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Nexhour – Timesheet Management System

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Abstract: *In modern organizations, effective monitoring of employee working hours is essential for improving productivity, accountability, and overall operational efficiency. Despite technological advancements, many organizations continue to rely on manual registers or spreadsheet-based systems for maintaining timesheets. These traditional approaches are time-consuming, prone to human error, and often result in data inconsistency, limited transparency, and delayed approvals. As organizational operations expand, such limitations create challenges in workforce management and decision-making.This project focuses on the design and implementation of a Web-Based Timesheet Management System developed using Spring Boot and the Model–View– Controller (MVC) architectural pattern. The proposed system automates the process of recording, submitting, reviewing, and approving employee work hours through a secure and centralized platform. Role-based authentication ensures that employees and administrators have clearly defined access privileges, enhancing data security and system reliability.*

Keywords: Employee Working Hours Timesheets, Spring Boot, Centralized Platform, Role-based Authentication.

I. INTRODUCTION

In the modern organizational landscape, where efficiency and accountability play a crucial role, accurate tracking of employee working hours has become increasingly important. Timesheets plays an important role for monitoring productivity, assessing employee performance, planning project timelines, and estimating overall operational costs. Proper time tracking helps organizations maintain transparency and ensures adherence to internal policies and labor regulations.

II. BACKGROUND

Earlier, organizations used manual methods like paper records or spreadsheets to track employee work hours. These methods were simple but often led to errors, data loss, and difficulty in managing large amounts of information.With the advancement of technology, web-based systems and automated solutions have been introduced to improve efficiency and accuracy. However, many organizations still lack a proper system that is simple, reliable, and easy to use.This creates a need for a Timesheet Management System that can manage employee work data effectively and improve overall productivity

III. PROBLEM STATEMENT

In many organizations, employee work hours are still recorded using manual methods or simple tools like spreadsheets. These methods are not very efficient and can easily lead to mistakes, missing data, or repeated entries. Because of this, it becomes difficult to maintain proper and accurate records of daily work.Employees sometimes forget to update their tasks regularly, and managers do not have a proper system to check the correctness of the submitted data or track progress on time. This creates confusion and reduces transparency in the workflow.Also, preparing reports for payroll or project

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IV. PROPOSED SOLUTION

To overcome the problems of manual time tracking, a Timesheet Management System is proposed. This system will provide a simple and organized way for employees to record their daily work and working hours.

In this system, each user will have a login through which they can enter their task details and time spent on different activities. All the data will be stored in a centralized database, which makes it easy to access and manage.

Managers will be able to view the submitted timesheets, verify them, and approve or reject entries when required. This helps in maintaining accuracy and avoiding incorrect data.

The system will also generate reports automatically, which can be used for payroll, performance evaluation, and project tracking. By automating these processes, the system reduces manual effort and saves time.

Overall, the proposed solution aims to make time tracking more accurate, transparent, and easy to manage for both employees and managers.

V. METHODOLOGY

The development of the proposed Web- Based Timesheet Management System followed a systematic and well-defined software development methodology to ensure reliability, scalability, and ease of use. The methodology was divided into multiple phases, each contributing to the successful implementation of the system.

RESOURCES USED

- Frontend (HTML, CSS, JavaScript)
- Backend (JavaScript)
- Database(MySQL)

VI. CONCLUSION

This project successfully designed and implemented a Web-Based Timesheet Management System using Spring Boot and MVC architecture. The system automates the process of recording, submitting, and managing employee work hours, thereby reducing manual workload and minimizing errors. By offering secure authentication, role-based access, and automated approval workflows, the system ensures data accuracy and reliability. The developed solution is scalable, user- friendly, and suitable for small to medium- sized organizations as well as academic and training purposes.

REFERENCES

Spring Boot in Action — C. Walls
A detailed guide on building enterprise applications using Spring Boot, focusing on rapid development and simplified configuration.

Head First Servlets and JSP — B. Basham, K. Sierra, B. Bates
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Software Engineering: A Practitioner's Approach — R. S. Pressman
Provides essential knowledge of software development processes, system design, and project management practices.

Design and Implementation of a Web-Based Workforce Management System (IEEE, 2019)
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Automation of Employee Time Tracking Using Web Technologies (IEEE, 2017)
Focuses on automating timesheet processes to reduce manual effort and increase accuracy using web solutions.

Authentication and Authorization Mechanisms in Web Applications (IEEE, 2019)
Explains techniques for securing web applications through user authentication and role-based access control.