



# VIT AE Hackathon

*This doc will have basic requirements for the assignment task. We will also include some suggestions and libraries that we have tested. If you are familiar with some other tools or libraries, feel free to use that. You don't have any constraints on languages, libraries, or frameworks. Your focus should be on building a product that fits the requirements.*

*Assume VIT fest (Riviera) is going to happen and you are required to develop an web application that can handle the event registrations.*

## User Roles

- Participant (P)
- Admins (A)

## Project Flow

1.  $P$  can register on the Event Management Portal (EMP).
2. EMP will have multiple events across various time slots.
  - a. Overlapping events are possible.
3. A should be able to CRUD an event.
4. Events page should be visible publicly.
5.  $P$  can register for any event(s).
  - a. Registering for overlapping events should not be allowed.
6. An event (say e) should have a fixed number of seats (say s), so if  $s$  number of  $P$  have registered for event, e, any more  $P$  should not be allowed to register for the same event,
  - a. However, if any previously registered  $P$ , de-registers from an event, such that all seats,  $s$ , are not booked, another  $P$  can now register for the same event.
7. Registering for an event generates a unique code, specific to the  $P$  and the event.
8. A can allow the  $P$  in the event by entering the unique code.
  - a. Once the unique code is entered, it cannot be used again, and if done so, display appropriate messages.
9. Search functionality
  - a. for the  $P$  to filter events
10. Location of events to be visible to the  $P$  in a map view
  - a. Event markers should be clustered together with details shown in a marker-tooltip (can ref. to below mentioned Libraries)

## Pages

### Participant View

1. Register/Login page
  - i. /register
2. Landing/Events page
  - i. /events
  - b. Displays all the events with their details.
  - c. Search box to filter the events.
  - d. The list should include a link to register for the event.
    - i. /events/:eventId
3. Registered Events page
  - i. /events/:userId
  - b. Shows all the events for which a  $P$  has registered.
  - c. Show the unique code for that event.
  - d.  $P$  can deregister from an already registered event.
4. Map page
  - a. Shows all the events in a map view with events as clustered markers on the map.
  - b. On clicking a marker, event details to be shown.

### Admin View

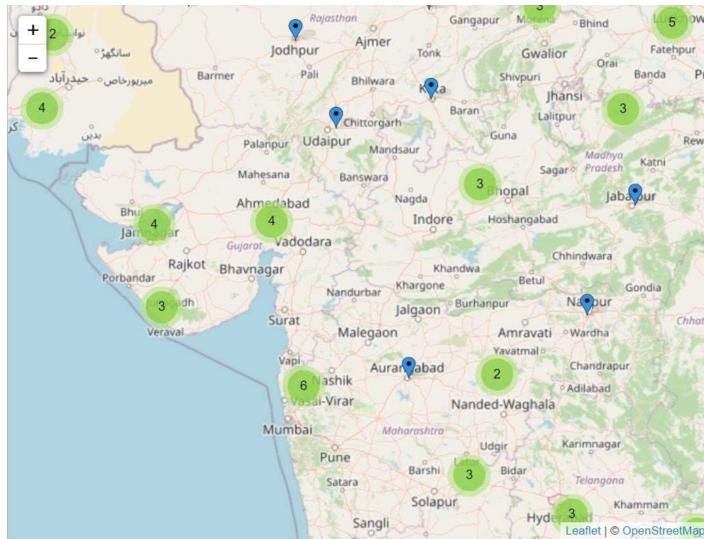
1. Register/Login page
2. CRUD page for each event.
  - i. /events
3. Verify user page
  - a. Allow a  $P$  to enter an event by entering the unique code and verify.
  - b. Verify that the unique code has not been entered previously.
  - c. Verify that the code is registered for an event, and return the event details.

Once all the mentioned Tasks are completed, Hackathon Participants are required to inform the Motorq mentors so that they can sign-off these and discuss further tasks.

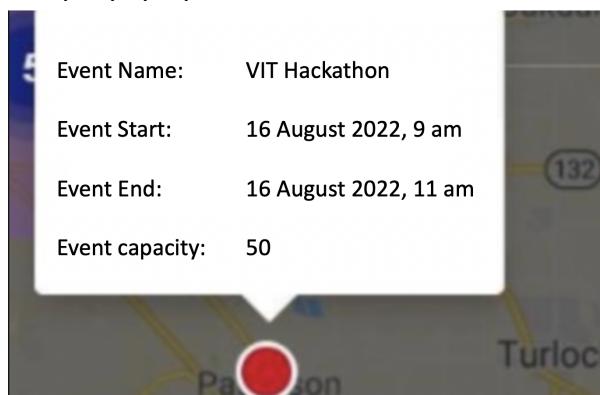
## Key HTTP Endpoints

- POST /register - To register the user
- GET /events
  - Get all Events
  - Search By Event Name
- GET /events/:userId
  - Get Events Registered by users.
- POST /events - Create a Event (Only Admin)
  - {  
event\_name: 'Example Event',  
event\_start\_timestamp: '2022-08-16T14:15:56.800Z',  
event\_end\_timestamp: '2022-08-16T15:15:56.800Z',  
event\_location: {  
Lat: '35.56',  
Lon: '45.78'  
},  
event\_capacity: '50'  
}
- PATCH /events/:eventId - Modify the Event (Only by admins)
- DELETE /events/:eventId - Delete an Event (Only by admins)
- POST /events/:eventId - Register for the Event
- POST /verify - Verify the user for that event
  - {  
event\_code: '83b89c0a63fd9173054070e7af5'  
}

This is how marker cluster should cluster events' location:



Sample pop up:



## Expectation

- Clean professional level Code.
- More weightage would be given to the functionalities than UI. Having a better UI will be a bonus.
- HTML and CSS can be taken from the internet. Feel free to use any frameworks to polish the UI
- Basic requirements should be completed. Additional features/enhancements can be discussed with the Motorq team.

## Resources

- [Leaflet Javascript library for creating interactive maps](#). o We have tested this library, and this works for rendering location on a map. It has support for popups and has good set of libraries and good resources on the internet
- [Leaflet/Leaflet.markercluster: Marker Clustering plugin for Leaflet \(github.com\)](#) o This plugin can be used for market cluster functionality
- [Plugins - Leaflet - a JavaScript library for interactive maps \(leafletjs.com\)](#) o Plugin page of plugin. This has a good set of plugins for leaflet
- [Maps, geocoding, and navigation APIs & SDKs | Mapbox](#) o Leaflet documentation uses tiles API from mapbox. You need to create a free account here to get access key from mapbox.

## Guidelines for Submission

### ***Please use one of the below methods***

- Create a .zip file of all application related files and send an email ([campus-hiring@motorq.co](mailto:campus-hiring@motorq.co)) with name and roll number
- Upload code to public github repo and email us the link
- Ensure that a README file is present in the base folder describing steps for any local steps required
- **Imp: Record the working project and add the link of the video in README file. (without demo, project will not be reviewed)**