



Techprimelab Assignment document

Assignment introduction

- The Assignment consists of a mini project which needs to be developed using Frontend and backend technologies
- The assignment is to demonstrate candidates full stack development capabilities
- It is a learn and do assignment
- Learn the technologies or concepts you are not known and implement in the assignment
- Frontend should be clearly bifurcated from the backend
- After completion of assignment candidate will be interviewed by our Sr. Developer for the code written.
- On clearing the interview you will be given the offer letter and immediate start working with Techprimelab

Technologies which can be used are

- Front-End – Angular 11+ OR React
- Back-End – DotNet Core and Node are preferred or any other server side technology which supports writing APIs
- Database: Mongo DB, MSSQL are preferred or any other database
- UI: HTML, CSS and technologies like Bootstrap for developing pixel perfect webpages

Note: *Links to Mockups for Desktop and Mobile are given on the last page*

Functionalities to be completed in this assignment are

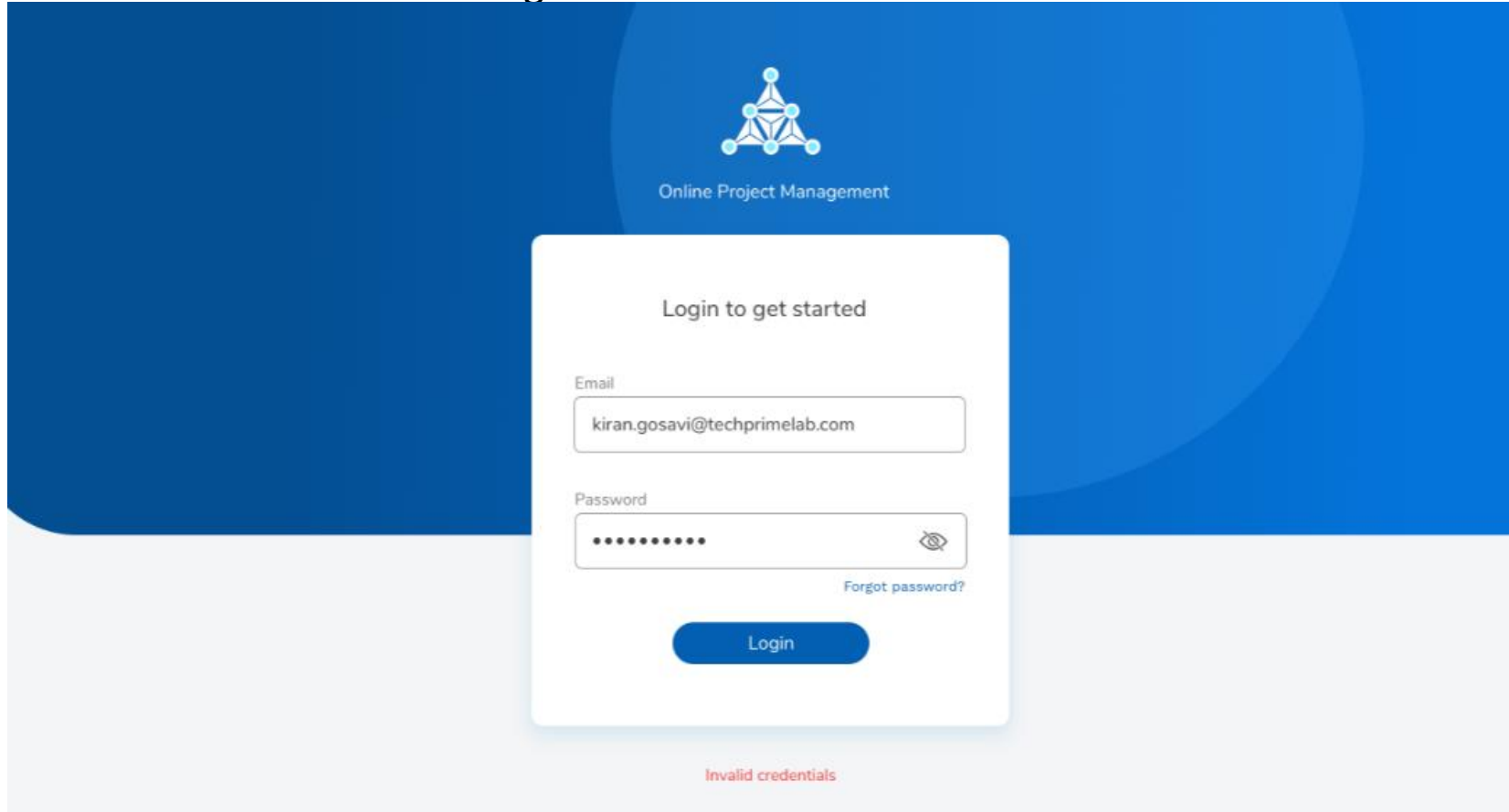
- Login
- Insert Project details
- List project details
- Update project status
- Search a project
- Sort the list by any one column selected from dropdown
- Pagination
- Dashboard with status counters
- Graph to show department wise project completion report

Login page with below functionalities

- UI to support functionality is required.
- UI validation for email format and non empty fields

On clicking the login button the user should be validated with the user details from database

- If user is invalid show a message on the screen “Invalid user”
- If the user details are valid user should be navigated to the dashboard




The screenshot displays a login interface for 'Online Project Management'. At the top, there is a logo consisting of a triangle of nodes and the text 'Online Project Management'. Below this, a white card contains the heading 'Login to get started'. The card features two input fields: 'Email' with the value 'kiran.gosavi@techprimelab.com' and 'Password' with masked characters. A 'Forgot password?' link is positioned to the right of the password field. A blue 'Login' button is at the bottom of the card. Below the card, the text 'Invalid credentials' is displayed in red, indicating a failed login attempt.

- Insert a new project record
- Create the below form to insert project details: User will input project name and use drop for all other values.
- Use date picker for Start date and End date.
- The status field is constant with a default value as “Registered”
- Implement required UI validations to all fields

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Create Project



Enter Project Theme

Save Project

Reason

For Business

Type

Internal

Division

Filters

Category

Quality A

Priority

High

Department

Strategy

Start Date as per Project Plan

D Month, Yr

End Date as per Project Plan

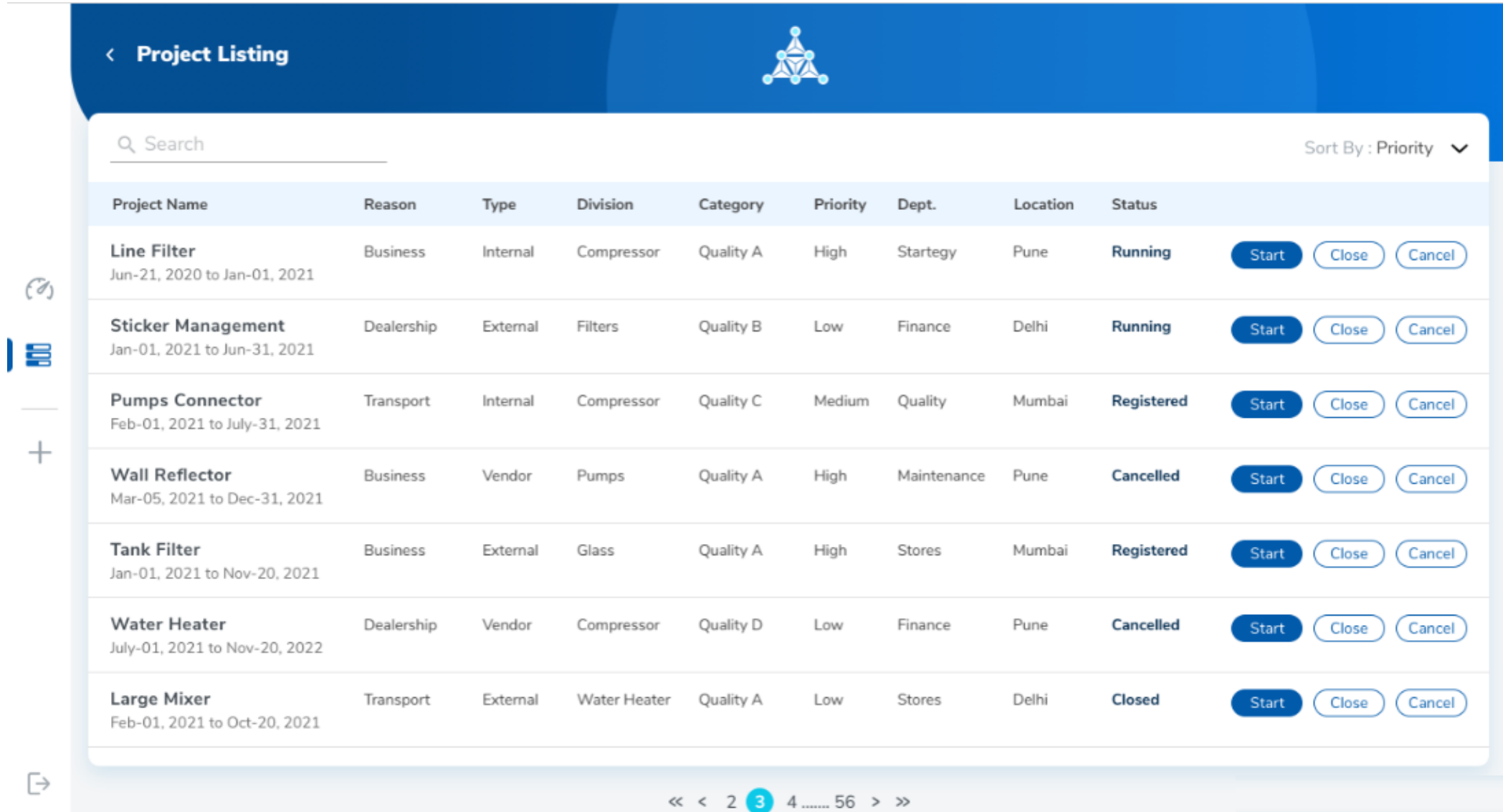
D Month, Yr

Location

Pune

Status: **Registered**

Listing page: All records inserted into the database using the Insert Project screen from earlier page should be listed here with additional functionalities as show in the next screen



The screenshot shows a web application interface for 'Project Listing'. It features a blue header with a back arrow and a network icon. Below the header is a search bar and a 'Sort By : Priority' dropdown. The main content is a table with 9 columns: Project Name, Reason, Type, Division, Category, Priority, Dept., Location, and Status. Each row represents a project and includes 'Start', 'Close', and 'Cancel' buttons. A left sidebar contains navigation icons: a magnifying glass, a list icon, a plus sign, and a right arrow. At the bottom, there is a pagination control showing page 3 of 56.

Project Name	Reason	Type	Division	Category	Priority	Dept.	Location	Status	
Line Filter Jun-21, 2020 to Jan-01, 2021	Business	Internal	Compressor	Quality A	High	Startegy	Pune	Running	<button>Start</button> <button>Close</button> <button>Cancel</button>
Sticker Management Jan-01, 2021 to Jun-31, 2021	Dealership	External	Filters	Quality B	Low	Finance	Delhi	Running	<button>Start</button> <button>Close</button> <button>Cancel</button>
Pumps Connector Feb-01, 2021 to July-31, 2021	Transport	Internal	Compressor	Quality C	Medium	Quality	Mumbai	Registered	<button>Start</button> <button>Close</button> <button>Cancel</button>
Wall Reflector Mar-05, 2021 to Dec-31, 2021	Business	Vendor	Pumps	Quality A	High	Maintenance	Pune	Cancelled	<button>Start</button> <button>Close</button> <button>Cancel</button>
Tank Filter Jan-01, 2021 to Nov-20, 2021	Business	External	Glass	Quality A	High	Stores	Mumbai	Registered	<button>Start</button> <button>Close</button> <button>Cancel</button>
Water Heater July-01, 2021 to Nov-20, 2022	Dealership	Vendor	Compressor	Quality D	Low	Finance	Pune	Cancelled	<button>Start</button> <button>Close</button> <button>Cancel</button>
Large Mixer Feb-01, 2021 to Oct-20, 2021	Transport	External	Water Heater	Quality A	Low	Stores	Delhi	Closed	<button>Start</button> <button>Close</button> <button>Cancel</button>

Functionalities required on the listing page

Status update: On clicking the buttons shown at the right side of each record support below functionality

START – Update the respective records status in database to “Running”

Close – Update the respective records status in database to “Closed”

Cancel – Update the respective records status in the database to “Cancelled”

On updating the status in DB the status should also get reflected on the listing screen in the STATUS column without REFRESHING the page

SEARCH : Should work as a filter to show only those records where the provided filter text is matching completely or partially for text in any column

SORTING: The dropdown should have names of all columns and the list should get sorted if the value in the dropdown is changed

If user selected status sort the whole list in ascending order for status column

PAGINATION: Show 10 records on one page and perform pagination

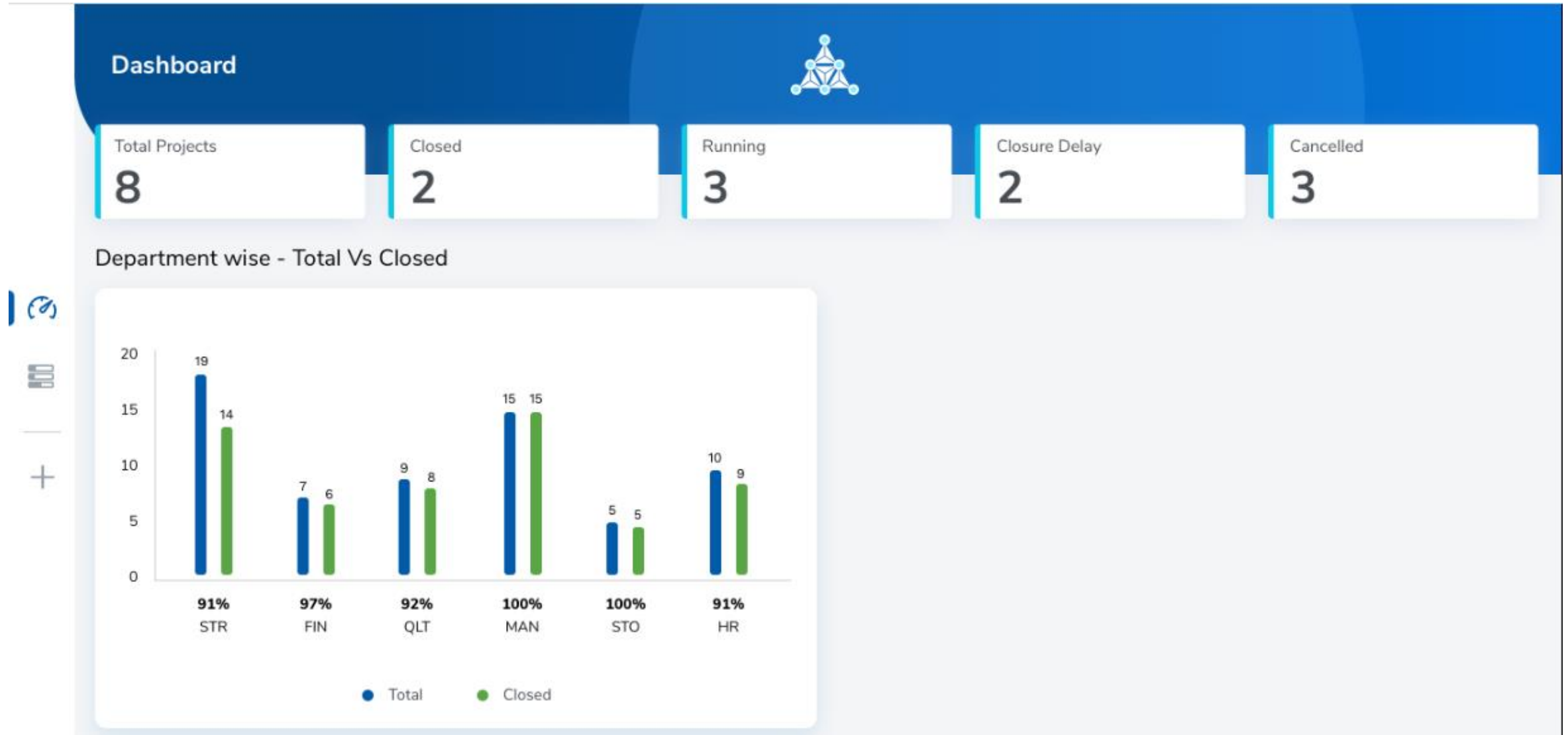


Q Search

Sort By : Priority ▼



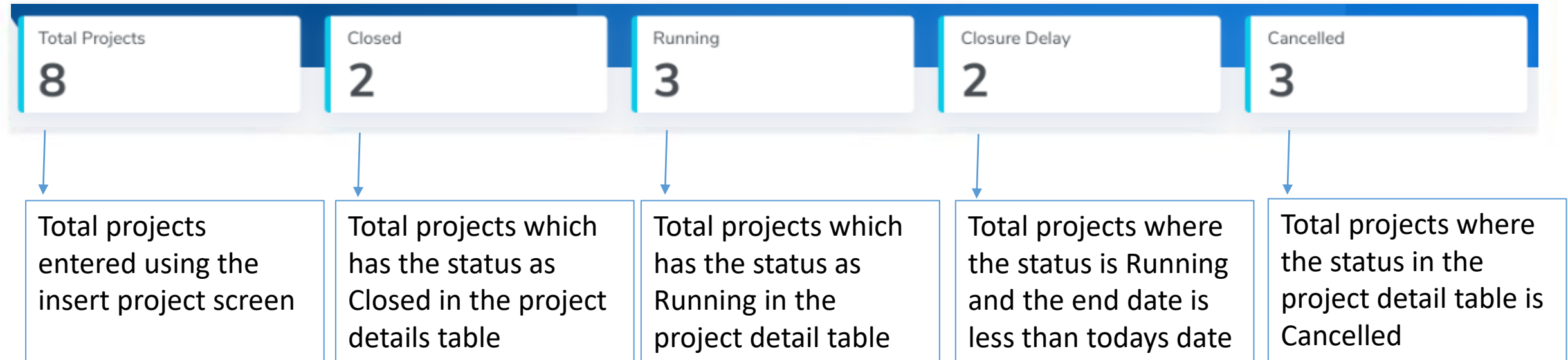
Dashboard: Details about the two sections on dashboard are given on next 2 pages



Dashboard Page:



Counters on the top of the dashboard has values as explained below



Criteria

- Use single API to get all counters
- Use single query in the server side code to fetch all counters except the Closure Delay counter
- Use your own approach while using Json Server Or Firebase

**** Create separate API call which gets only counters. Do not use the project listing API which gets all the records**

Dashboard chart

The chart shows department wise success percentage of projects

For example in the chart on the right for the strategy department

- Total project registered are 89
- Total projects closed are 81 – projects which has status = closed

For Finance department

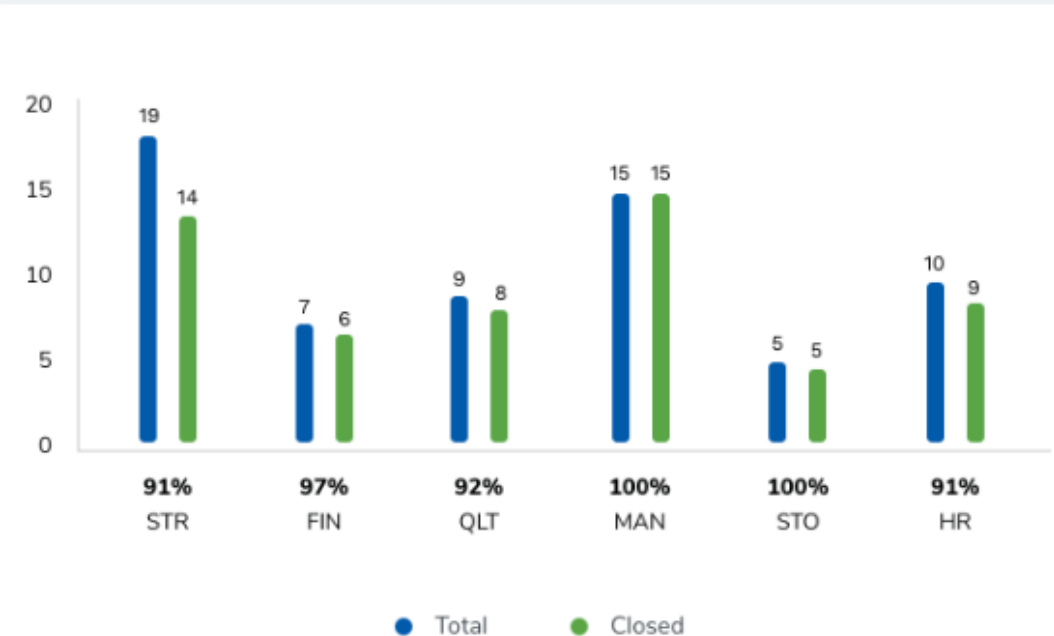
- Total projects registered are 36
- Total projects closed are 36

Use any ready to use library like Highchart

Criteria – Use single API to get this data and also use a Single query in the server side code to fetch this data from the project table.

**** Create separate API call which gets data needed in chart. Do not use the project listing API which gets all the records**

Department wise - Total Vs Closed



Menu:

Create a menu similar to one shown in the mockup or a horizontal menu at the top with below options



Dashboard – User should be navigated to the dashboard



Project listing - User should be navigated to the project listing page



Add project: User should be navigated to the Insert Project page



Logout – User should be navigated to the login page



Link to the desktop mockup:

<https://projects.invisionapp.com/share/8Q137HREC2UF#/screens/472494770> Login

Link to the Mobile mockup:

<https://invis.io/FE1370MZBQ4Z#/472496931> Login

Images needed for project

<https://drive.google.com/drive/folders/1y9kW-c9CzjTXphA6RCv71utbXlVrBKxh?usp=sharing>

Techprimelab website

<http://www.techprimelab.com>