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Work Prism: A Work Compliance system

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Abstract— **In organizations and colleges, there is a huge flow of a variety of tasks or activities which becomes difficult for users to manage the task and complete it on time. Many times user also forgets to complete a certain task from a given set of tasks. As a result, this study outlines the creation of an automated task management system for businesses and universities that will track tasks and notify users when they need to be finished by a certain date. There are many such systems available in the market but they are not cost-effective and lack with some of the major functionalities like monitoring tasks using interactive dashboards. An important feature of this proposed system is its user-friendly design which helps users to navigate through the application easily. Also the system is generic and can be further used for project management, colleges, Schools and Organizations. Users can also interact with the difficulties while completing the task to the assigner using a comment section. The system admin maintains a database system, which can add the users to the system and can assign roles to the user. This system helps to maintain the overall workflow of the organization.**

Keywords- work compliance, alerts, monitoring Task, Assign Task.

INTRODUCTION

In a work environment, people have multiple tasks assigned to them. Creating a to-do list,setting up goals and priorities,monitoring the use of time helps to improve productivity resulting in higher work efficiency and organization growth. A particular task which looks extremely difficult, can be made simple by effective planning and job assignment.A good task management provides these features and helps in maintaining the workflow of the organization. Even the time management experts recommend task priorization based on the importance of the task and its deadline which helps to avoid any issue.

We introduce WorkPrism- A work compliance system . This system will provide a platform for all the users within an organization to communicate and execute various tasks. The project proivdes an online platform to acccomplish day to day tasks .The users can assign tasks to the faculty working under them and periodically share the details regarding the tasks with the faculty. The system easily assigns tasks so as to avoid all the time-consuming and unnecessary meetings.The management of assignment of task is easy from both ends.The users higher up the hierarchy are the privileged users who set deadlines,keep a track of the completed/incompleted tasks. The system delivers the information about the assigned tasks to the users.The admin can add users into the system and can assign them roles. Regular users are not permitted to see the administrative tasks. WorkPrism with its user friendly architecture enables users to organize and prioritize projects efficiently and with flexibility.

LITERATURE REVIEW

[1] **Automated Management System using Analytical Hierarchy Process**, by Sonya Meitarice, Mumtaz Begum Peer Mustafa, Dedek Okta Andi. In order to continually monitor the work performance of university students, this research describes the research and development of an automated task management system that uses Analytical Hierarchy Process (AHP) measurement. The next methodology was used to accomplish the goal of this study. The research first finds appropriate indicators of ineffective time management, the best time management strategies for college students, and an appropriate approach for creating the suggested system.

[2] **An Interactive Dashboard for Monitoring the spread of COVID-19 in Sudan**, by Alaa M.O. Abdelsamad Azza Z. Karrar. In this paper an interactive dashboard was created in this study to track the COVID-19 situation in Sudan. This paper tells about the interactive dashboard created to monitor the COVID-19 data. It became easy for people to track the situation and make decisions based on it. Tableau was used to construct the dashboard (the public version). Making decisions about the spread of COVID-19 in

Sudan requires having access to key information, which the created dashboard and visual analysis offer.

[3] **Survey Paper: Framework of REST APIs,** by Sujan YM, Dr Shashidhara H R, Dr.Rohini Nagapadma. In administrative setup, discussions are a remarkable concept to represent complex conversations between a consumer and one or more administrations. The REST building approach forces the characteristics of clients, servers, and their relationships in REST structures, which significantly influences conversations in such frameworks. REST API are mostly utilised in cloud computing, the Internet of Things, and micro services, among other areas. Representational state transfer (REST) is a sort of software architecture that is used in web services and provides more flexibility. REST controls how the API appears.

[4] **Online Task Management System(OTMS),** by Girishma Hedaoo, Priyanka Thoke, Raksha Tabhane, Shubham Meshram, Swapnil Kumbhalkar, Prof. Mukesh Barapatre. In this paper, the System was developed to manage the on-going activities in the college. The project offers an online platform to carry out routine departmental tasks and deliver information about the work to a designated user. The user-friendly architecture of the proposed system has the important advantage of facilitating easy online interaction and job completion between the administrator and user. A database administrator is in charge of upkeep and system performance. The system may be controlled by the admin. Users are not authenticated to see administrative tasks.

[5] **A Study on Task Management System,** by Jyothi N S, A Parkavi. In this paper, a study on task management system is presented. Every project or event has a lot of activities, tasks, deadlines, and personnel budgets. The project's execution strategy and the order in which the activities are carried out affect whether it will succeed or fail, regardless of how big or little the project is. It takes a lot of ability to accomplish this well, but the time and energy invested in learning excellent project management techniques can pay off greatly and support the completion of projects on time and within the constraints of available resources. The ability to efficiently plan, organise, and allocate tasks makes it straightforward to guarantee the project's success. This is where the Eisenhower decision matrix is useful. Teams can easily communicate and define tasks using the "Eisenhower matrix" with the aid of task matrixes. This suggested solution assists the project management team and other team members in organising tasks efficiently.

PROPOSED SYSTEM

Our Proposed System is a Web application and an Android application. It is an application which helps an organization maintain the work flow by assigning tasks, Monitoring assigned tasked which helps in the smooth functioning of the organization.

a. System Architecture

The major components of our application are shown in Fig.1

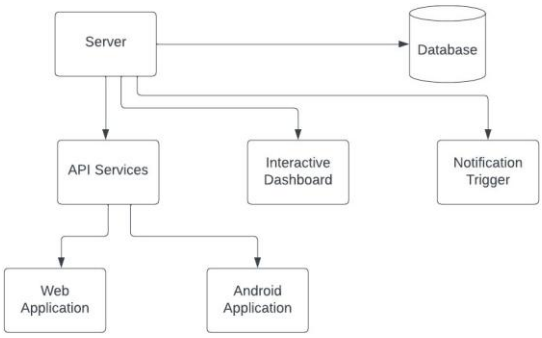

Fig. 1. System Architecture

The system has a client-server architecture, where user request a web-page to the server and server sends the data or file as a response back to the user. All the resources and services are managed by the server. The database is stored on the server to serve the data to the users through applications which make the application dynamic.

The RESTFUL API's are implemented and kept on server to serve the data from database to web and android applications. The user has to communicate with the database through API's, so there is no direct communication between user and database. The data can be fetched and sent to the database using the GET and POST method of API's.

The Interactive Dashboard helps to monitor all the task flow in an organization or college. The Dashboard gets the data from database and allows a user to filter and visualize/analyze the task status and user performance.

The Notification Trigger is a service which sends alert emails regarding the tasks and its deadline to the user using SMTP protocol. This will help user to complete its task before deadline.

c. b. Additional Features

After going through various similar projects, we realized that many projects are missing some features which can help to make the application more engaging, user friendly and improve the user experience. Following are some additional features of our application:

- The application is made generic which can be used for project management, task management or can be used in organization to manage their work flow.
- The system can generate reports of the work going-on in the organizations which helps to monitor the performance and growth of the organization.
- A Responsive Application that will deliver an excellent user experience on Mobile Devices.

MATHEMATICAL MODEL

The mathematical representation of the proposed system focuses on the function of assigning tasks to user.

Suppose Employee Z wants to assign a task.

E- Set of all the employees to whom Z can assign tasks E={E1,E2…….,En}

Let J denote the task to be assigned J={T,D}

(T-Task, D-Deadline)

EJ- Set of all currently assigned tasks to Ei

eg: E1J -set of all currently assigned tasks to employee E1-{E1J1,E1J2,…..E1Jn}

Let A denote "Assign the task" function,

A: Z*J*E*EJ

Thus, employee Z assigns task J to an employee from set E after checking the tasks currently

assigned to that employee(Ei) from set of all currently assigned tasks(EiJ)

CONCLUSION

We introduce Work Prism – A work compliance system which helps us manage the workflow of the organization. The administration, user, and task management processes are automated using the Work Compliance System. The top authorities are monitoring the work. The initiative offers an online workspace for a college department's daily tasks. The suggested program will facilitate communication between academics and higher authorities. The system distributes assignments quickly in order to prevent all the time-consuming meetings thar are pointless. Task management is simple on both ends. The department's head assigns the duty to the faculty. The users of this software can assign tasks, send messages, send notifications and view notifications. Through this work, we have emphasized the project's architecture. The goal of this project is to provide an efficient work management system in an organization.

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