <ul style="list-style-type: none"> ○ Secure Login ○ Submit OT Requests ○ Real-time OT Tracking • Requirements Gathering: Conduct thorough requirements gathering, including user interviews and analysis of existing Optitrack systems. 	<ul style="list-style-type: none"> • Prototyping: Develop a functional prototype of the Optitrack system based on the finalized design. • Increment Release 2 (MVP): • Approval Workflow (potentially including basic reporting) • Notifications • Development: Begin development of core features for Release 1 and Release 2. 	<p>testing, and deployment.</p> <ul style="list-style-type: none"> • Other Workflow Improvements: Integrate any additional workflow enhancements based on user feedback or further analysis. • Contingency Plans: Define and document backup plans and risk mitigation strategies. • Optitrack system Hand-off: • Source Code: Deliver well-documented source code. • Development Artifacts: Provide design specifications, test cases, and deployment guides. • User and Admin Manuals: Create comprehensive user and administrator manuals.
---	---	--

Release Plan Table

Appendix C: Product Roadmap

Phase 1: Research & Analysis (1–2 Months)

- Interview stakeholder participants (Ms. Rochelle, Team Leaders, Ops Team Manager, Staff).
- Review current OT process in Replicon and determine pain points.
- Create project schedule and resource plan.

Phase 2: Design & Prototyping (3-5 Months)

- Design wireframes for the OT tracker Optitrack system.
- Finalize approval workflow logic and user access roles.
- Secure necessary approvals from key stakeholders.

Phase 3: Development & Integration (1-3Months)

- Employee OT request submission with contextual information.
- Real-time visibility dashboard for Team Managers, Team Leads, and Operations.
- Automated approval process with notifications.

Phase 4: Continuous Improvement (4+Months)

- Establish continuous feedback.

Appendix D: Minutes of the Meetings

Meeting 1: Project Task Assignment Meeting

Date: April 16, 2025

Attendees: Robyn Fruto, Kurt Yuri Fegarido, Rick Laurence Cruz, Sondrick Frondozo

Absent: Virgilio Angelo S. Navarro

Subject: Use Case Expansion and Task Distribution

Minutes:

1. Use Case Expansion:
 - Discussed the need to expand current use cases.
 - Group agreed to create full case descriptions for each identified feature.
2. Task Distribution:
 - Tasks were assigned to team members as follows:
 - *Manage Employee Account*: Kurt Yuri Fegarido
 - *Manage OT / Performance*: Robyn Fruto
 - *Manage Recommendation*: Sondrick Frondozo
 - *OT Approval*: Virgilio Angelo S. Navarro
 - *View Reports*: Rick Laurence Cruz

Action Items:

- Ask Sir Sean if he can be the project adviser.

Prepared By: Kurt Yuri Fegarido

Meeting 2: DFD and Test Case Planning

Date: April 30, 2025

Attendees: Robyn Fruto (Lead), Rick Laurence Cruz, Sondrick Frondozo, Virgilio Angelo S. Navarro

Absent: Kurt Yuri Fegarido (Excused)

Subject: DFD Development and Test Case Planning

Minutes:

- Distributed tasks among team members.
- Robyn created the DFD Level 0 and Level 1 diagrams.

- Team discussed the approach for developing DFD Levels 0 to 2.
- Team discussed how to formulate test cases.

Action Items:

- None recorded.

Prepared By: [Not specified]

Meeting 3: Progress Check & Prototype Testing

Date: June 16, 2025

Attendees: Robyn Fruto (Lead), Kurt Yuri Fegarido (Secretary), Rick Laurence Cruz, Sondrick Frondozo, Virgilio Angelo S. Navarro

Absent: None

Subject: Project Progress and Prototype Testing

Minutes:

- Reviewed progress on:
 - Full use case descriptions
 - Data Flow Diagrams Level 0 and 1
 - Project paper nearing completion
 - Prototype testing with screenshots showing applied fully dressed use case
- Encountered difficulty changing the title in Horilla; all other features were working.

Next Steps:

- Search how to change the name in Horilla and replace it with the team's company name.

Action Items:

- Research how to rename project title in Horilla.

Prepared By: Kurt Yuri Fegarido

Meeting 4: Progress and Presentation Check

Date: June 20, 2025

Attendees: Robyn Fruto (Lead), Rick Laurence Cruz, Sondrick Frondozo, Virgilio Angelo S. Navarro

Absent: Kurt Yuri Fegarido (Secretary)

Subject: Progress Check and Task Continuation

Minutes:

- Checked on progress:
 - Assigned a second leader
 - Reviewed status of project questions
 - Discussed schedule for client meeting

Next Steps:

- All questions directed to Operations Manager and Team Manager should be filled in the shared PPT.
- Research how to remove excess options from Horilla GitHub.

Prepared By: Rick Laurence Cruz

Meeting 5: Presentation Review

Date: June 23, 2025

Attendees: Robyn Fruto (Lead), Sondrick Frondoza, Virgilio Angelo S. Navarro

Absent: Rick Laurence Cruz, Kurt Yuri Fegarido

Subject: Presentation Walkthrough and Task Clarification

Minutes:

- Robyn shared a PowerPoint presentation to explain the project to Virgilio Angelo S. Navarro.

Next Steps:

- Complete all questions for the Operations Manager and Team Manager in the shared PPT.
- Look into how to remove excess options from the Horilla GitHub repository.

Prepared By: Robyn Fruto

Meeting 6: Diagram and Prototype Update

Date: June 26, 2025

Attendees: Robyn Fruto (Lead), Rick Laurence Cruz, Sondrick Frondoza

Absent: Kurt Yuri Fegarido, Virgilio Angelo S. Navarro

Note:

Please let us know why you could not attend the meeting today.

Progress Report:

- Robyn is currently updating the ERD, Data Flow Diagrams Level 0 and 1, and her assigned DFD.
- Sondrick and Rick will focus on updating the prototype by removing all unnecessary content. Once cleaned, they will proceed with updating their diagrams.
- Meeting with the client has been rescheduled to the weekend, Sunday at the latest.
- The updated diagrams and prototype will be reviewed as a group tomorrow.

Action Required:

- Virgilio Angelo S. Navarro and Kurt Yuri Fegarido – Please update us on your individual progress.

Prepared By: Robyn Fruto

Meeting 7: Client Meeting

Date: June 1, 2025

Attendees: Robyn Fruto (Lead), Rick Laurence Cruz, Virgilio Angelo S. Navarro III

Absent: Sondrick Frondozo, Kurt Yuri Fegarido

Subject: Project Status Discussion with Client

Minutes:

- The team met with the client to discuss the current status of the project.
- Robyn Fruto led the meeting and presented the current progress.
- During the meeting, the client proposed a change in the workflow: employees will now assign their own tasks.
- A Q&A session followed the presentation, attended by Rick and Virgilio.

Prepared By: Robyn Fruto