BANNARI AMMAN INSTITUTE OF TECHNOLOGY
Autonomous Institution, Accredited by NAAC With 'A' Grade

SOFTWARE REQUIREMENT SPECIFICATION

FOR

CAMPUS MAINTENANCE-ESSENTIAL STAFF WORK STATUS PORTAL

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PROJECT ID   : 18

DOMAIN   : CAMPUS MAINTENANCE

1. INTRODUCTION

The Campus Maintenance - Essential Staff Work Status Portal is a web-based application designed to efficiently manage and track the work status of essential staff involved in various campus maintenance tasks. The system provides real-time updates on the progress of maintenance work, enabling supervisors to effectively manage resources and ensure timely completion of tasks.

2.PROBLEM STAREMENT

- **Inefficient Staff Management Processes:** The current methods of assigning tasks and managing staff are ineffective, leading to poor resource utilization and low productivity.
- **Communication and Coordination Challenges:** There are significant communication gaps between supervisors, employees, and administrators, which hinder effective coordination and collaboration in campus maintenance activities.
- **Lack of Work Progress Monitoring:** There is limited visibility into the progress of maintenance tasks, making it difficult to track and ensure timely completion.
- **Ineffective Resource Allocation:** The allocation of resources, including staff and equipment, is not optimized, resulting in inefficiencies and delays in maintenance activities.
- **Inadequate Campus Maintenance Oversight:** There is a lack of effective management and oversight in maintaining campus facilities, which are essential for providing a conducive learning environment.

3.PROJECT SCOPE

The Campus Maintenance - Essential Staff Work Status Portal aims to revolutionize the management of essential staff and maintenance tasks within the campus environment. Here's an intuitive breakdown of the project scope:

1. **Optimized Staff Management:** The system will streamline the allocation of essential staff members and their tasks, enhancing operational efficiency and productivity across campus facilities.
2. **Real-time Tracking and Task Management:** Administrators will have access to Realtime updates on staff locations and task statuses, allowing

for agile resource allocation and ensuring timely completion of maintenance activities.

3. **Scalability:** The system will be designed with scalability in mind, capable of accommodating future growth and evolving campus needs without compromising performance or user experience.

By focusing on these key aspects, the Campus Maintenance - Essential Staff Work Status Portal aims to revolutionize campus management practices, fostering efficiency, reliability, and user satisfaction across the campus community.

4.KEY FEATURES

- **Work Status Tracking:**
    a. The system allows supervisors to track the status of maintenance tasks in real-time.
    b. Essential staff can view the tasks assigned to them and can update their work status to supervisors

- **Task Details:**
    a. Each maintenance task is associated with the following details:
    b. Date and session of the task
    c. Task ID for easy identification
    d. Nature of the work (e.g., painting, carpentry)
    e. Location of the work within the campus (e.g., IB, SF, AS block, hostel)
    f. Number of essential staff assigned to the task
    g. Name of the essential staff attending the task
    h. Duration of the work
    i. Status of the work (e.g., pending, in progress, completed)
    j. Remarks for any additional information or updates related to the task

- **User Roles and Permissions:**
    a. The system supports two main user roles: supervisors and essential staff.
    b. Supervisors have permission to update the task status for their assigned staff.
    c. Essential staff can view task details but can only update their work status.

- **Task Management:**
  a. Supervisors create maintenance tasks in the system, specifying task details such as date, location, nature of work, and staff assignment.
  b. Essential staff are assigned to specific tasks based on their availability and expertise.

- **Work Status Updates:**
  a. Only supervisors can update the status of maintenance tasks for their assigned staff.
  b. Essential staff can view the tasks assigned to them and update their work status (start and completion times) but cannot update the task status.

- **Dashboard and Reporting:**
  a. The system provides supervisors with a comprehensive analytical dashboard for monitoring and oversight.
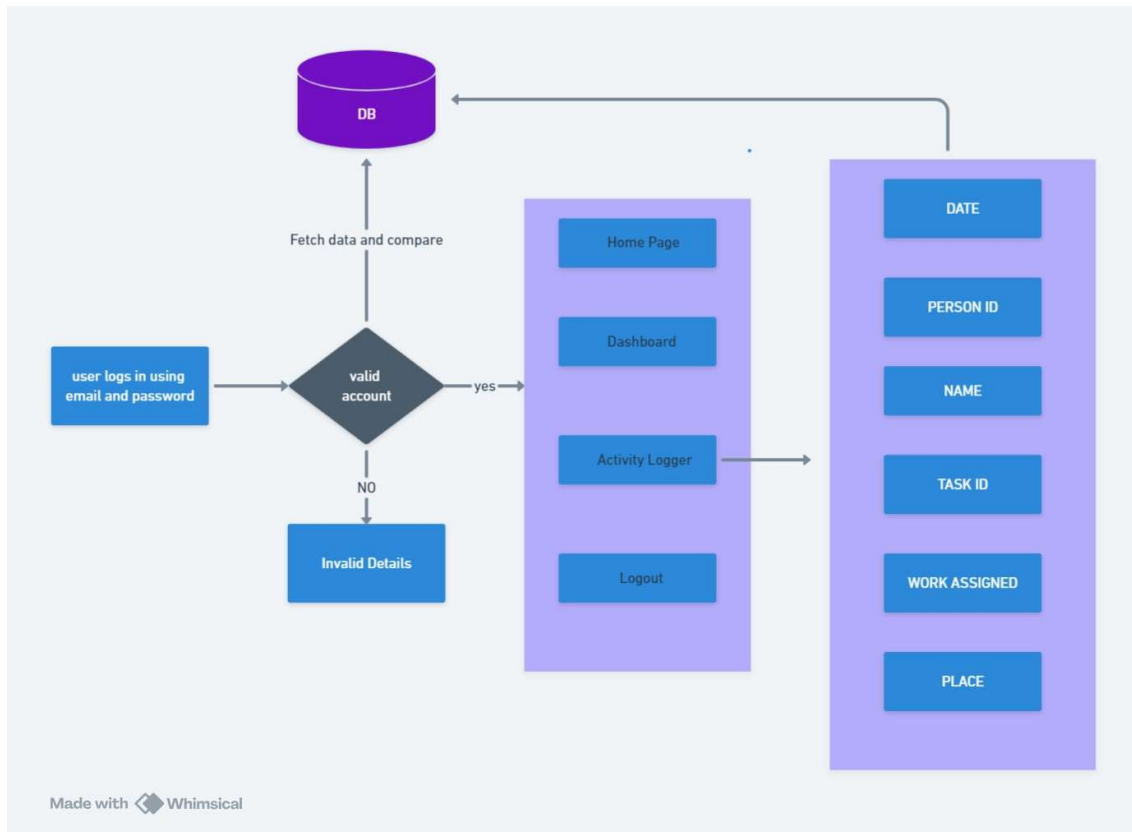 b. Reports can be generated to analyse maintenance trends, task completion rates, and staff productivity.
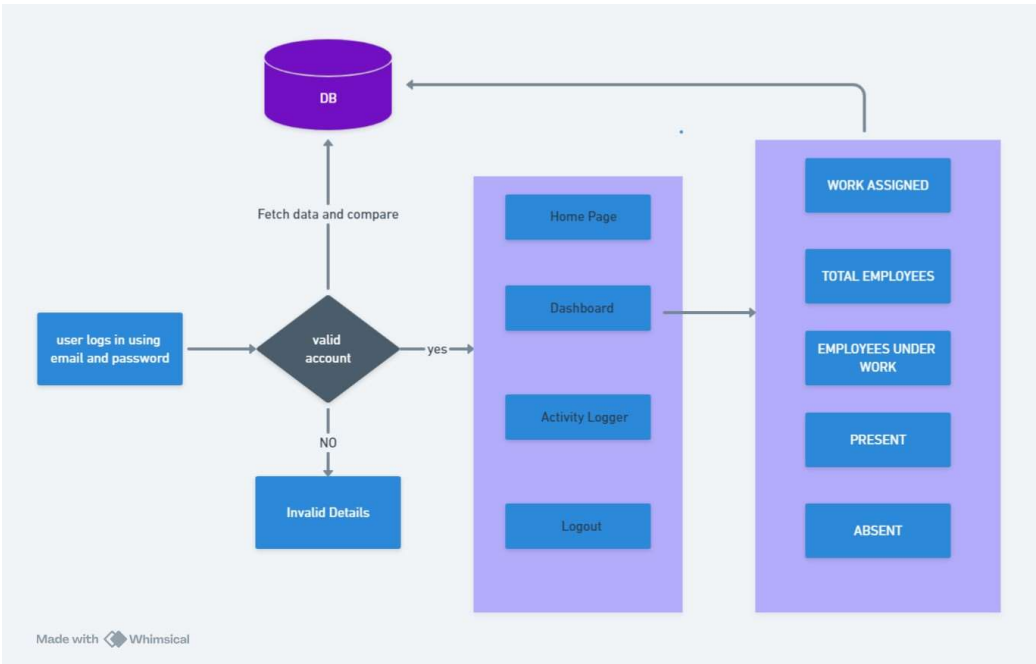
5.TECHNICAL COMPONENTS

Front End	• Angular (Js Framework)
Back End	• Express.js (Web framework for Node.js) • Node.js (JavaScript runtime environment)
Database	• MongoDB (NOSQL Database)
API	• REST Ful API/GraphQL APIs

6.FLOW CHART

ADMIN:

STAFFS:

S.No.	Task ID	Person ID	Name	Work Assigned	Action
Records not Available					

Add+

Dashboard
Employee
ActivityLogger
Tasks
Logout

S.No.	Task ID	Person ID	Name	Work Assigned	Action
1	1		A	painting	

Add+

Add New Person

Person ID

Name

A

Task ID

1

Work Assigned

painting

Close   Close   Submit