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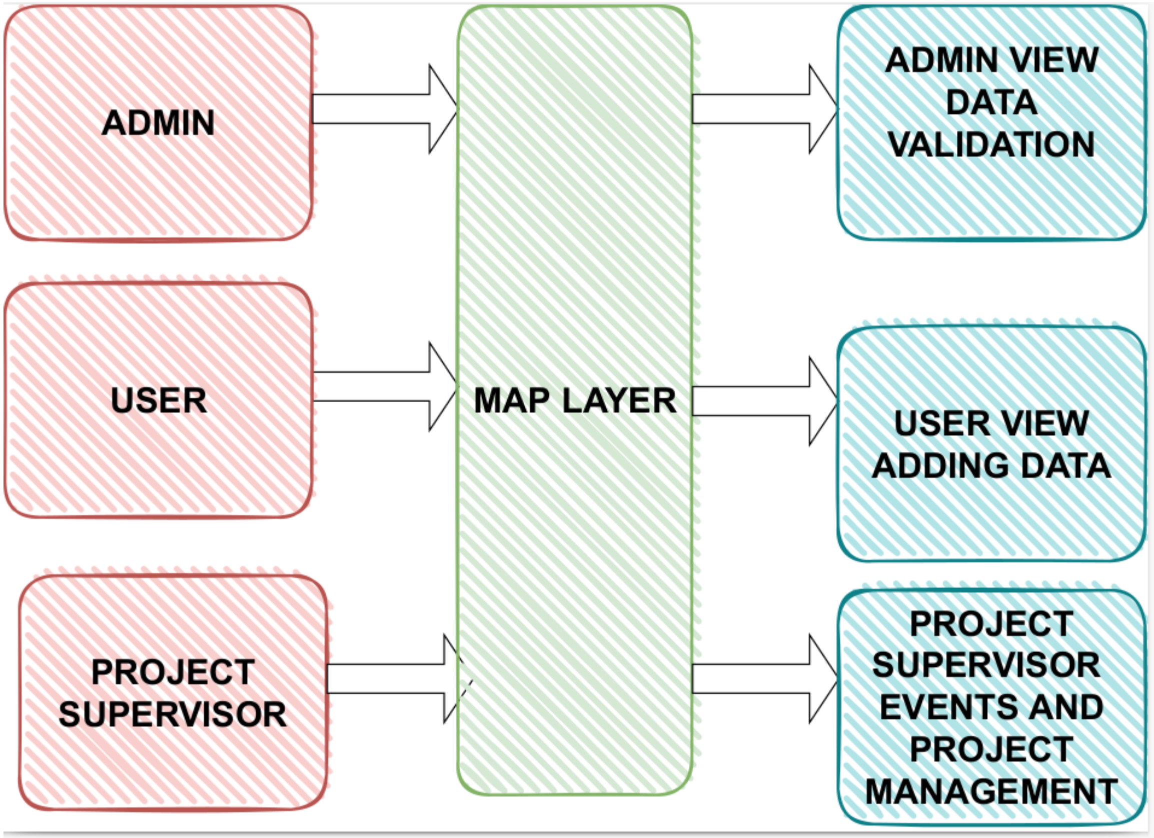
Design Overview

Architectural design


ADMIN
USER
PROJECT SUPERVISOR
MAP LAYER
ADMIN VIEW DATA VALIDATION
USER VIEW ADDING DATA
PROJECT SUPERVISOR EVENTS AND PROJECT MANAGEMENT

System interfaces

User Interface

1. Common Map View Layer

- Map-based interface that can present info on various activities and on-ground structures. The view can be city-wide or drill down to specific blocks. Can see activities, events, and structures. This will be an entry-level view (& dashboard) for all types of users
- We plan to use the Google API to use the map. This will be a paid API inclusion.
- Information that we plan to show on the map:

    i) Structures will be in Layers.

    - layers of information can be put up on the map. Later, details like Bore wells, RWH pits, community pits, parks, lakes, step wells, regular wells
    - Should be able to drill down to any structure and see details of the structure

    ii) Activities.. LIst all activities underway in the block or region, as they are added, in reverse chronological order, with Current Events having a different list entry.

    iii) Projects.. List all projects underway in order of chronological time-wise future completion dates.

- Citizen / Local Data adding view / Layer.
    - Citizens can view the region or the block and see all info available. Including structures and water position (groundwater level)
    - If we have enough live map data points in the area, we can give a rough estimate of the groundwater level in the region.
    - Operations citizens can perform
        - Citizens should be able to add info on borewells, step wells, pumps, water depth, step wells, lakes, etc
        - CItizen can request for activities or projects in their area

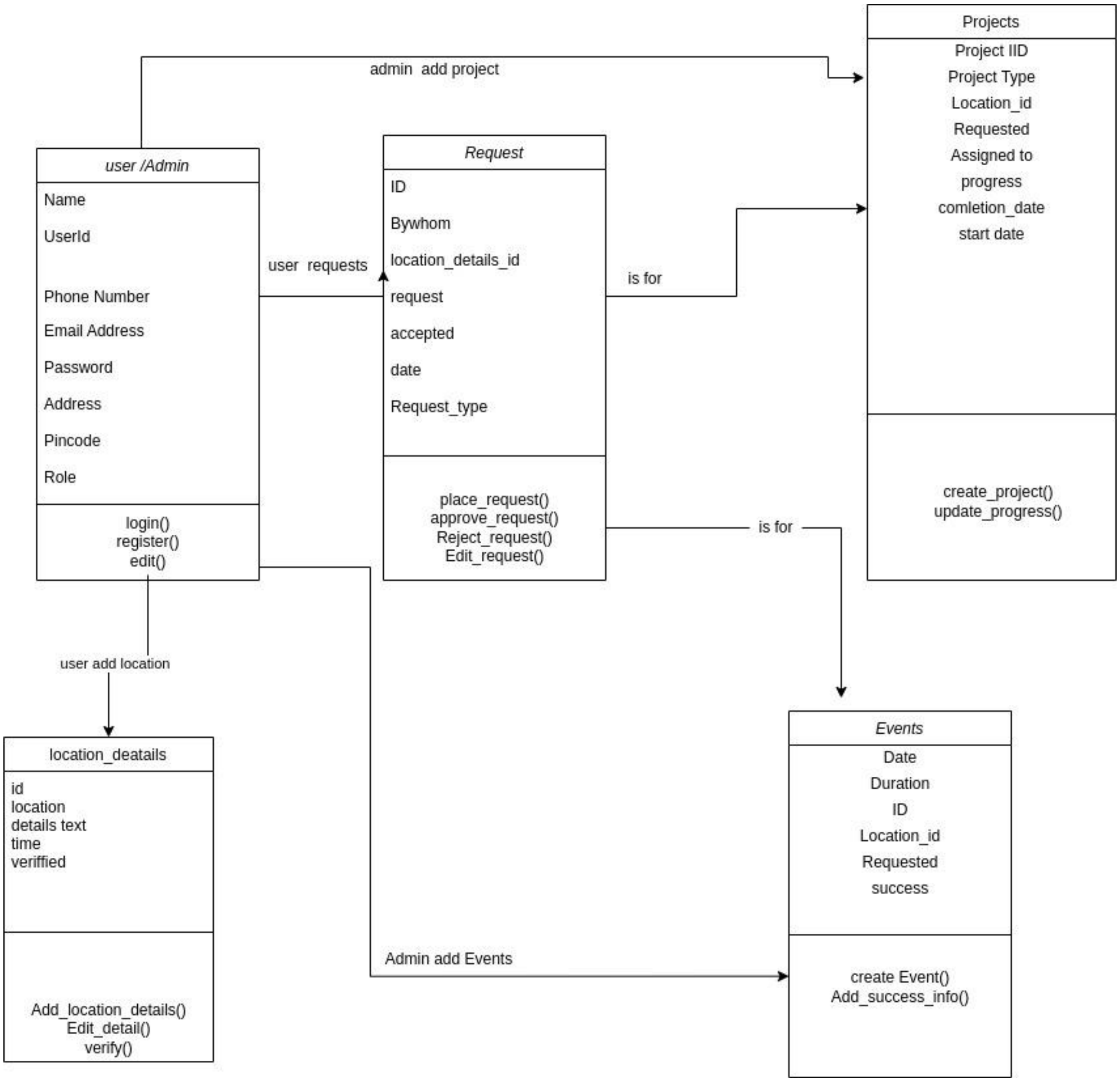
- Admin view / Activities Management
    - Activity types: talks, cleanup, and timings of such events, a few hours or 1-2 days, and Engaging a hub like a school.
    - Each activity will be listed before, and there need to be a provision to add photos and stats captured after the event to be added to db.
    - Operations
        - Create & Manage various activities. Types: Talks community events, cleanups & such
        - Manage volunteers and the hub (schools or communities)
        - Activities in each hub Written in 3 / 4
        - . Community activities - list and manage
        - Any citizen can view current activities happening

- 4. Projects Management
    - Create a project and at a very high-level track the project (not fine-grained tracking), and periodic updates and photos. And the final status of the project.
    - The Projects should also help add to the overall view of structures in the region (RWH puts, injection bores, regular bores, wells etc.. SO when new structures get added that they also get listed in map view)

APIs

Google-Maps Api

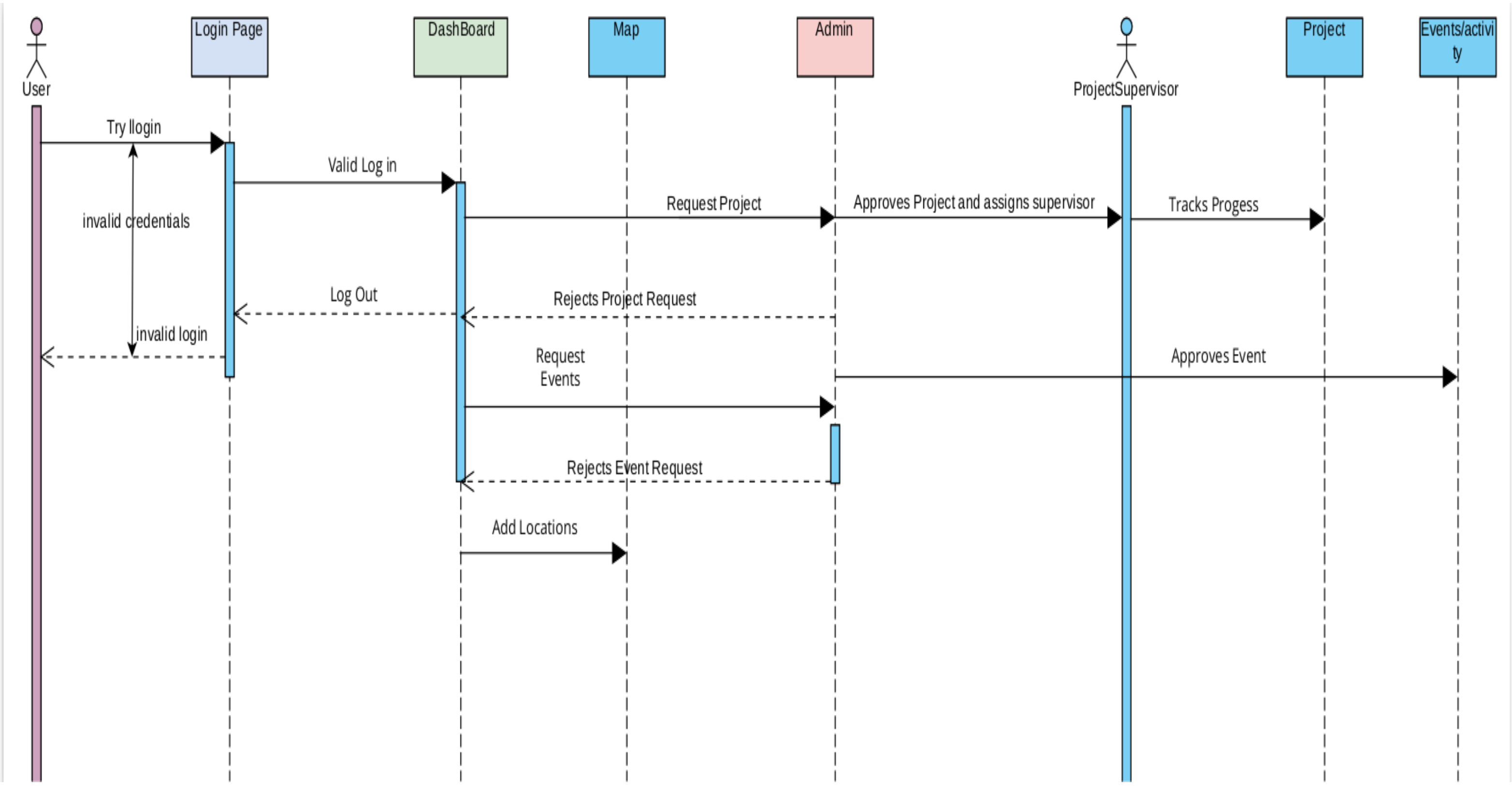
Model



user/Admin	class state ● userid ● name ● phonenumber ● email Address ● Password ● Address ● Pincode ● Role class behaviour ● login() login and authorization ● Register() register admin/user/supervisor ● edit() edit user details
Request	Class state ● ID ● ByWhome ● location_id ● request ● accepted ● date ● Request_type Class behavior ● place_request() users can place a request for project/event ● approve_request() admin approves request ● Reject_request() admin approves request ● Edit_request() users can edit request before verification
project	Class state ● project Id ● project type ● location_id ● Requested ● Assigned to ● progress ● start_date ● completion_date Class behavior ● create_project() admin creates a project ● update_progress() update progress of the project
Event	Class state ● id ● Date ● Duration ● Location_id ● Requested ● sucess_info Class behavior ● create_event() admin creates a event

	● update_sucess_info() add success info of the event
location_details	Class state ● id ● location ● details text ● date_time ● verified Class behavior ● add_location() user adds location’s water bodies details ● Edit_detail() user can edit until admin verifies/if rejected ● verify() Admin verifies the details

Sequence Diagram(s)



Design Rationale