A PROJECT REPORT ON

PROJECT MANAGEMENT SYSTEM

AT

Internship tenure: 14-08-2023 to 14-09-2023

PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF

BACHELOR OF TECHNOLOGY
IN
COMPUTER SCIENCE & ENGINEERING
WITH SPECIALIZATION IN AI AND ROBOTICS

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ACKNOWLEDGEMENT

My internship experience at Tata Technologies Ltd. provided an excellent opportunity for learning and professional growth. I consider myself fortunate to have been a part of it and am grateful for the chance to meet many remarkable individuals and professionals who guided me throughout the internship.

I want to express my sincere gratitude to **Mr. Dhrubajyoti Kumar**, Project Manager, and **Mr. Nilesh Kumar**, Senior Solution Developer, for their vision, mentorship, and unwavering support throughout the project. Without their invaluable guidance and contributions, the project would not have been possible. I also appreciate the support and cooperation of the company's employees.

I extend my thanks to **Mr. Amitava Roy** (HR, TTL) for offering me this valuable training opportunity. This internship has given me a new perspective on the company's significance.

I view this opportunity as a significant milestone in my career development. I am committed to utilizing the skills and knowledge I gained to the fullest and will continue working to enhance them to achieve my career goals. I look forward to future collaborations with all of you.

Lastly, I'd like to express my gratitude to this esteemed organization for allowing me to complete my project.

Danish Eqbal

DECLARATION

I, DANISH EQBAL here by state that the project titled "PROJECT MANAGEMENT SYSTEM" is completed by me at Tata Technologies Jamshedpur, solely for the purpose of partial fulfilment for the degree of B.Tech from 14-08-2023 to 14-09-2023.

…….
Signature
DANISH EQBAL
Vellore Institute of Technology, Chennai

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ABSTRACT

The "**Project Management System**" is a web-based solution designed to streamline task assignment and management within organizations. It provides a centralized platform where managers can efficiently assign tasks to team members and monitor their progress in real-time. This system offers flexibility for managers to update task statuses, provide comments, and track task-specific details. Managers can also filter and view tasks assigned to specific employees within specified date ranges.

In addition to benefiting managers, the system empowers employees by allowing them to view their open and closed tasks, update task statuses, provide comments, and track their task-related activities. Employees can also conveniently change their passwords through the system.

The project features a robust and secure back-end system that seamlessly integrates with a user-friendly front-end interface. The back-end ensures data accuracy and currency, while the front-end enables managers and employees to interact with the system, assign tasks, view task details, monitor progress, and manage account settings. The design prioritizes user-friendliness, delivering an efficient user experience that simplifies task and account management.

Technologically, the project leverages web development tools such as **HTML**, **CSS**, and **JavaScript** for the front-end. On the back-end, it utilizes frameworks like **Node.js**, **Express.js**, and a **MongoDB** database management system to handle data storage, retrieval, and synchronization.

The benefits of the "Project Management System" project are numerous. It includes increased task management efficiency, reduced communication gaps, improved team collaboration, enhanced transparency in task assignment and tracking, and simplified account management. By offering a centralized and user-friendly platform, the project contributes to improved productivity, effective resource allocation, and streamlined task and account management within organizations.

In conclusion, the " Project Management System" is a cutting-edge solution that provides an intuitive online platform for efficient task and account management. It optimizes these processes, delivering a seamless user experience while enhancing collaboration and productivity within organizations.

COMPANY PROFILE

Tata Technologies is a global leader in engineering services, digital transformation, and product lifecycle management (PLM). With a rich legacy of innovation and a strong commitment to excellence, the company empowers organizations across industries to reach their full potential and foster sustainable growth. As a part of the prestigious Tata Group, Tata Technologies upholds values of integrity, excellence, and social responsibility in all its endeavours.

Headquartered in Singapore, Tata Technologies operates essential regional hubs in India (Pune), the USA (Detroit, Michigan), and the UK (London).

Key Competencies:

Engineering Services: Tata Technologies offers comprehensive engineering services, collaborating with clients to design, develop, and validate innovative products across the entire product development lifecycle.

Digital Transformation: The company's digital transformation solutions leverage emerging technologies such as AI, machine learning, IoT, and cloud computing to enhance operational efficiency, customer experiences, and business opportunities.

Product Lifecycle Management (PLM): Tata Technologies specializes in PLM, optimizing product development processes and data management to streamline operations and accelerate time-to-market.

Manufacturing Solutions: The company provides manufacturing solutions, including shop floor automation, digital manufacturing, and process optimization, aiding clients in achieving operational excellence.

Connected and Autonomous Vehicles: Tata Technologies leads the future of mobility, offering expertise in connected and autonomous vehicles, vehicle electronics, telematics, software development, and cybersecurity.

Tata Technologies plays a pivotal role in driving innovation and efficiency for organizations, helping them thrive in the digital era while maintaining a commitment to excellence and social responsibility.

OBJECTIVE

The primary objective of the **Project Management System** (PMS) described above is to revolutionize and streamline the way organizations handle task assignment, tracking, and management. This innovative web-based solution aims to enhance efficiency, transparency, and collaboration within teams while reducing the complexities associated with traditional task management methods.

Firstly, the PMS empowers managers by providing them with a centralized platform where they can easily assign tasks to team members. This simplifies delegation and ensures that tasks are distributed effectively, optimizing resource allocation and productivity.

Secondly, the system facilitates real-time monitoring of task progress. Managers can update task statuses, provide comments, and access task-specific details, fostering improved communication and visibility into ongoing projects.

Thirdly, the PMS offers advanced filtering and reporting capabilities, allowing managers to view tasks assigned to specific employees within specified date ranges. This feature promotes data-driven decision-making and aids in workload distribution.

Moreover, the system extends its benefits to employees, enabling them to effortlessly access their open and closed tasks, update task statuses, provide comments, and monitor their task-related activities. Additionally, employees can manage their own account settings, including changing passwords, enhancing user autonomy and security.

In summary, the Project Management System aspires to create a cohesive and efficient environment where managers and employees can collaboratively manage tasks, leading to improved productivity, effective resource allocation, enhanced transparency, and simplified account management. Ultimately, this system aims to elevate task management processes within organizations and contribute to their overall success.

SCOPE OF PROJECT MANAGEMENT SYSTEM

The Project Management System (PMS) holds immense potential and a broad scope within various sectors, including business, project management, and team collaboration. Its applications and benefits extend to a wide range of scenarios, making it a valuable tool for enhancing efficiency and productivity.

Cross-Industry Applicability: PMS is a versatile tool applicable across various industries, including business, healthcare, education, IT, and manufacturing.

Task Allocation and Monitoring: It streamlines task assignment, monitoring, and completion, ensuring alignment with organizational goals, enhancing efficiency, and reducing operational costs.

Project Management: PMS aids project managers in assigning tasks, tracking real-time progress, and identifying bottlenecks, contributing to project success and on-time delivery.

Enhanced Collaboration: PMS facilitates seamless team collaboration, enabling effective communication and information sharing among team members, fostering a collaborative work environment that promotes productivity and innovation.

Time Management: Users can prioritize tasks, set deadlines, and allocate resources efficiently, aiding in time management and helping teams meet project milestones.

Performance Evaluation: PMS provides valuable data for performance evaluation, enabling managers to assess productivity, identify areas for improvement, and make informed decisions.

Scalability: PMS is scalable and adaptable, accommodating the unique needs of different organizations and industries.

Remote Work Support: It supports remote work by providing a centralized platform for task management and communication, ensuring teams can work effectively from anywhere.

In conclusion, the Project Management System has a vast scope in modern work environments, offering an array of advantages such as improved organization, collaboration, and performance. Its adaptability and cross-industry relevance make it a valuable asset for organizations seeking to optimize their task-related processes and achieve higher levels of productivity and efficiency.

INTRODUCTION

The report on the **Project Management System** (PMS) provides a comprehensive overview of a crucial tool designed to enhance task assignment and management within organizations. Task management plays a pivotal role in optimizing productivity and ensuring the successful execution of projects. This report offers an in-depth analysis of the PMS, covering its key components, functionalities, and the wide-ranging advantages it brings to businesses across various sectors.

The PMS represents a state-of-the-art software solution that centralizes and streamlines task-related processes. It serves as a catalyst for efficient task allocation, real-time progress tracking, and performance evaluation. Throughout this report, we will explore the system's development, emphasizing its rich feature set and its adaptability to diverse industry needs.

Our examination will encompass how the PMS fosters collaboration among team members, supports remote work arrangements, and empowers project managers to ensure the timely completion of projects. We will highlight the system's scalability, which allows it to cater to the unique requirements of organizations of all sizes.

Furthermore, this report will delve into the potential impact of the PMS on organizations, including increased productivity, streamlined operations, improved resource utilization, and enhanced transparency in task management.

In summary, this report offers a comprehensive and insightful view of the Project Management System's pivotal role in modern organizational workflows. It elucidates its robust functionalities and underscores the transformative potential of the PMS in revolutionizing task management processes across diverse industries.

ADVANATGES OF PROJECT MANAGEMENT SYSTEM

A Project Management System (PMS) offers a multitude of advantages that significantly contribute to enhanced productivity, efficient collaboration, and streamlined operations within organizations.

Enhanced Productivity: It streamlines task organization and tracking, reducing time spent on administrative work and allowing teams to focus on important tasks.

Efficient Resource Allocation: Managers can assign tasks to the right team members based on their skills and availability, ensuring optimal resource utilization.

Improved Collaboration: Team members can easily communicate, share files, and provide updates within the system, fostering collaboration regardless of geographical locations.

Real-Time Monitoring: It provides real-time visibility into task progress, allowing managers to identify bottlenecks and make informed decisions promptly.

Transparency: Detailed task histories and status updates offer transparency, enabling teams and stakeholders to stay informed about project developments.

Task Prioritization: Users can prioritize tasks based on deadlines and importance, ensuring critical tasks receive the necessary attention.

Scalability: They can adapt to the needs of growing organizations, accommodating an increasing number of tasks and users.

Remote Work Enablement: Cloud-based systems facilitate remote work, making it easier for distributed teams to collaborate effectively.

Cost Savings: By optimizing task workflows, organizations can reduce operational costs and improve overall efficiency, leading to better financial outcomes.

In summary, a Project Management System offers a comprehensive array of advantages, from better organization and productivity to transparency and scalability. It is a valuable tool for modern organizations striving for efficiency and success in their projects and tasks.

NEED OF PROJECT MANAGEMENT SYSTEM

The need for a **PMS** in modern organizations is undeniable due to several compelling reasons:

Complexity of Tasks: In today's dynamic business environment, tasks often involve numerous steps, dependencies, and contributors. A PMS simplifies these complexities by breaking down tasks into manageable sub-tasks, ensuring a structured approach.

Enhanced Team Collaboration: With teams often working from different locations or remotely, effective collaboration is critical. PMS provide a centralized platform for team members to communicate, share files, and monitor progress collectively, fostering collaboration and teamwork.

Deadline Adherence: Meeting project deadlines is paramount. Project management tools allow teams to set deadlines, receive timely reminders, and prioritize tasks, ensuring projects stay on track and are completed within stipulated timeframes.

Resource Optimization: Efficient resource allocation is essential for maximizing productivity. PMS facilitate task assignment based on individual skills, availability, and workload, leading to optimized resource allocation.

Data and Information Management: Organizations handle substantial volumes of data and information related to tasks. PMS efficiently organize and store data, ensuring easy access for future reference and analysis.

Accountability: Clearly defined roles and responsibilities are crucial in task execution. Project management tools assign ownership of tasks, creating accountability among team members and minimizing confusion.

Decision Support: Managers and leaders rely on data-driven insights to make informed decisions. PMS provide real-time data and generate reports, offering valuable insights for effective decision-making.

In conclusion, PMS have become indispensable tools for modern organizations. They streamline operations, enhance collaboration, improve resource utilization, and ensure tasks are completed efficiently and on time. Embracing these systems provides a competitive edge and ensures compliance with regulatory requirements, making them essential for organizational success.

WORKING ENVIRONMENT

Hardware Requirements:

PROCESSOR:	Intel i3 or Ryzen 3
RAM:	512 MB or above
HARD DISK:	240GB or above

Software Requirements:

OPERATING SYSTEM:	Windows or Linux
DBMS:	MongoDB
PROGRAMMING LANGUAGE:	HTML, CSS, JavaScript, Node.js, Express.js
INTERNET BROWSER:	Chrome or Brave
INTEGRATED DEVELOPMENT ENVIRONMENT (IDE):	Visual Studio Code (VS Code) or Any IDE

FRONTEND

User Interface (UI) Design: Develop an interface that is easy to navigate and user-friendly, enabling users to effortlessly check room availability, book rooms, and access relevant information.

HTML/CSS: Employ HTML for organizing the content of the web application and CSS for styling and structuring, ensuring a visually pleasing and uniform user experience.

JavaScript: Integrate client-side scripting using JavaScript to introduce interactivity and enrich user engagement, including features like real-time updates and form validation.

Frameworks and Libraries: Make use of front-end frameworks to simplify development, encourage component reuse, and create seamless user interactions. Consider leveraging libraries such as Bootstrap5 to access pre-designed UI elements and responsive layouts for enhanced efficiency.

BACKEND

Backend Programming: Employ a server-side programming language such as Node.js and Express.js to manage server-side operations and database interactions.

Web Framework: Choose a web application framework that complements the selected programming language, for instance, Bootstrap5.

Database Handling: Opt for a database management system (DBMS) like MongoDB to store and oversee task data and associated details.

Data Security: Integrate security features, including authentication, access control, and data encryption, to safeguard user data's confidentiality and integrity.

MANAGER'S END

Employee Addition: The ability to add new employees to the system.

Task Assignment and Management: Assigning tasks to employees and updating task statuses while adding remarks.

Task Tracking: Viewing lists of both open and closed tasks.

Employee Performance Analysis: Viewing specific employee data within defined date ranges.

Employee Profile Access: Accessing personal employee details, including password, when necessary.

Password Reset: The option to reset passwords for security reasons.

EMPLOYEE'S END

Profile View: Access their profile information and check the number of open and closed tasks.

Task Tracking: Review the specifics of both open and closed tasks.

Task Management: Modify task statuses and provide comments as needed.

Password Reset: Reset their password if security concerns arise.

HTML

HTML (Hypertext Markup Language) is a fundamental cornerstone of the internet and acts as the standardized markup language for fabricating web content. It furnishes the blueprint and significance for arranging and demonstrating information on the web. Here are some essential insights regarding HTML:

Structure: HTML employs a collection of tags to delineate the configuration and hierarchy of web page constituents. Tags are symbolized by opening and closing angle brackets (< >) and envelop the content they characterize.

Components and Tags: HTML constituents serve as the fundamental constituents of a web page. They comprise opening and closing tags that establish the commencement and culmination of a constituent. Instances of prevalent HTML constituents include headings (<h1> to <h6>), paragraphs (<p>), hyperlinks (<a>), images (<img>), and lists (<ul>, <ol>, <li>).

Semantic Marking: HTML offers a broad array of semantic constituents that impart meaning and context to the content. These constituents furnish valuable insights to search engines, accessibility utilities, and other applications. Illustrations of semantic constituents encompass <header>, <nav>, <article>, <section>, <aside>, and <footer>.

Attributes: HTML tags can possess attributes that provide additional details about the constituents. Attributes are integrated within the opening tag and furnish options for customization or operational features. Prevalent attributes encompass class, id, style, src, href, and alt.

Document Composition: An HTML document adheres to a specific composition. It usually initiates with a doctype declaration, succeeded by the <html> constituent. The <head> section comprises meta-information regarding the document, like the title, character encoding, and linked style sheets or scripts. The <body> section embodies the visible content of the web page.

Nesting and Hierarchy: HTML constituents can be nested inside each other to formulate a hierarchical arrangement. Accurate nesting and alignment enhance code legibility and maintainability.

HTML lays the groundwork for web development and acts as an essential expertise for creating and configuring web pages. It is often used alongside CSS (Cascading Style Sheets) for design and JavaScript for interactivity, producing dynamic and immersive web encounters.

CSS

CSS (Cascading Style Sheets) stands as a foundational element within web development, dictating the presentation and visual embellishments of web pages and web applications. Collaborating harmoniously with HTML, it elevates the user's interaction by governing the arrangement, hues, typography, and overall aesthetics of the content.

Critical Aspects of CSS:

Selectors: CSS selectors pinpoint specific HTML elements for styling application. They can be rooted in element names, classes, IDs, attributes, or hierarchical connections.

Styling Properties: CSS boasts an extensive repertoire of styling properties to oversee element appearances. These encompass color configuration, backgrounds, borders, typography, margins, padding, layout, and transitions.

Box Model: CSS employs the box model, which defines elements as rectangular entities. This model encompasses attributes like width, height, margin, border, and padding, granting meticulous management of element positioning and spacing.

Responsive Design: CSS plays an integral part in molding responsive web designs that adapt gracefully to varied screen dimensions and devices.

CSS Frameworks: Frameworks like Bootstrap offer pre-designed CSS styles and components, expediting development while ensuring uniformity across diverse projects.

CSS Transitions and Animations: CSS facilitates the crafting of seamless transitions and animations, bestowing dynamic vitality and interactivity upon elements, thus enriching the user experience.

CSS represents a potent instrument, empowering developers to craft visually captivating and immersive web encounters. It confers indispensable flexibility and authority over web page design and structure, fostering a uniform and polished aspect across various platforms and devices.

JAVASCRIPT

JavaScript stands as a highly utilized programming language predominantly operating on the client side of web applications, ushering in dynamic and engaging user interactions. Here are key takeaways regarding JavaScript:

Purpose and Functionality: JavaScript finds its primary role in enhancing web pages through the infusion of interactivity and dynamic content. Developers harness its power to craft interactive elements such as form validation, animations, real-time content updates, and client-side data processing.

Client-Side Language: JavaScript executes within the user's web browser, distinguishing it as a client-side language. This localization accelerates response times and curtails the necessity for server-related round-trips, thereby elevating the overall user experience.

Versatility: JavaScript boasts versatility, apt for both front-end and back-end development. At the front, it reshapes the Document Object Model (DOM), facilitating dynamic alterations to web page structure and content. On the flip side, in conjunction with frameworks like Node.js, it fuels server-side application creation.

Syntax and Features: JavaScript adopts a syntax akin to other languages like C, rendering it relatively accessible for developers versed in these languages. It endorses diverse programming paradigms, spanning procedural, object-oriented, and functional programming. JavaScript is also recognized for its event-driven programming capabilities.

Frameworks and Libraries: JavaScript houses an extensive ecosystem of frameworks and libraries, streamlining development efforts. Prominent front-end frameworks like React offer reusable components, robust state management, and declarative syntax. On the server side, Node.js empowers server-oriented JavaScript development, capitalizing on its non-blocking, event-centric architecture.

Browser Compatibility: JavaScript enjoys compatibility with all contemporary web browsers, establishing itself as a universal language in web development.

JavaScript's adaptability and widespread adoption position it as a foundational language in the realm of web development. Its capacity to infuse dynamism and interactivity into the client side contributes significantly to the immersive web applications prevalent in our digital landscape.

FRAMEWORKS AND LIBRARIES

Frameworks and libraries constitute pivotal assets in the realm of web application development, particularly in the context of managing a project for a conference room booking system. They serve as repositories of pre-constructed components, tools, and utilities, simplifying the development process, enhancing productivity, and elevating the overall user experience. Among the noteworthy frameworks and libraries are:

Front-End Frameworks:

JavaScript: These frameworks and libraries stand as invaluable accelerators in the development journey. They lay a robust foundation for crafting web applications while presenting a diverse array of features and functionalities.

UI Component Libraries:

Bootstrap: Recognized as a leading front-end framework, Bootstrap presents an extensive assortment of CSS and JavaScript components tailored for the creation of responsive, mobile-first web applications. It imparts a consistent and aesthetically pleasing design system, streamlining the creation of refined user interfaces.

Back-End Frameworks:

Node and Express.js: Node.js and Express.js are stalwarts in the realm of back-end development. Node.js is renowned for its non-blocking, event-driven architecture, while Express.js complements it by simplifying the creation of robust, scalable web applications. Together, they empower developers to construct efficient and high-performance server-side components, facilitating the seamless functioning of web applications.

NODE.JS AND EXPRESS.JS

Node.js and Express.js are essential components of modern web development, working seamlessly together to build robust and scalable server-side applications. Here are some key aspects and features of Node.js and Express.js when combined:

Purpose and Functionality: Node.js serves as the JavaScript runtime for server-side programming, while Express.js functions as a web application framework. Together, they enable the creation of scalable and efficient network applications, making them a cornerstone of web server and API development.

Event-Driven Architecture: Node.js, with its event-driven, non-blocking I/O model, enhances efficiency and responsiveness. Combined with Express.js, developers can easily create web applications that handle numerous concurrent connections without performance degradation.

Vast Package Ecosystem: Node.js brings a rich package ecosystem via **npm** (Node Package Manager), offering an extensive collection of pre-built libraries and modules. This accelerates development, promotes code reuse, and ensures that developers have access to a wide range of tools and resources.

Express.js Framework: Express.js, as a minimal and flexible web application framework, simplifies the creation of robust web applications and APIs. It provides essential tools and structures, such as routing, middleware, and templating engines, to enhance code organization and maintainability.

Middleware Integration: Express.js introduces middleware, allowing developers to extend its functionality with custom components. This is particularly valuable for tasks like request processing, authentication, and error handling.

Routing and Templating: Express.js offers a straightforward routing system and supports various templating engines, simplifying the mapping of HTTP requests to controller functions and dynamic HTML content generation.

In conclusion, the combined use of Node.js and Express.js empowers developers to create performant, scalable, and feature-rich web applications and APIs. Their synergy leverages JavaScript's versatility and the strengths of the Express.js framework within the Node.js runtime, providing a powerful solution for modern web development.

MONGODB

MongoDB is a prominent NoSQL database management system that plays a crucial role in modern web development and application architecture. Here are key aspects and features of MongoDB:

NoSQL Database: MongoDB is classified as a NoSQL database, which means it stores and retrieves data differently than traditional relational databases. It uses a flexible, document-oriented data model that allows developers to store, query, and manage unstructured or semi-structured data efficiently.

JSON-Like Documents: Data in MongoDB is stored in BSON (Binary JSON) format, which is a binary-encoded serialization of JSON-like documents. This format is highly flexible and supports complex data structures, making it suitable for a wide range of applications.

Scalability: MongoDB is designed for horizontal scalability. It can handle large amounts of data and high read/write loads by distributing data across multiple servers, known as sharding. This scalability is particularly valuable for applications with rapidly growing data requirements.

Schema-less Design: Unlike traditional relational databases, MongoDB does not require a predefined schema. Developers can add or modify fields in documents on the fly, making it easier to adapt to evolving application requirements.

Indexes: MongoDB supports indexing to improve query performance. Developers can create indexes on specific fields to accelerate data retrieval operations.

Document-Based Queries: MongoDB supports document-based queries that are intuitive and align well with modern application development practices.

Cross-Platform Compatibility: MongoDB is available for various platforms, including Windows, macOS, Linux, and cloud-based services like MongoDB Atlas, simplifying deployment and management.

Open Source: MongoDB is open-source software, providing cost-effective and accessible solutions for developers and businesses.

In conclusion, MongoDB is a versatile and powerful NoSQL database that aligns with the requirements of modern web development. Its flexibility, scalability, and robust feature set make it an excellent choice for applications.

WORKFLOW

MANAGER-

The manager is granted the privilege of adding employees to their team. They have the authority to assign tasks to the team members under their supervision. The manager can conveniently access and review both open and closed tasks of their team members. They also have the capability to update task statuses and include additional comments. When a manager updates a task status as "closed," it will be moved to the closed tasks list.

Additionally, managers have the ability to generate task reports for any employee within their team, allowing them to assess an individual's performance within a specified date range. In the admin data section, managers can access an employee's profile and confidential information, including login passwords.

Furthermore, a password change option is provided to managers in case they perceive a security risk associated with their current password. This comprehensive set of features empowers managers to efficiently manage their teams, tasks, and employee-related data within the system.

EMPLOYEE-

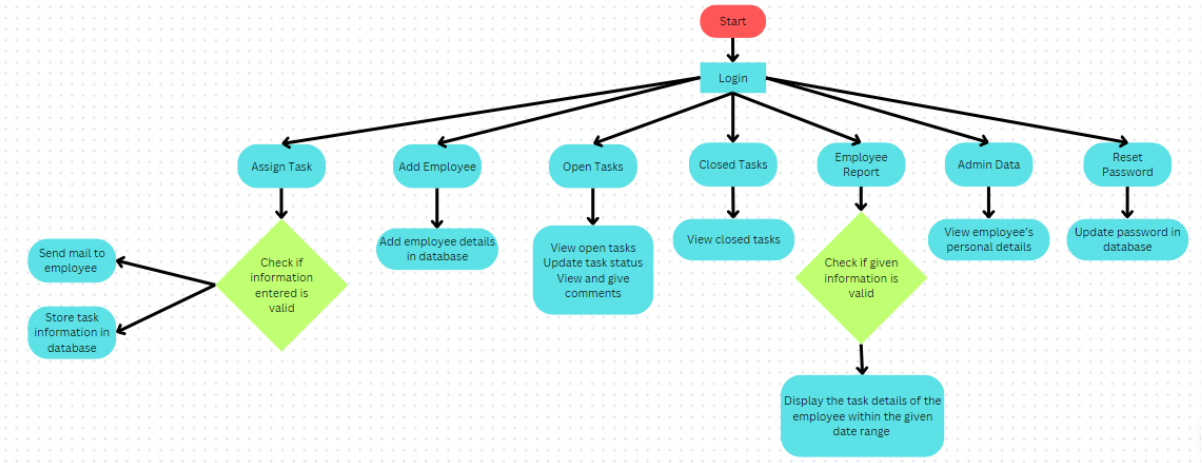
The employee has access to their profile and can view the count of both open and closed tasks displayed on their dashboard. They can also access detailed information about each task, whether it's open or closed.

Within the open tasks section, employees can add comments and update the task status as needed. In the closed task section, they can retrieve information about the tasks they've successfully completed. Additionally, employees can generate task reports for their own performance analysis within a specified date range.

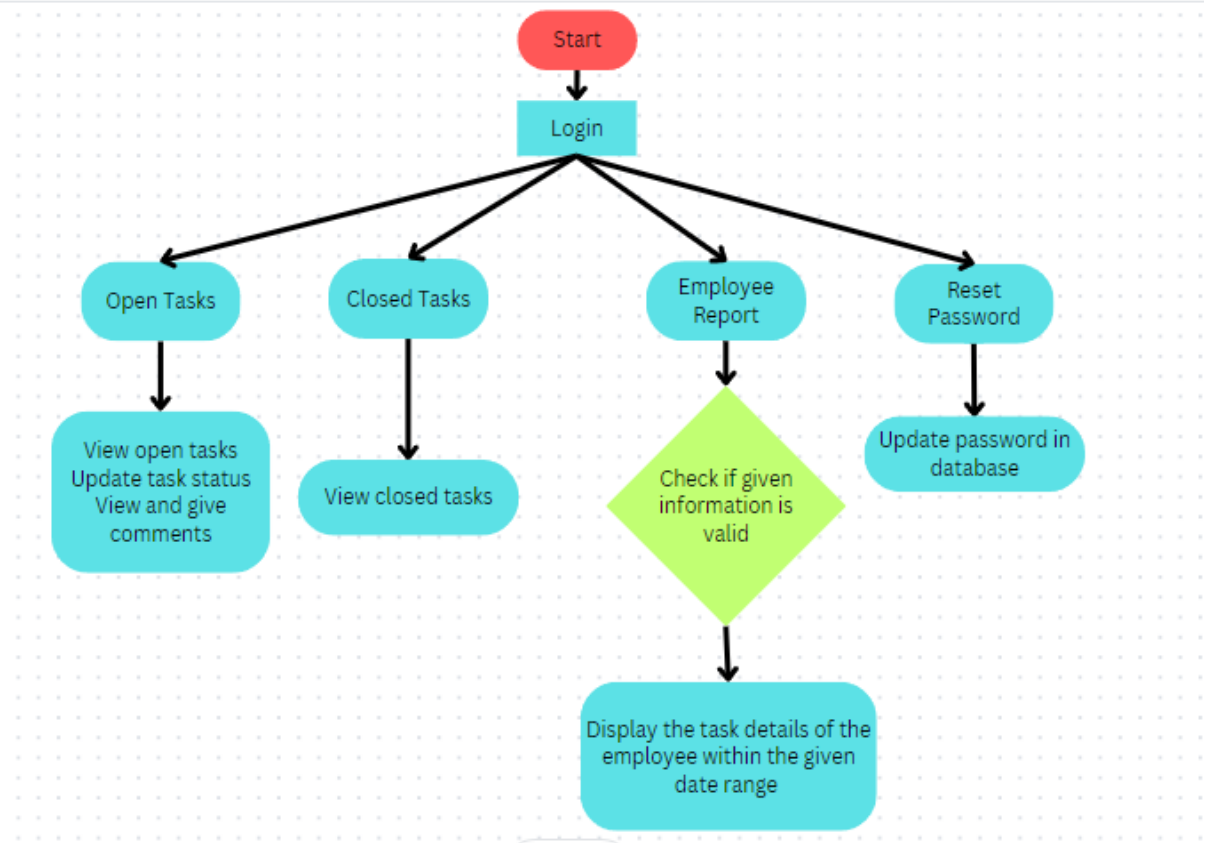
Finally, for security concerns, employees have the option to change their password. These features collectively provide employees with a comprehensive set of tools to manage their tasks, monitor their performance, and ensure the security of their accounts.

FLOWCHART

MANAGER-

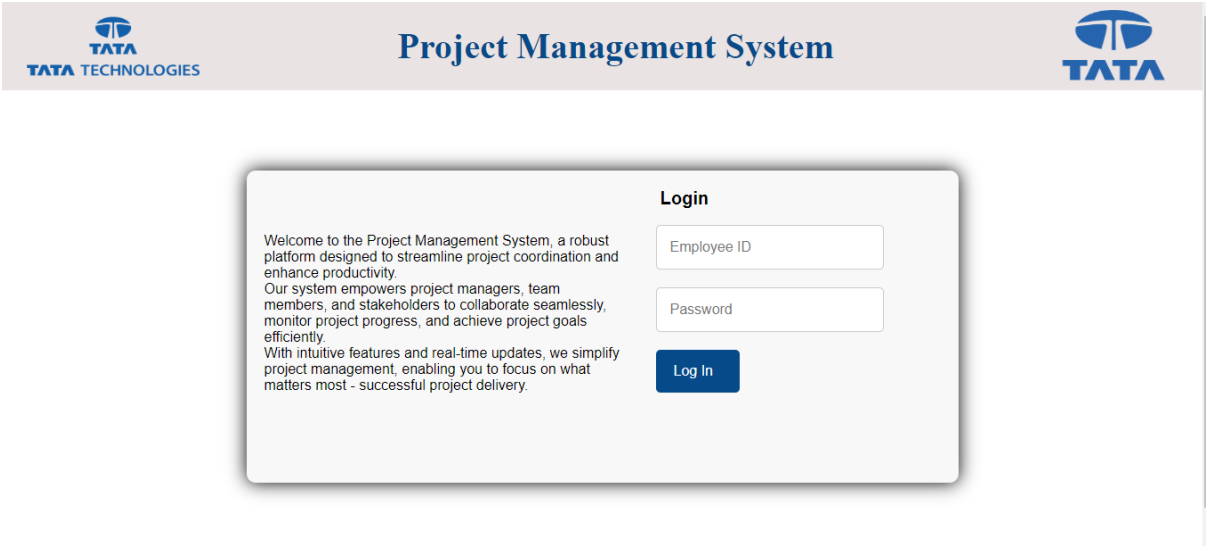


EMPLOYEE-

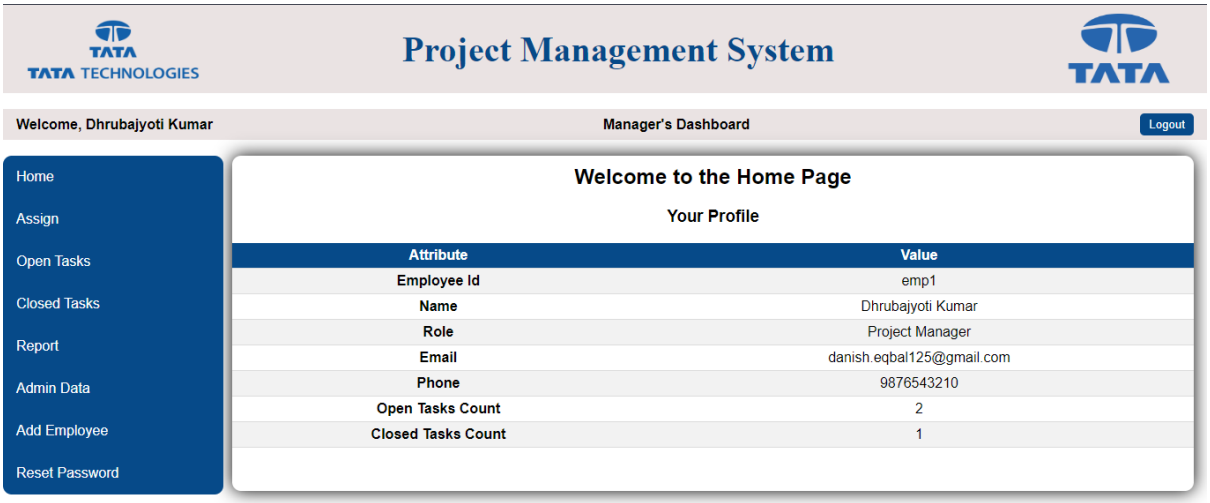


SCREEN SHOTS

Login Page-



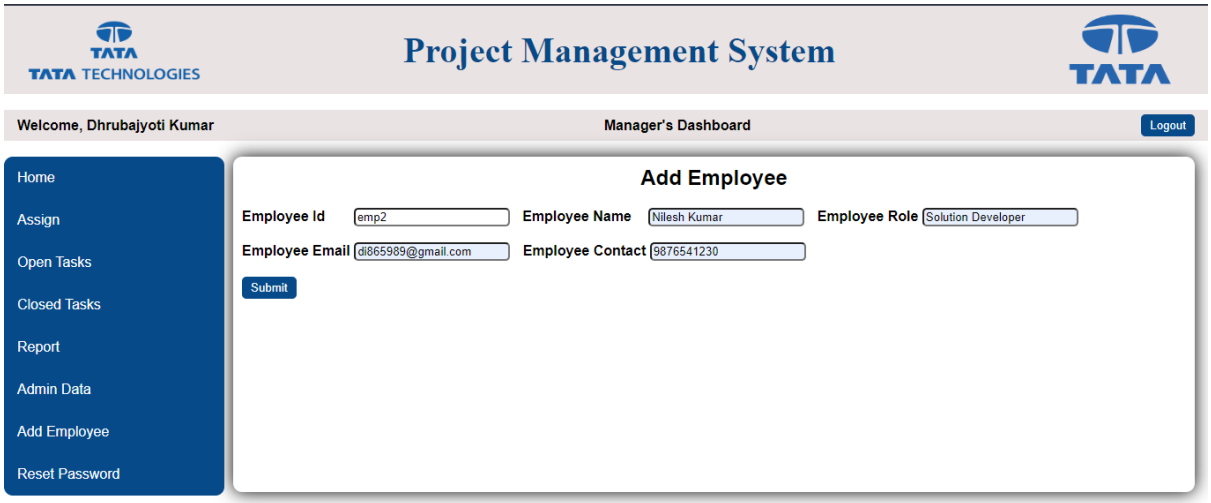
Manager's Section-



The dashboard shows manager's details along with the number of open and closed tasks assigned to employees assigned under him.

Add Employee-

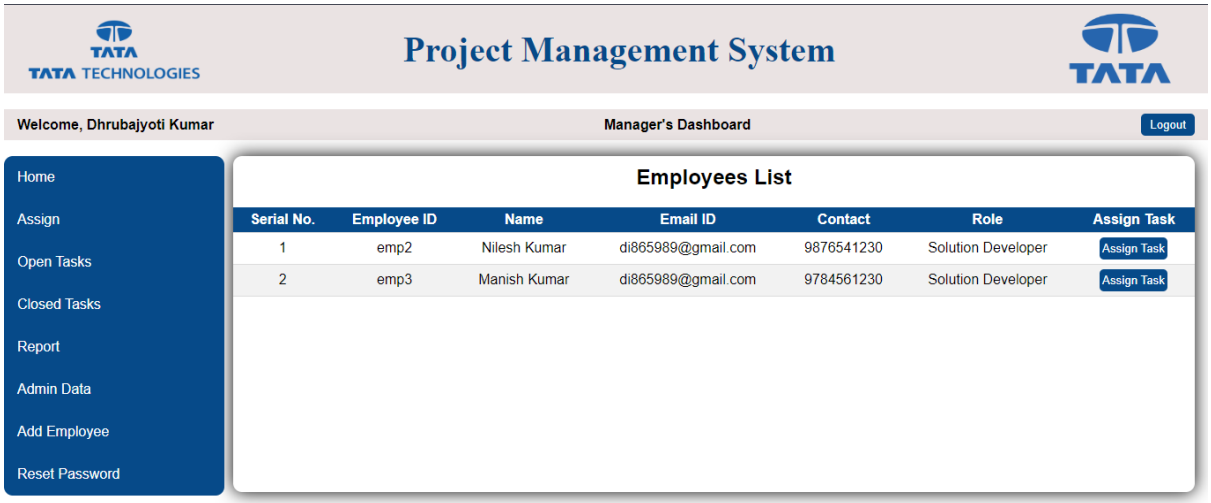
It will add an employee in the database under the manager who is adding him.



Assign Task-

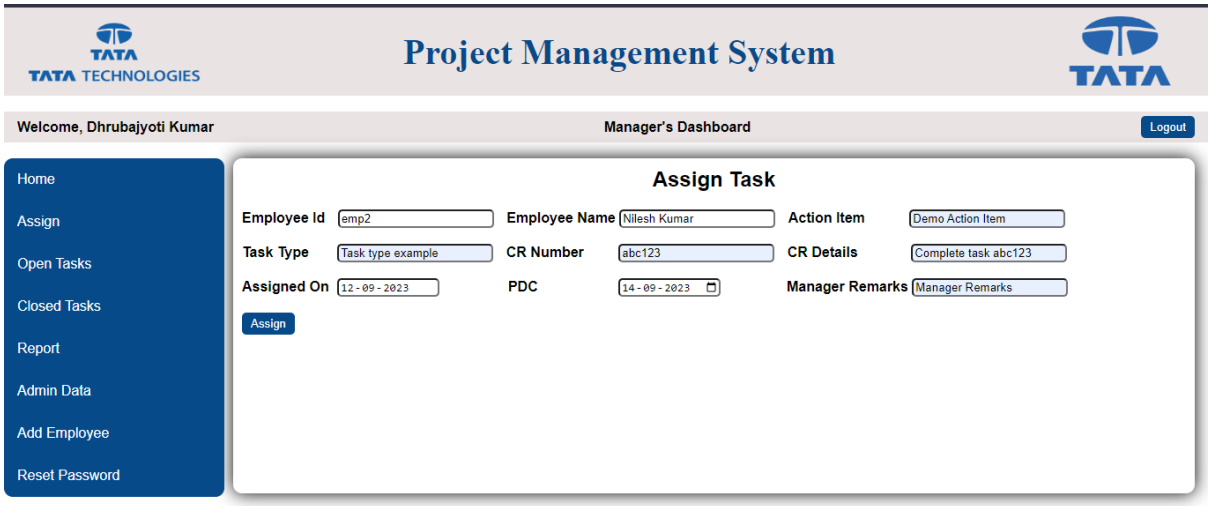
It will display all the team members assigned under the manager.

The manager would have the option to assign task to any of them.

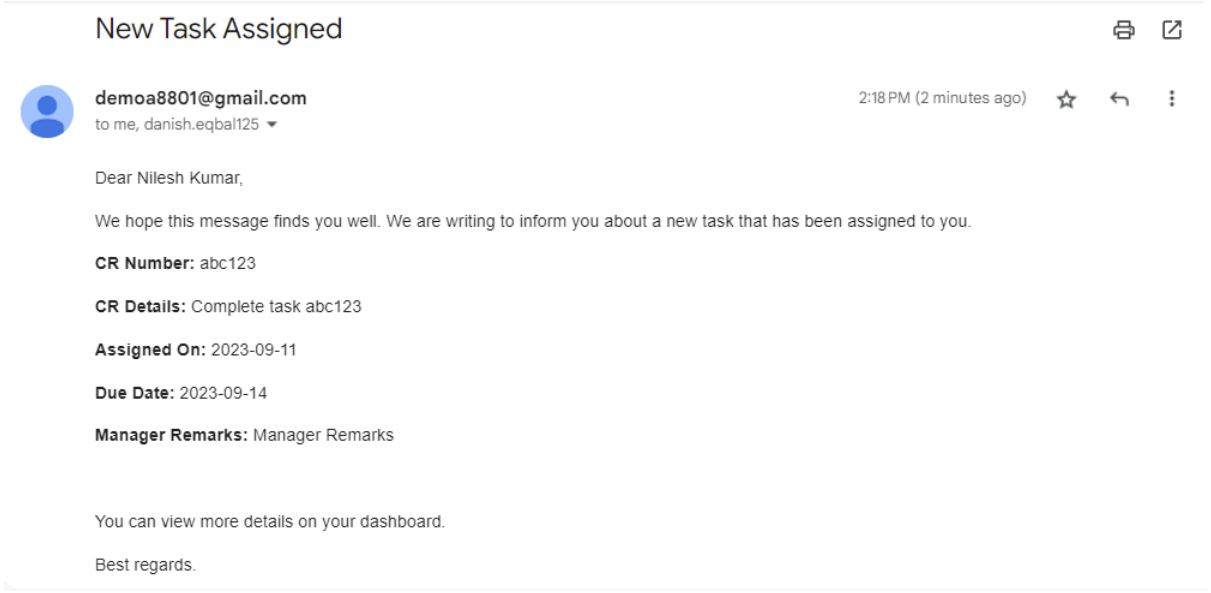


On clicking the Assign Task button, manager would be taken to the page where he would be prompted to enter the task details.

The Employee Id and Employee Name would be auto filled.

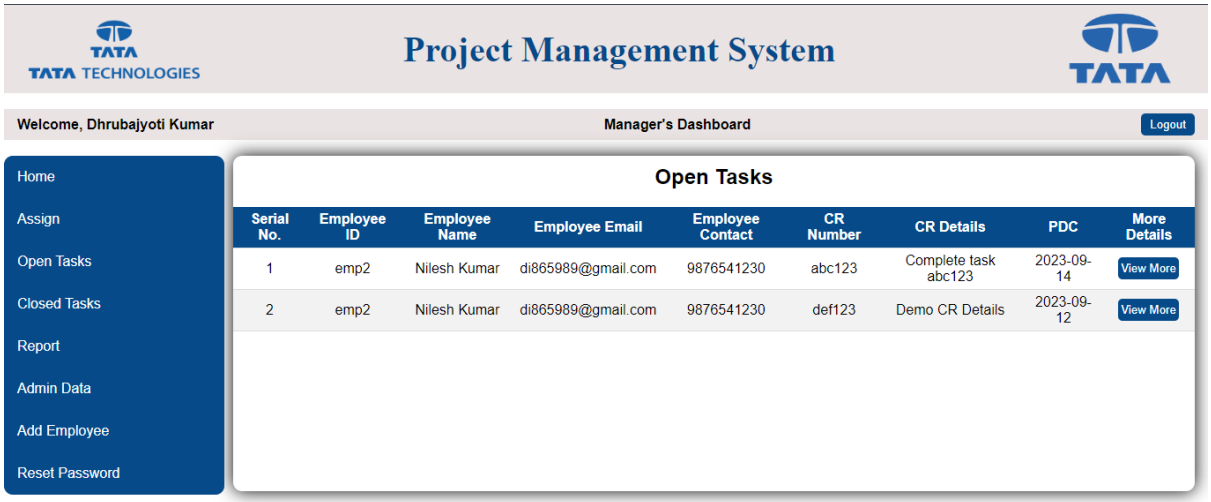


On successful assignment of task, a message would be displayed saying “Task Successfully Assigned” and an email would be sent to the employee with the task details and manager added in cc.

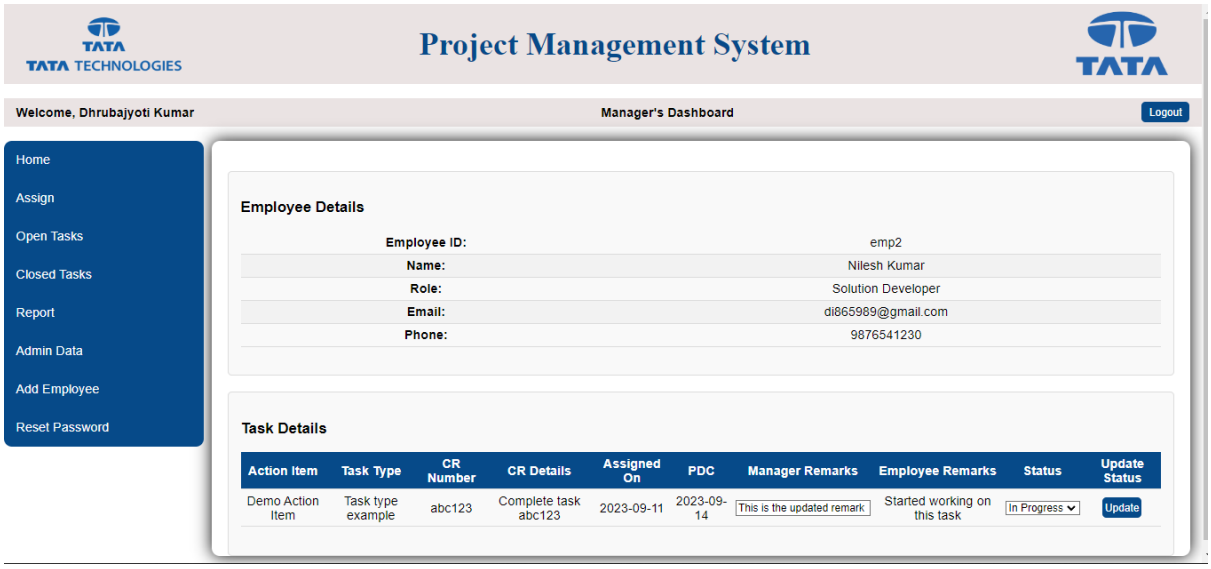


Open Tasks-

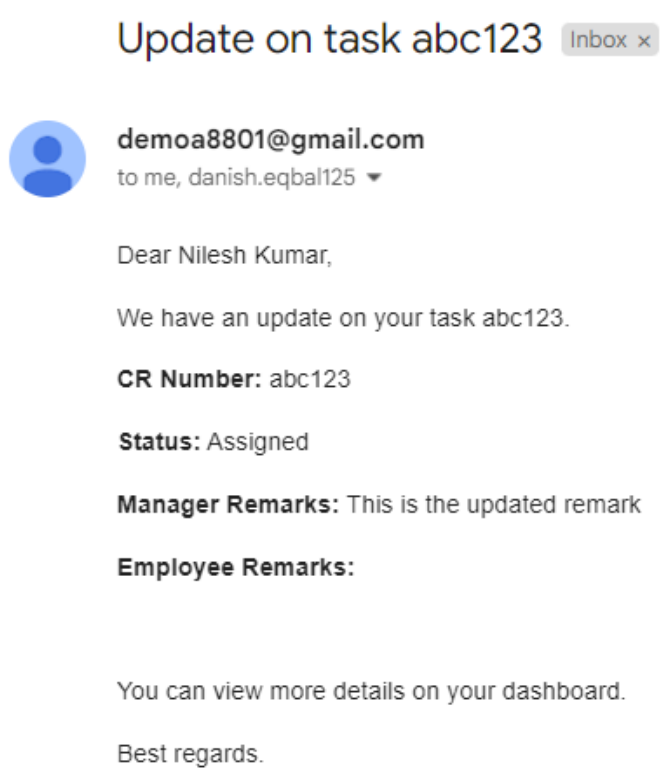
This section shows the open tasks of all employees assigned under the manager.



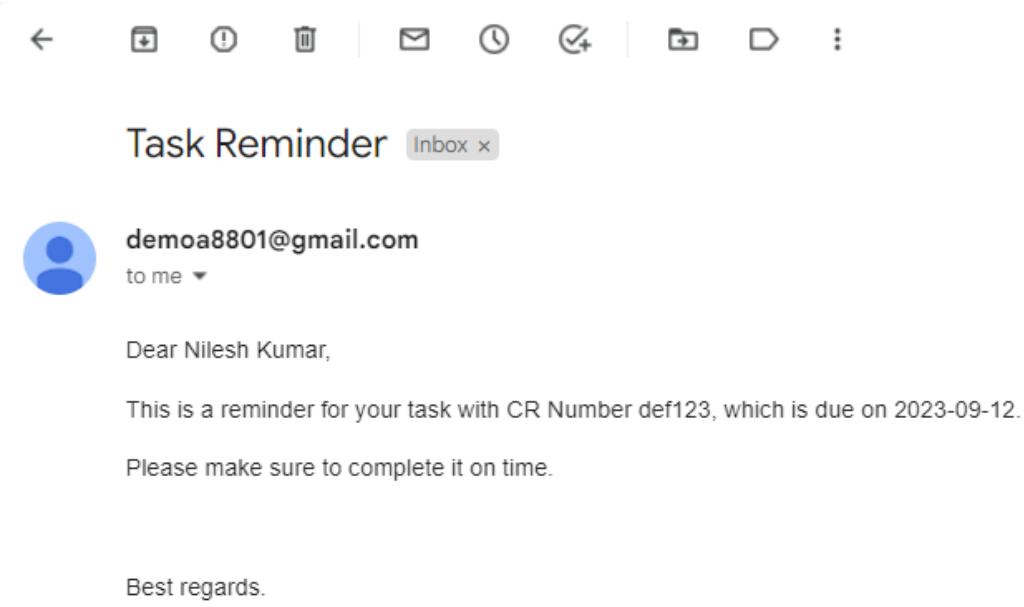
On clicking the View More button, the details of the employee as well as the task will be displayed and the manager would be able to update the task status as well as provide his comments and see the employees' comments.



On giving comment or updating the task status, the employee would receive a mail regarding the update.

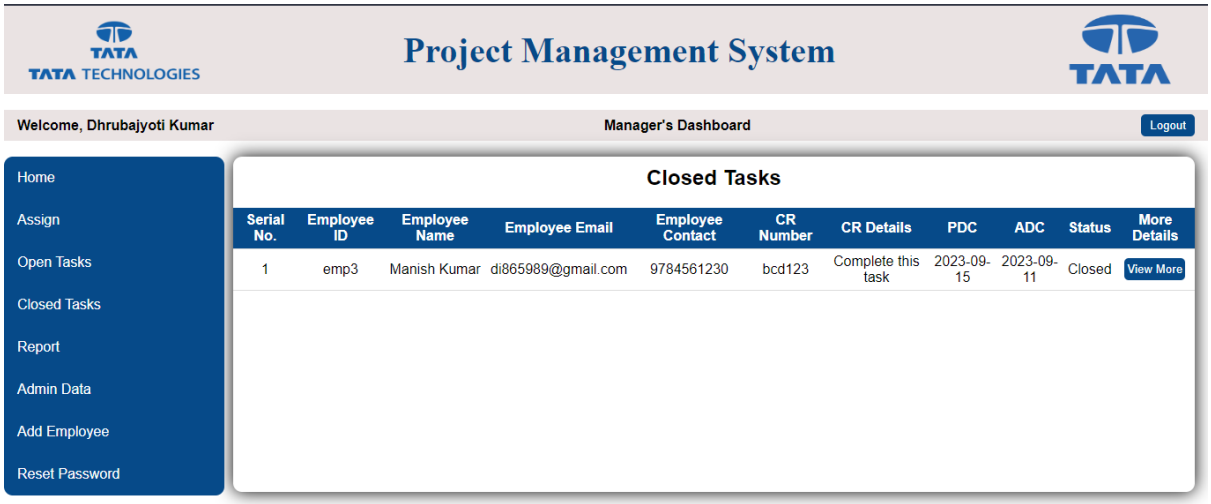


The employee will start receiving notifications everyday when the PDC gets closer until the task is completed and closed.



Closed Task-

This would show all the closed tasks of all the employees.



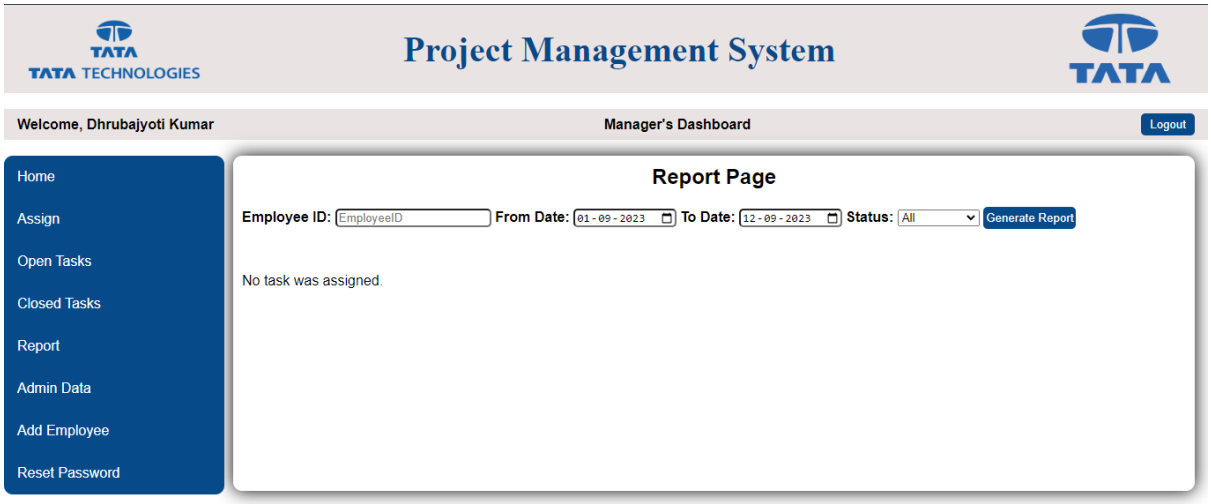
The manager can also reopen any closed task from the View More button.

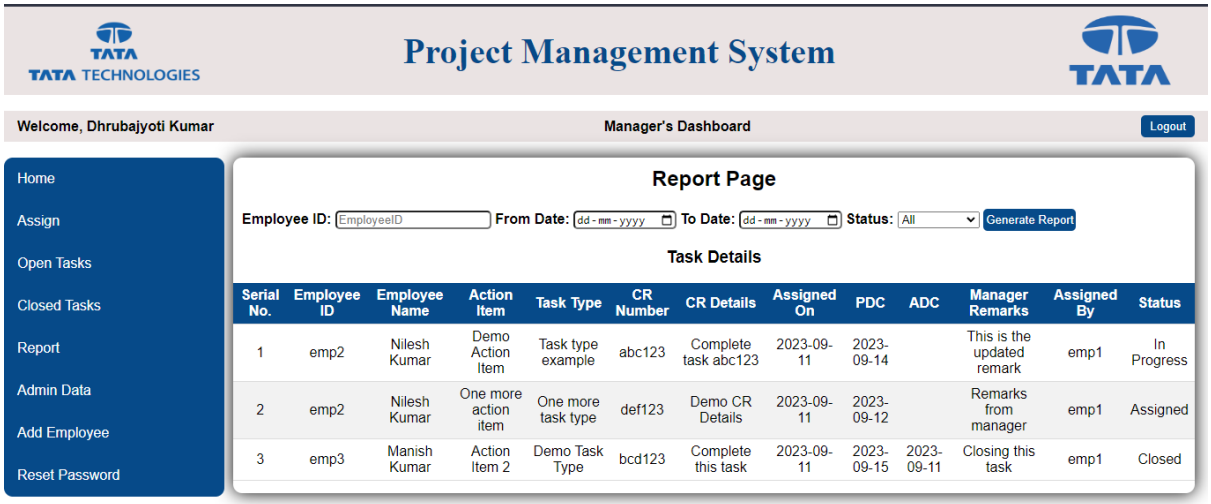
Report-

This will show details of all the tasks assigned to an employee within a date range.

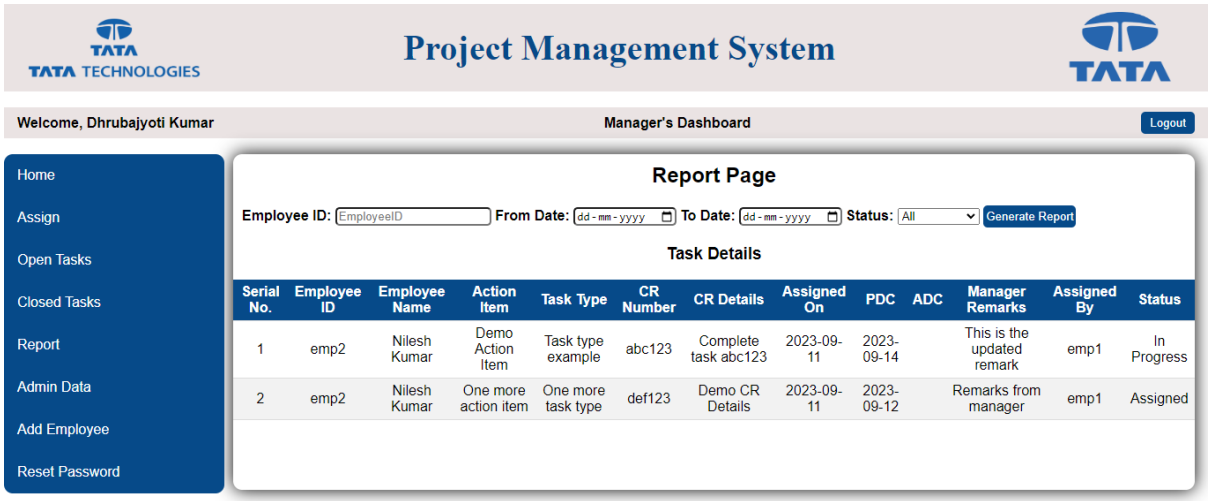
We can filter according to employee id or task status.

This information is of all the employees assigned under the manager between the date range 01-9-2023 to 12-09-2023. The task status is selected as All which will display all tasks.



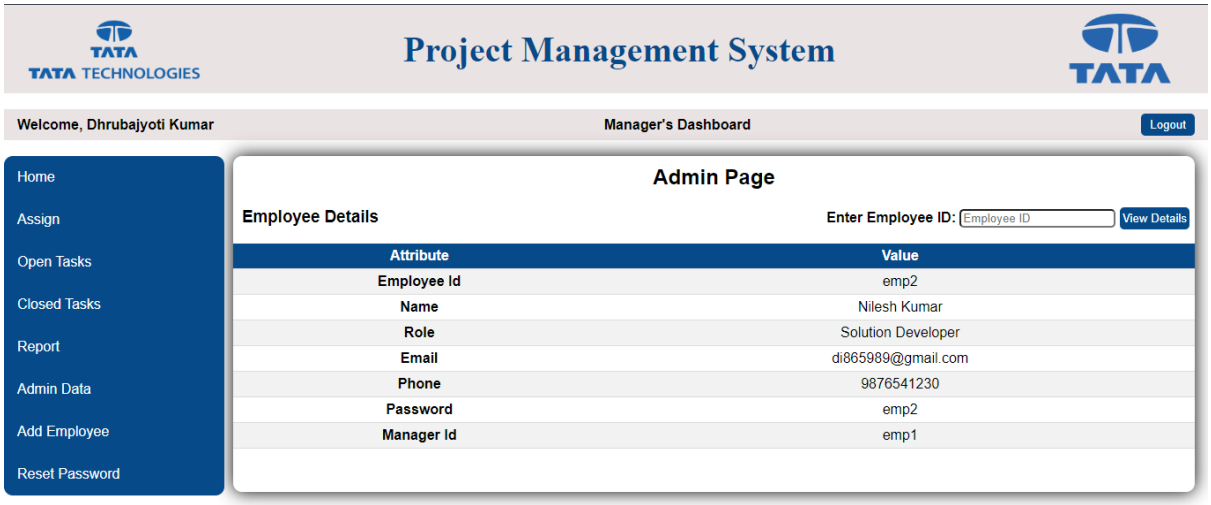


This is information of just emp2 which is Nilesh Kumar with task status selected as All.



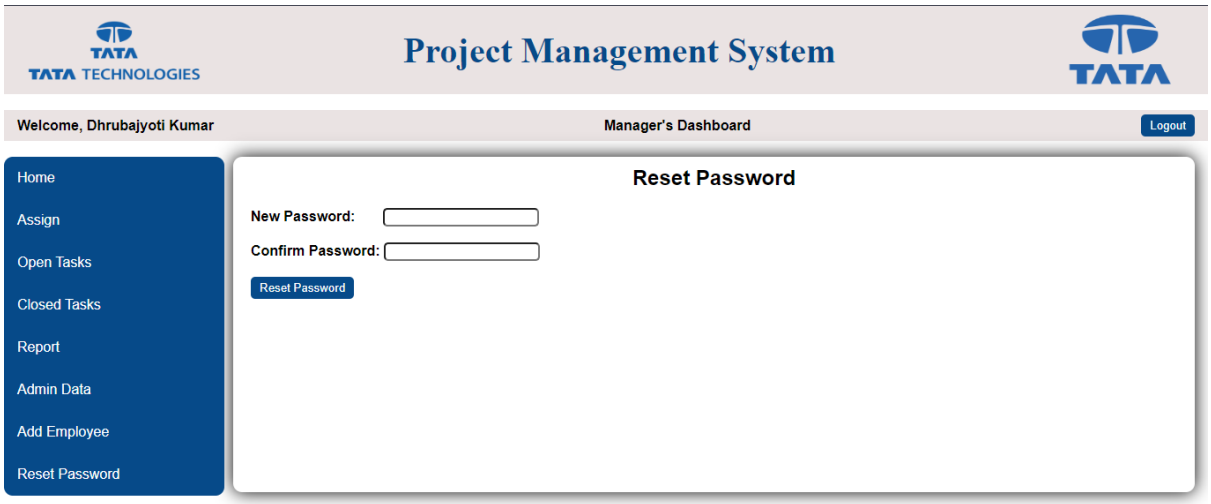
Admin Data-

Admin Data will show the personal details of any employee assigned under the manager.

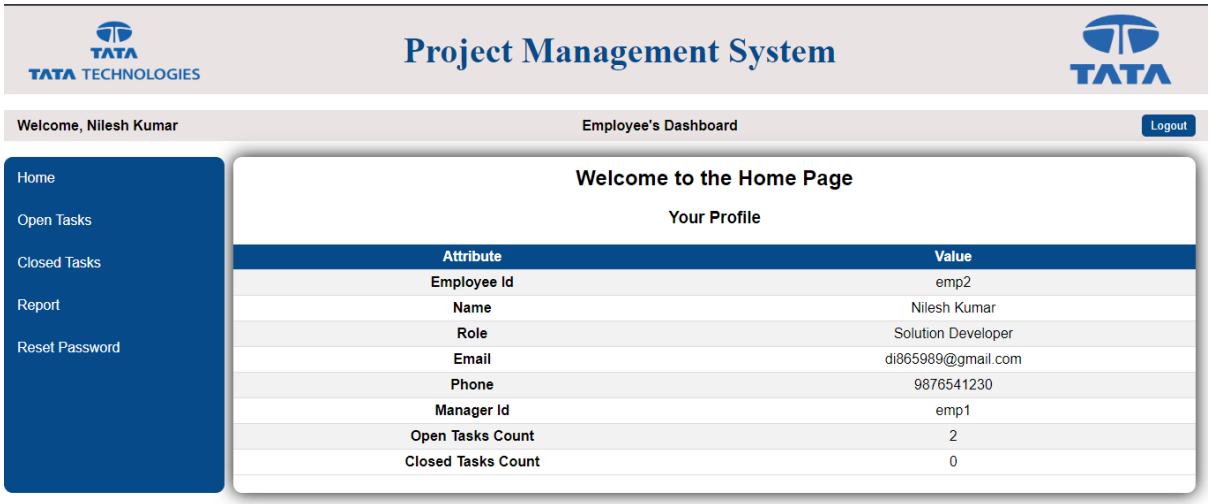


Reset Password-

It will allow user to change his password.

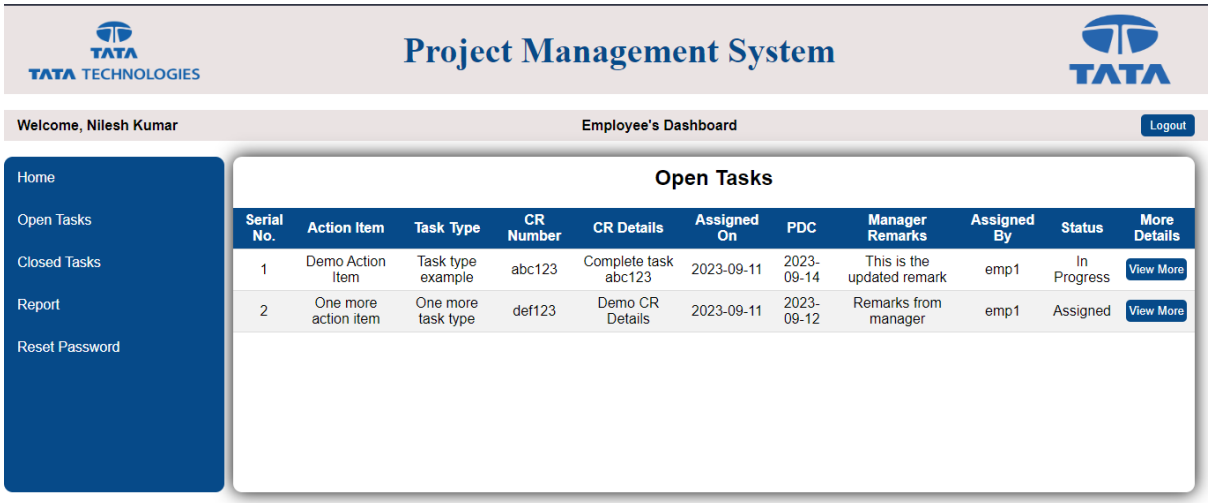


Employee's Section-

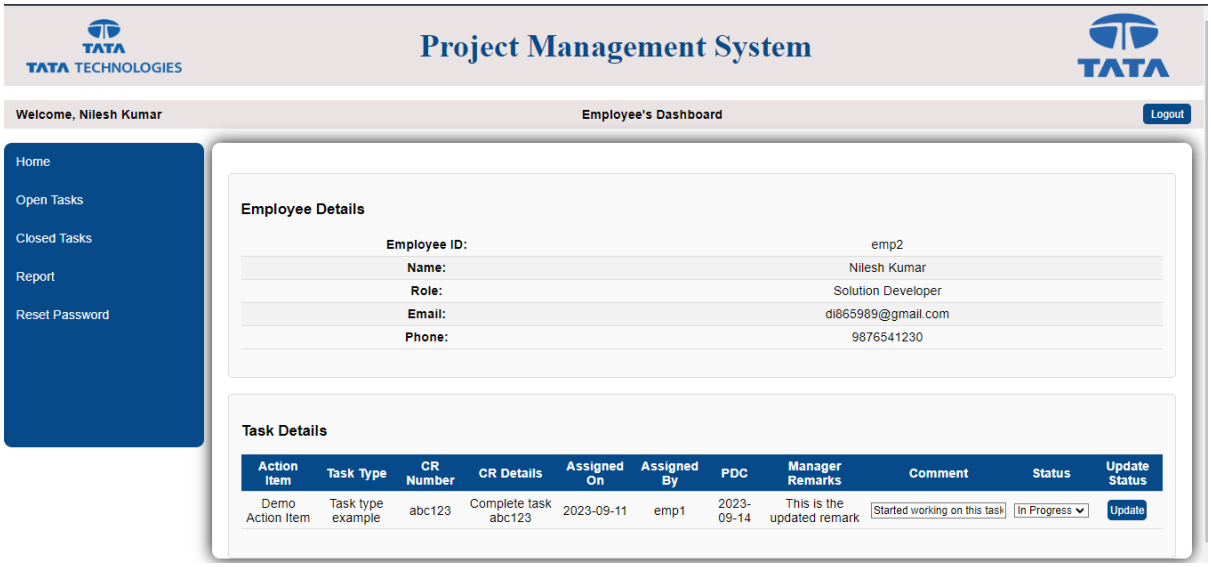


Open Task-

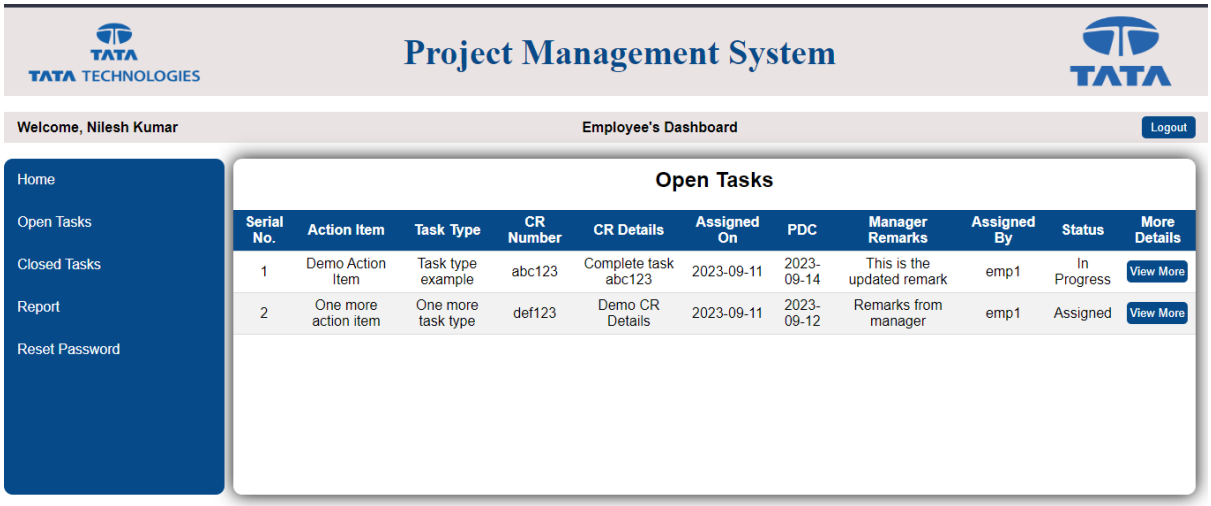
Shows all the open tasks of the employee.



On clicking the View More button, more details of the task would be displayed and the employee would get the privilege to update task status and give comments.

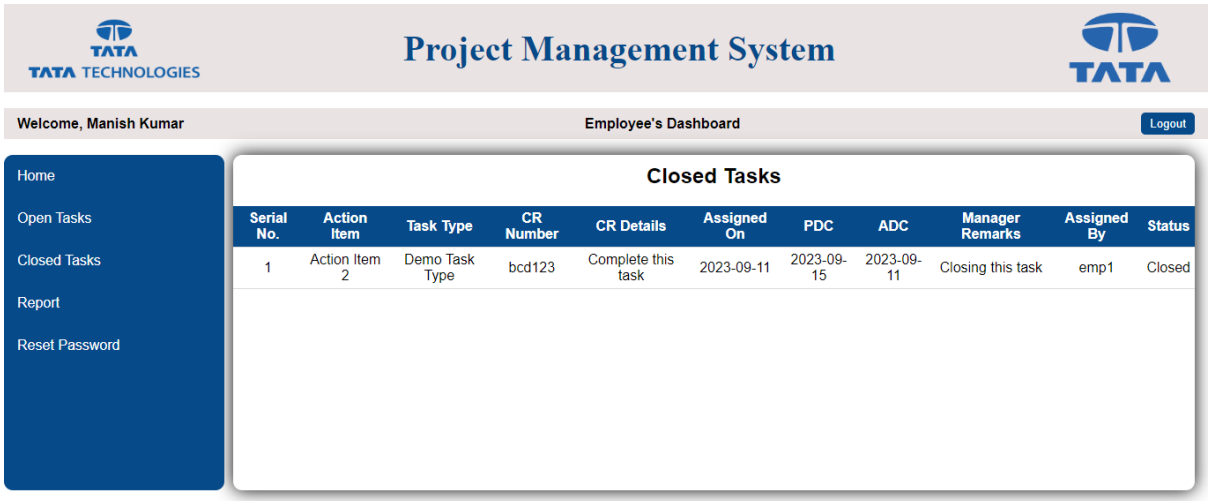


The status of the task is changed.



Closed Task-

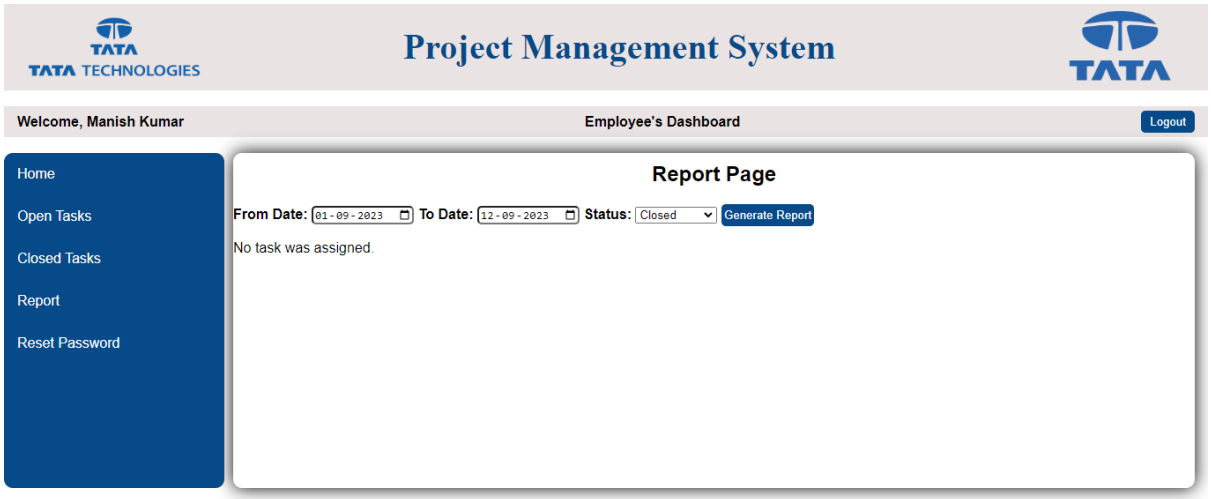
Shows all the closed task of the employee.

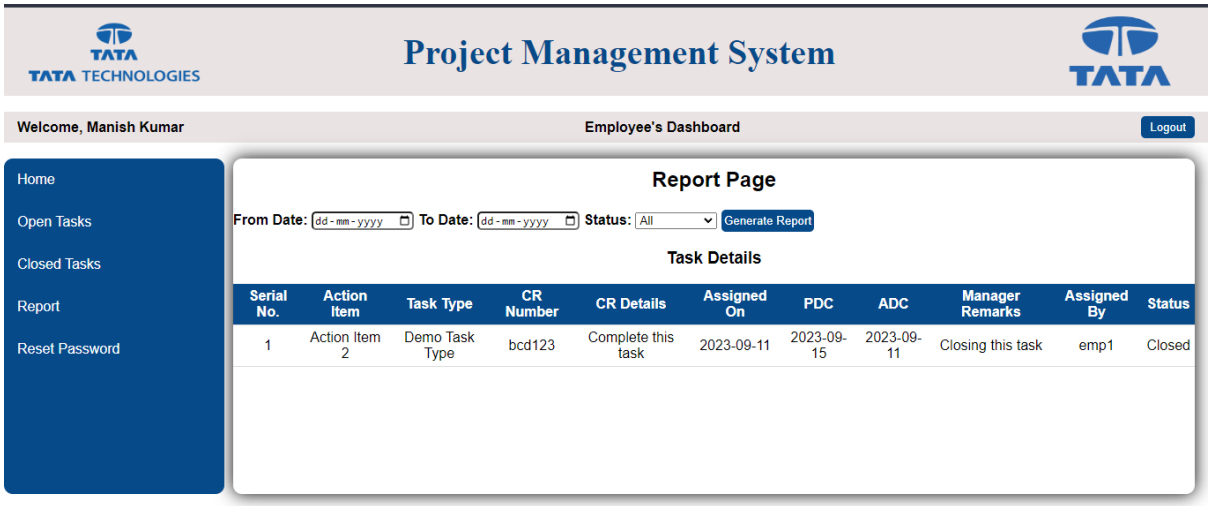


Report-

Generated report of the task assigned to the employee within a date range.

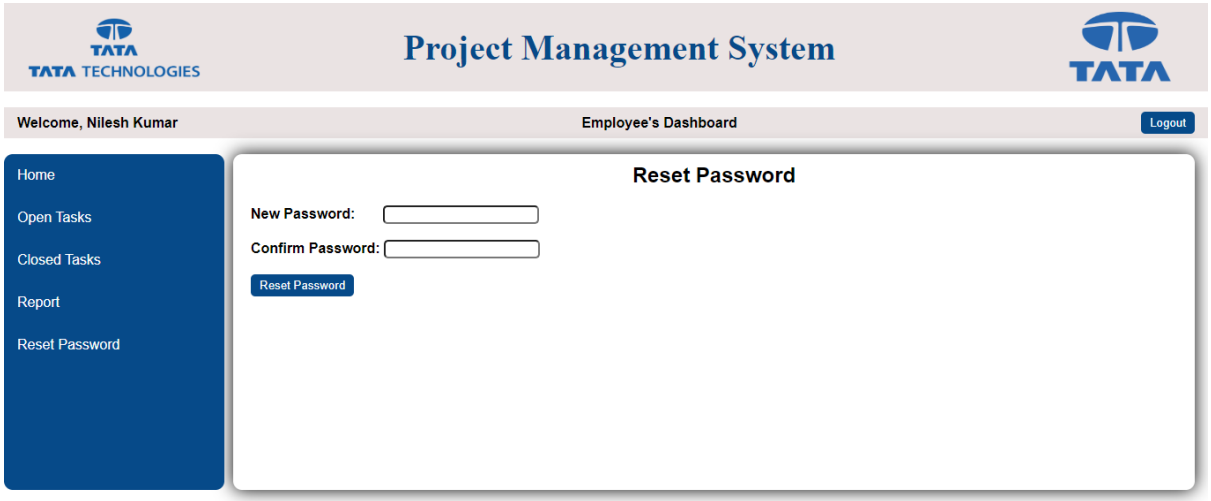
Also, can be filtered on the basis of task status.





Reset Password-

Allows user to reset his password.



SUMMARY

The **Project Management System** project is a dynamic web-based solution designed to revolutionize task assignment and tracking within organizations. This project aims to simplify the complexities often associated with traditional task management methods, offering an efficient and user-friendly platform that enhances productivity and collaboration. With an intuitive interface and robust features, this system caters to both managers and employees, providing them with the tools they need to streamline their workflow.

One of the project's core features is its managerial control capabilities. Managers gain the power to assign tasks to team members, track their progress in real-time, and communicate seamlessly through task updates and comments. This feature not only saves time but also fosters effective collaboration among team members, leading to improved task management and outcomes. Employees, on the other hand, can effortlessly access their open and closed tasks, update statuses, and provide comments, enhancing their sense of ownership and involvement in the task management process.

Efficiency and data-driven decision-making are at the heart of this project. Detailed task tracking allows users to access comprehensive task-specific information, empowering managers to assess performance effectively. Additionally, managers can filter tasks assigned to specific employees within defined date ranges, gaining insights into employee productivity and making informed decisions. The project's technological stack, which includes **HTML**, **CSS**, **JavaScript**, **Node.js**, **Express.js**, and **MongoDB**, ensures reliable and efficient performance, underpinning the project's commitment to delivering an optimal task management experience.

In terms of security, the project prioritizes user data privacy and integrity. It includes features like password reset options and data encryption to safeguard sensitive information. In summary, the Project Management System project is poised to transform task management practices, driving efficiency, collaboration, and data-driven decision-making across organizations. It provides a comprehensive solution that empowers both managers and employees, ultimately enhancing productivity and facilitating more effective task management.

CONCLUSION

In conclusion, the **Project Management System** project represents a significant leap forward in optimizing and modernizing task management within organizations. By harnessing the power of web-based technology and a user-friendly interface, this project offers a comprehensive solution that addresses the intricate challenges associated with traditional task management methods.

Through this system, managers gain unprecedented control over task assignment, monitoring, and communication. They can efficiently allocate tasks, track progress in real-time, and maintain seamless communication with team members. This not only streamlines workflows but also fosters collaboration and accountability among team members, ultimately resulting in improved task management and project outcomes.

The project's commitment to efficiency and data-driven decision-making is evident in its robust tracking and reporting capabilities. Managers can access detailed task-specific information and analyse employee performance effectively. This empowers organizations to make informed decisions, optimize resource allocation, and drive continuous improvement in task management practices.

With a solid technological foundation and a strong focus on data security, the Project Management System project is poised to revolutionize task management practices across industries. It empowers organizations to enhance productivity, streamline processes, and ensure the integrity and privacy of sensitive information. In a fast-paced and increasingly digital work environment, this project offers a strategic advantage for organizations looking to stay competitive and efficient in their task management endeavours.

BIBLIOGRAPHY

I had consulted these websites during the course of my project:

1. https://www.w3schools.com/

2. https://www.geeksforgeeks.org/

3. https://www.youtube.com/

4. https://nodejs.org/en/docs

5. https://getbootstrap.com/

6. https://chat.openai.com/