Task Management Systems at Higher learning Educational Institutions

Ms.Anagha R. Kadve[1], Kajal K. Pawar[2], Harshali M. Pawar [3] , Saylee S. Patil [4] Pratik S. Pawar [5]

[1]Professor , [2]Student, [3]Student , [4]Student, [5]Student

[1,2,3,4,5]Department of Computer Science and Engineering,

[1,2,3,4,5]Dr. Daulatrao Aher College of Engineering ,Karad, India.

Abstract : The administration of an educational system using both human and material resources to develop plans, put in place structures, and carry out system operations is known as educational management. The professional eco-system that exists inside educational institutions is known as the education system. Institutions of higher learning are essential to a country's generational development. A higher education institution must have an effective management structure in place in order to provide parents and students the confidence to explore their latent potential. The definition of innovation in management is the creation and use of a procedure, framework, instrument, or method that is novel to the maximum degree of advancement in the area and that is carried out in order to support the achievement of organizational goals. In order to be innovative in management, one must possess and exercise managing talents, be resolute and courageous, and accept accountability for implementing changes that spur advancement and performance. The establishment of the curriculum takes into account the institution's (collegiate) ideology, learning experiences, languages, and key courses. A quality educational institution prioritizes providing students with comprehensive training to satisfy the diverse demands of society, in addition to fulfilling the academic standards of teaching and learning. The assessment of employee performance is one of the most crucial requirements for the efficient running of higher educational institutions. In this article, we've developed an automated task management system that may help higher education institutions evaluate the performance of their employees or teachers. The approach helps managers assess and categorize instructors, staff, employees, and colleges by tallying the number of jobs assigned, finished, incomplete, or delayed. In one of the universities, the proposed procedure has been tested. Given that the Institute is a higher education establishment, it is advised that the faculty members evaluate one another's work using this method.

Index Terms – **administration, education system, task management, Institute.**

I. INTRODUCTION

The term "educational management system" refers to the management of the educational system in which a team integrates material, financial, and human resources in order to oversee, organize, and execute the structures necessary to carry out an educational system. Education is a triangle of quality, quantity, and equity that provides knowledge, skills, values, beliefs, habits, and attitudes with a learning experience. An ecosystem of professionals working in educational institutions, including government ministries, unions, statutory bodies, agencies, universities, and colleges, makes up the education system. Political leaders, principals, instructional staff, support staff, administrative staff, and other educational professionals collaborate to improve and enrich the educational system. Management is necessary at every stage of the educational ecosystem; it includes planning, organizing, implementing, controlling, reviewing, evaluating, and integrating an institution. Henri Fayol's Fourteen (14) Principles of Management have an impact on educational management. The activity of educational management is goal-oriented. It entails teamwork, disciplined work, and performance in an educational setting with the aim of achieving specific pre-established goals. Through diligent and well-coordinated work, we may accomplish the organization's objectives by effectively utilizing the material, financial, technological, and human resources found in educational settings. This's primary goal is The purpose of task management is to facilitate employee cooperation on assigned in-person or remote assignments. It is essential to manage any type of activity carried out in a business. Task management's primary function is to increase a task's purpose, threading, and reflectiveness1. But because of the communication issues within the team, task management efficiency is still below the rising level. Task management failures also lead to a number of tasks failing to reach their objectives because of budget overruns. The Head of Department is responsible for overseeing tasks completed by faculty and non-teaching personnel, whereas the Principal of the Institute oversees tasks completed by the Heads of Department. This will support the institute's external expansion as well as internal standard improvement. It aids in the institute's appropriate maintenance of its operations. Upon completion of the assignment by any faculty member, the work status can be filed online with the help of this Android application. The task which is carried out by faculty and non teaching staff is undertaken by the Head of department, and the task which is carried out by the HOD's is undertaken by the principal of institute. This will help in internal improvement of standards and external growth of institute. It helps the institute to maintain their work properly. When the task is completed by any faculty, using this android application the status of work can be submitted in an online mood.

A. Need of Study

The goal of the Institute Task Analyzer is to streamline and improve operations within the institute. Task automation will save time, improved decision-making, efficiency analysis of the institution, and faculty job monitoring will all benefit. In essence, the goal is to improve the institute's efficiency.

II. MOTIVATION OF STUDY

To improve operational efficiency, data-driven, decision making and ultimately enhancing the institute's competitiveness, transparency and long-term sustainability.

III. PROBLEM STATEMENT

The Institute Task Analyzer project aims to tackle the difficulties of manual administrative tasks that take a lot of time, misallocating resources, and the institute's lack of data-driven decision making. Therefore, to use this technology to monitor faculty activity and assess the institute's performance.

IV. SCOPE OF PROJECT

The system improve task automation for routine administrative task. The scope of system is to collect data, analyzing it and presenting results in a user- friendly format. This will help in internal improvement of standards and external growth of institute.

A. Area of project

The Institute Task Analyzer is to make things run more smoothly at the institute. This includes finding better ways to handle administrative tasks, using resources more efficiently, and making decisions based on data. Additionally, it aims to track and improve how well the faculty is doing their work. So, the system all about enhancing the institute's operations and effectiveness.

B. Objectives

- To make the work more efficient by keeping the faculty schedule.
- To reduce the time consumed for telling the status of work.
- To improve communication in between faculty, staff and HOD.
- To build automated report of academic calendar consistency.

C. Hardware Requirement
- Processor : 1.2 Quad core processer or Higher
- RAM: 4 GB
- Device : Android phone or tablet

D. Software Requirement
- Android : 2 V 5.0 or Higher
- IDE : Android studio
- OS :Windows 11
- Front End : XML
- Back End : Firebase server
- Language : JAVA

V. LITERATURE REVIEW

The goal is outlined in the paper "A Study on Higher Institute and Performance Management" by author Mohammed Tanaver. The quality of academic staff, as well as elements like training, recruiting, incentive systems, usage, and motivation, are seen to be crucial in enhancing the overall efficacy of higher education institutions. Therefore, the author concluded in his research that emphasis should be placed equally on academics and administration and that higher education institutions need to understand the distinction between performance management and performance evaluation.[1]

Author Sudharani "A Study on Students Expectation Perception and Satisfaction towards Management System of Education Institutions," author Sudharani makes the following statement.As a gauge of an institution's quality, she has mentioned staff, cost, facilities, academic reputation, and location. The study's conclusion has consequences for how administrators, legislators, and educators can create techniques that are appropriate for drawing in students. Institutional quality has the most significant influence at the transaction level for educators, who focus on six factors: location, academics, infrastructure, image, cost, and staff, and, finally, overall happiness.[2]

Author Rajesh Tivari et.al. "Management of Higher Educational Institutions: Issues and Challenges," author Rajesh Tivari used secondary data to explain the dynamics of faculty transformational and transactional leadership styles as well as to discuss the conceptual framework of issues in higher education management. Bureaucracies with a highly transactional and contractual organizational culture are known to prioritize their own interests over those of the organization. The laissez-faire leadership style has a bad correlation with followers' contentment and loyalty. Institutional leaders may improve their on-the-job abilities by including programs like seminars, workshops, and updates on leadership and institutional administration. [3]

Author Dr. Neradhar Dey provides a thorough discussion of the fundamentals of creating and running a higher education institution, as well as the difficulties and solutions related to its structural and procedural mechanisms, in his paper "Higher Educational Institutions in India and Its Management." The development of a participatory culture through faculty

management and decentralization procedures has been the main focus, with emphasis on resource generation, the institution's support system, and the process of self-renewal. Organization designers frequently struggle with the question of how tall or how flat an institution should be—not in terms of physical dimensions, but rather in terms of governing and decision-making levels. However, every institution is a multi-level management structure.One that is flat has very few levels. But one must remember that an organization's structure frequently depends on its size, volume, kind of institution, and area of activity. Also, organizations with a high degree of authority are more likely to experience organizational issues.[4]

The influence of the public high school management system on academic success is discussed by author Tsereteli M. Through his research, the author has been able to determine how an institution's culture affects its level of performance and accomplishment. The findings indicate that the degree of academic accomplishment of students is predicted by the institutional management structure. [5]

VI. **METHODOLOGY**

The manual, time-consuming administrative work misallocation and lack of data-driven decision making inside the institution are addressed by the institution work Analyzer project. Thus, this technology will be used to monitor faculty activity and assess the institute's performance. This Android application, which offers a framework for analyzing work at the institute, enables all faculty and non-teaching personnel to update the Head of Department on their tasks. Teachers are required to file a note explaining why they are unable to accomplish an assignment, which is given to them by the Head of Department. Academic-incharge uploads the academic schedule into the suggested system. It is required of all faculty members to review assigned work from calendar 5 and update program dates and other data in that module.
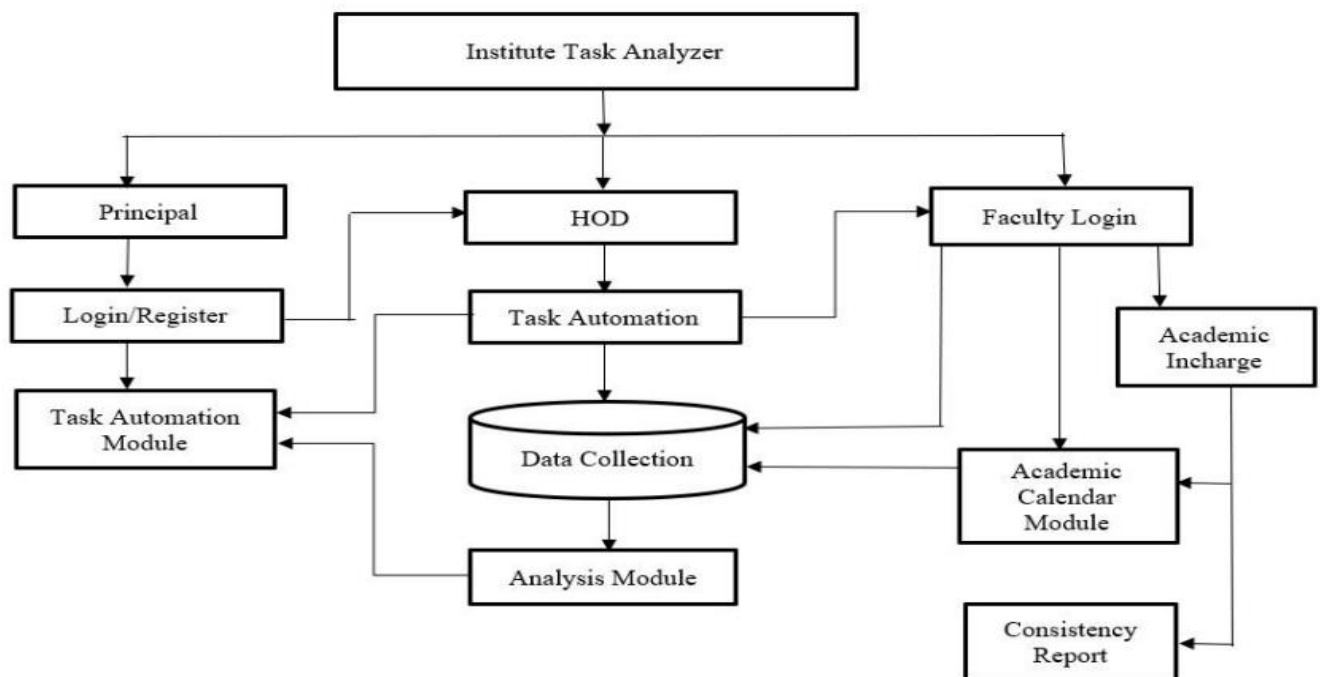

Fig.1. Block diagram of institute task analyzer

Fig.1. shows the block diagram of the system, The system is divided into three main modules, each of which has the following sub-modules:

1)Principal
• Login - Only principal can login the application.
• Dashboard – It will show the HOD task, manage HOD task.
• Manage HOD – In it HOD can manage ,add ,update, delete HOD ,basic info like name, Contact, password for login HOD page.
• Manage task - In it HOD can assign task for HOD with task details like task name, HOD name, date ,start and time/day.
• Add Details-Once principle assign task to HOD then he/she have to add task related details like time others.
• Logout- For logout the application.

2)HOD
• Login -Only those faculty can login who added by principle.
• Task – If shows the task which is given by principle. If will display the work and it assigned to faculty. It will show the update of task of faculty.
• Logout- For logout the application.

3) Faculty
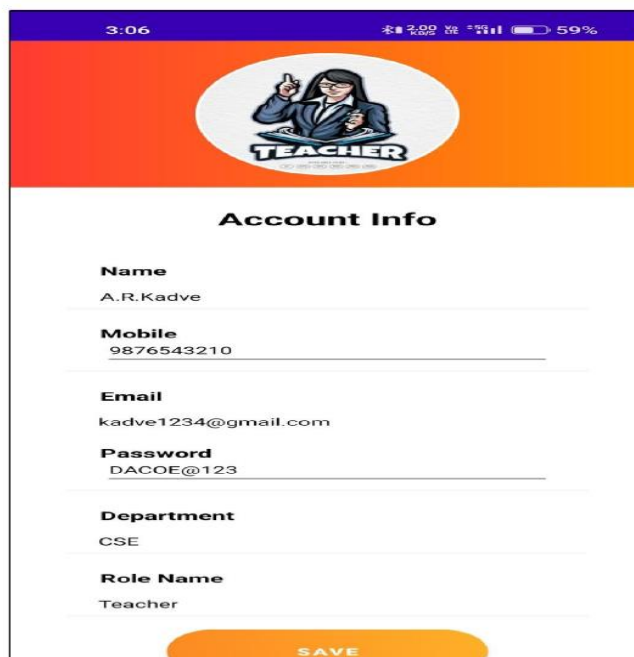• Login – Only faculty members added by the HOD are able to log in.

• Task: This displays a list of tasks arranged by date along with task specifics like duration and information. if the person began the work. They must update the end of status.

Show states that the real start and finish times have been updated.

• Logout: To exit the program.

VII. RESULTS AND DISCUSSION

The system will show the expected date of the faculty worked on the task and the amount of the time of faculty use to complete task and help to keep track of the work

• System will provide efficient automation, data informed decision, communication between HOD and faculty.

• System will generate automated consistency report of academic calendar.

Fig 2 and 3 shows snap shot of the design applications

Fig.2. Teacher Profile

The teacher profile contain name of teacher, mobile number , email address ,department, role and password. Similarly we have HOD profile .

Fig.3. Task assigned page

VIII. CONCLUSION

This was the Java programming language system design project we worked on for the Institute Task Analyzer. It takes a lot of work from us to develop this system. We believe that this system made all of us very happy. Even if there is never a guarantee that a work in the development area will be flawless, this application might yet use some further refinement. We received a great deal of knowledge and understanding about the topic of development. We're hoping this will work out well for us. The goal of the study was to enhance the manner in which employee and employer teams collaborate. Utilizing this also enhances teamwork, activity tracking, and other work-related tasks. The findings have aided senior managers in understanding the workflow and turnaround times for tasks assigned to staff members. It also makes it possible for staff members to work together to boost efficiency and production. In the future, a task management solution for coordinating with other departments for diverse interacting processes inside teams may be proposed.

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