WORKFLOW DOCUMENT

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YEAR: III

DEPARTMENT: AIML

PROJECT ID: 18

PROJECT TITLE:

“CAMPUS MAINTENANCE

ESSENTIAL STAFF WORK STATUS PORTAL**”**

TECH STACK: MEVN

SEAT NO: 178

GITHUB:

https://github.com/venkatk-git/Campus-Management-Portal

“CAMPUS MAINTENANCE - ESSENTIAL STAFF WORK STATUS PORTAL”

PROBLEM STATEMENT:

Our current Campus Management System, which relies on paper records and manual communication, creates significant inefficiencies in the following areas:

1. **Real-time Staff Location & Availability:** Faculty cannot readily determine the location and availability of specific staff members, particularly those working on-site. This currently requires contacting supervisors who then manually check logbooks and staff availability records. This process is time-consuming and prone to errors.
2. **Staff Skillset Visibility:** Identifying qualified staff for specific tasks (e.g., a carpenter for furniture repair, a plumber for a leak) is a slow and laborious process. Supervisors need to manually check paper records and staff availability to determine if someone with the appropriate skillset is available.
3. **Communication Delays:** Urgent communication with specific staff members, particularly those on-site, is often delayed due to the need to contact supervisors who then locate the staff member. This can lead to missed deadlines and hinder overall responsiveness.

These inefficiencies caused by the lack of a centralized and automated staff management system negatively impact productivity, communication, and responsiveness to urgent needs.

SOLUTION:

A web application called the "Campus Maintenance - Essential Staff Work Status Portal." This portal will provide a centralized, real-time view of essential staff work status, improving communication, efficiency, and responsiveness. This will address the limitations of the current system and create a more efficient and transparent work environment for both faculty and essential staff.

SOFTWARE REQUIREMENT SPECIFICATIONS:

INTRODUCTION:

PURPOSE:

The purpose of this project is to develop a web application that provides a central platform for tracking the work status of essential staff on campus. This will improve communication, efficiency, and transparency in managing maintenance tasks.

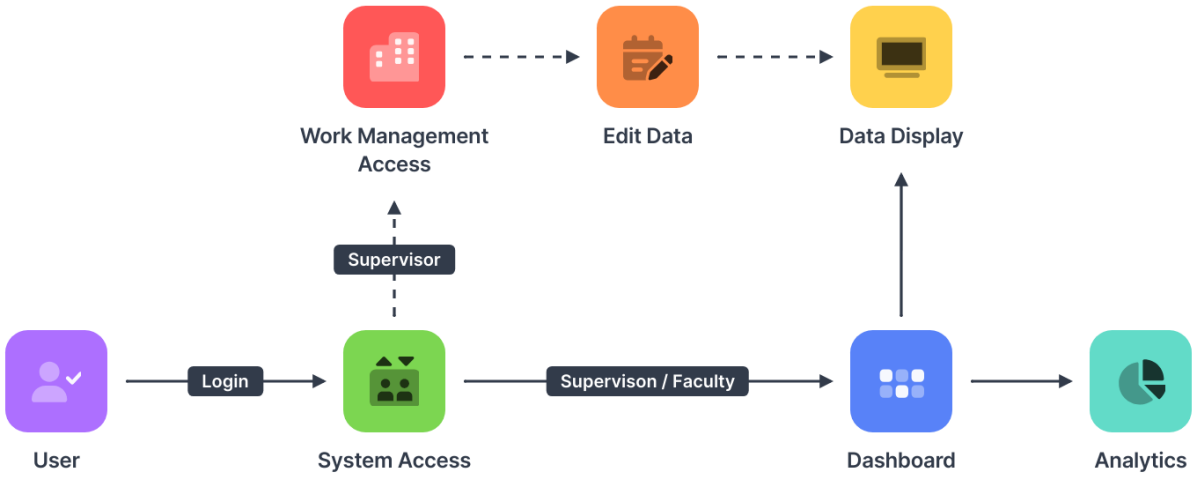
PROJECT SCOPE:

The "Campus Maintenance" web portal streamlines communication and workflow for managing essential staff. Faculty gain real-time insights into ongoing tasks, while supervisors update work status based on staff input. This collaborative system enhances efficiency and transparency in campus maintenance.

INDENTED AUDIENCE AND USE:

This portal is designed for two primary user groups:

1) **Faculty:** They will have access to a view-only dashboard displaying essential staff location, availability, and assigned tasks. This allows them to see which staff are available for assistance and track the progress of maintenance requests.
2) **Supervisors:** They will have full access to the portal, including the ability to view and update staff information, task details, and work status. This allows them to monitor staff activity, manage task assignments, and ensure efficient completion of maintenance tasks



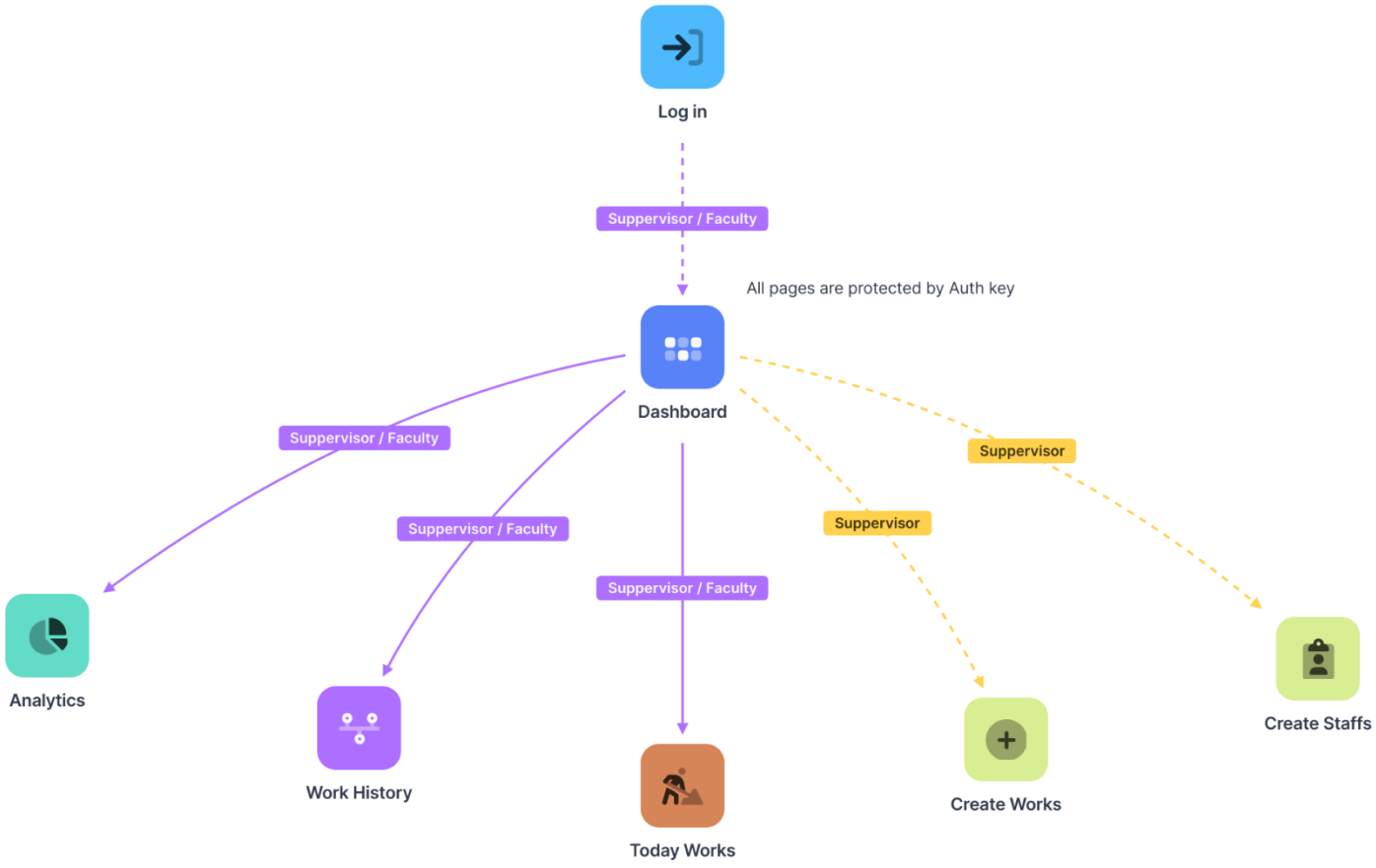
TECHNOLOGY STACK:

MEVN – Mongodb ExpressJs VueJs NodeJs

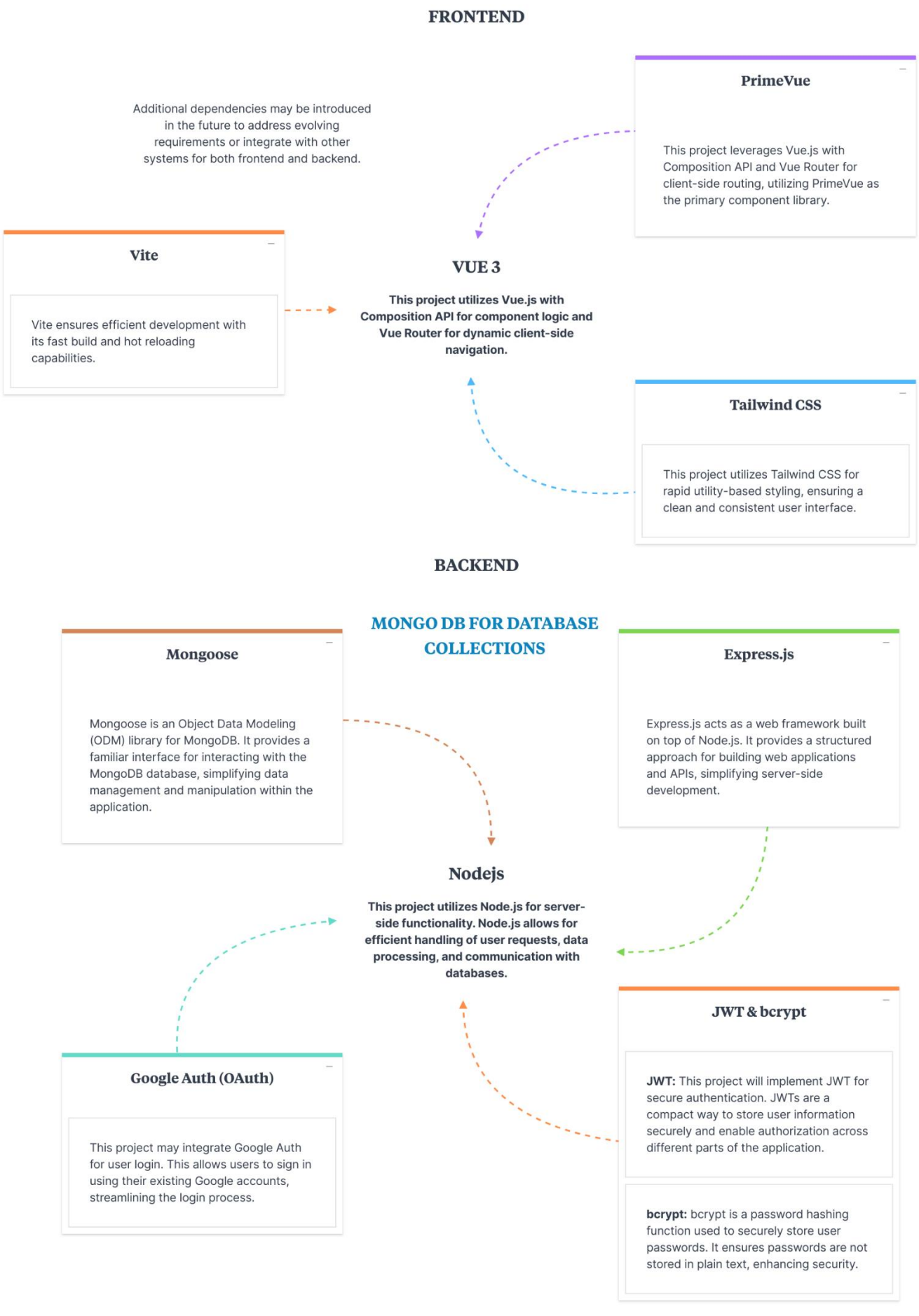
FRONTEND	**VUE JS**
BACKEND	**NODE JS, EXPRESS JS**
DATABASE	**MONGODB**
API	**REST API**

SYSTEM FLOWCHART:

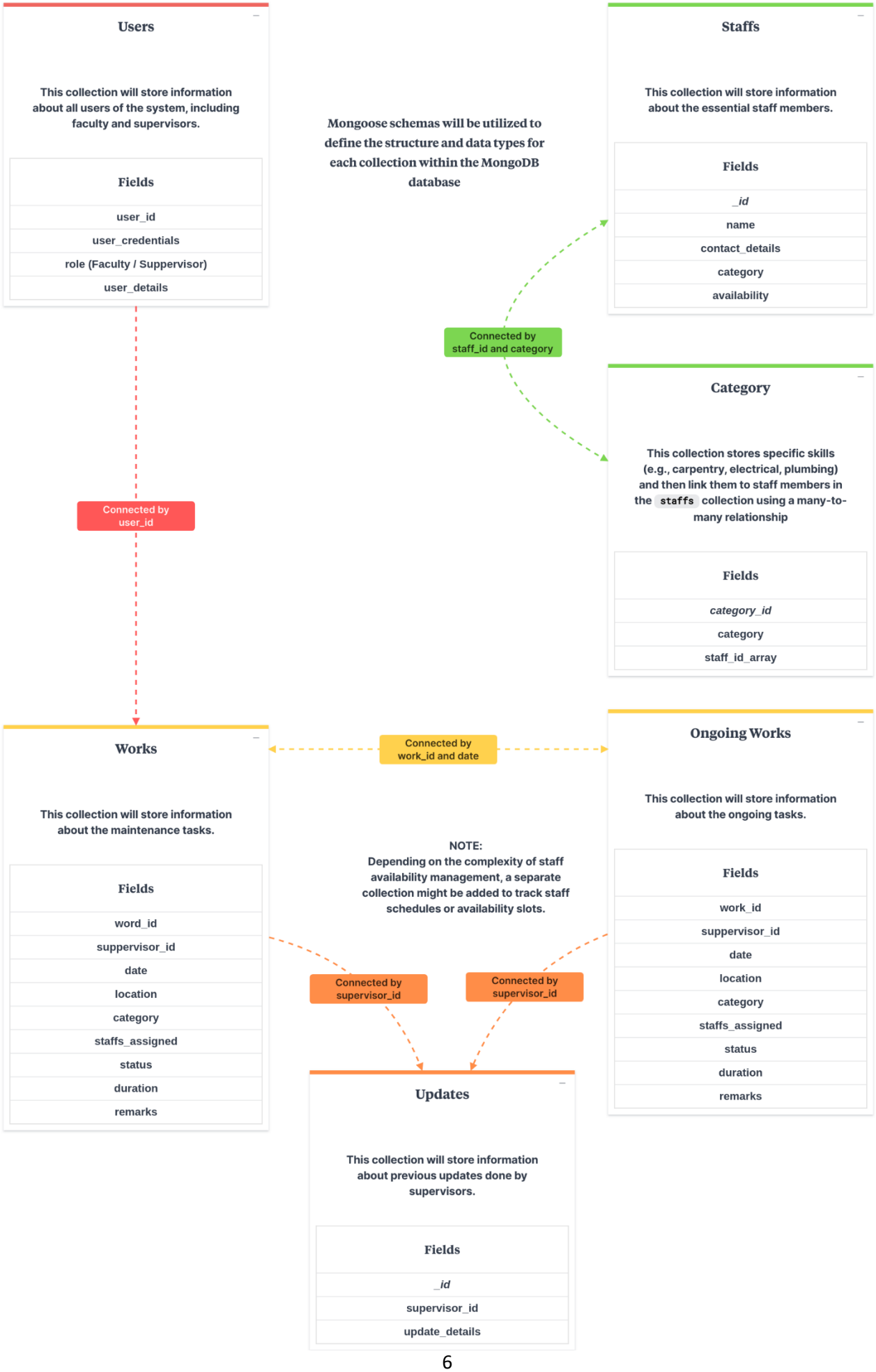
OVERVIEW:



DEPENDENCIES:



DATABASE:


Users
This collection will store information about all users of the system, including faculty and supervisors.
Fields
user_id
user_credentials
role (Faculty / Suppervisor)
user_details
Mongoose schemas will be utilized to define the structure and data types for each collection within the MongoDB database
Staffs
This collection will store information about the essential staff members.
Fields
_id
name
contact_details
category
availability
Connected by staff_id and category
Category
This collection stores specific skills (e.g., carpentry, electrical, plumbing) and then link them to staff members in the staffs collection using a many-to-many relationship
Fields
category_id
category
staff_id_array
Connected by user_id
Works
This collection will store information about the maintenance tasks.
Fields
word_id
suppervisor_id
date
location
category
staffs_assigned
status
duration
remarks
Connected by work_id and date
Ongoing Works
This collection will store information about the ongoing tasks.
Fields
work_id
suppervisor_id
date
location
category
staffs_assigned
status
duration
remarks
NOTE:
Depending on the complexity of staff availability management, a separate collection might be added to track staff schedules or availability slots.
Connected by supervisor_id
Connected by supervisor_id
Updates
This collection will store information about previous updates done by supervisors.
Fields
_id
supervisor_id
update_details

SYSTEM WORKFLOW:

A) Public Access (Faculty):

a) **Login:** Faculty users will log in with a secure username and password.

b) **Dashboard:** Upon successful login, faculty will be directed to a view-only dashboard containing:

1) **Analytics:** Charts or graphs summarizing essential staff work status (e.g., number of active tasks, staff distribution across locations).

2) **Current Day's Work:** A list of ongoing maintenance tasks for the current day, including:

i. Location of the work

ii. Nature of the work (brief description)

iii. Essential staff assigned (names or number)

iv. Overall status of the task (e.g., In Progress, On Hold, Completed)

3) **Work History:** An archive of past maintenance tasks with details like those listed above.

4) **View Staff Profile:** Faculty can view basic staff profiles containing information like name, contact details (if allowed), and area of expertise (if applicable).

B) Protected Access (Supervisors):

Login - Supervisors will log in with a secure username and password. In addition to the functionalities available to faculty, supervisors will have the following privileges:

1. **Create Staff:** Supervisors can add new essential staff members to the system, including their profile information.
2. **Create Work for the Current Day:** Supervisors can create new maintenance tasks for the current day, specifying:
    - Location of the work
    - Nature of the work (detailed description)
    - Number of essential staff required
    - Any additional details or instructions
3. **Update the Status of Current Day Works:** Supervisors can update the status of ongoing maintenance tasks throughout the day, reflecting progress or completion. This might involve:
    - Marking tasks as In Progress, On Hold, or Completed
    - Adding notes or remarks related to the task's progress

SYSTEM WORKFLOW: