mapGo

CS253: project presentation

made by group 6: WallE(s)

ACKNOWLEDGEMENT

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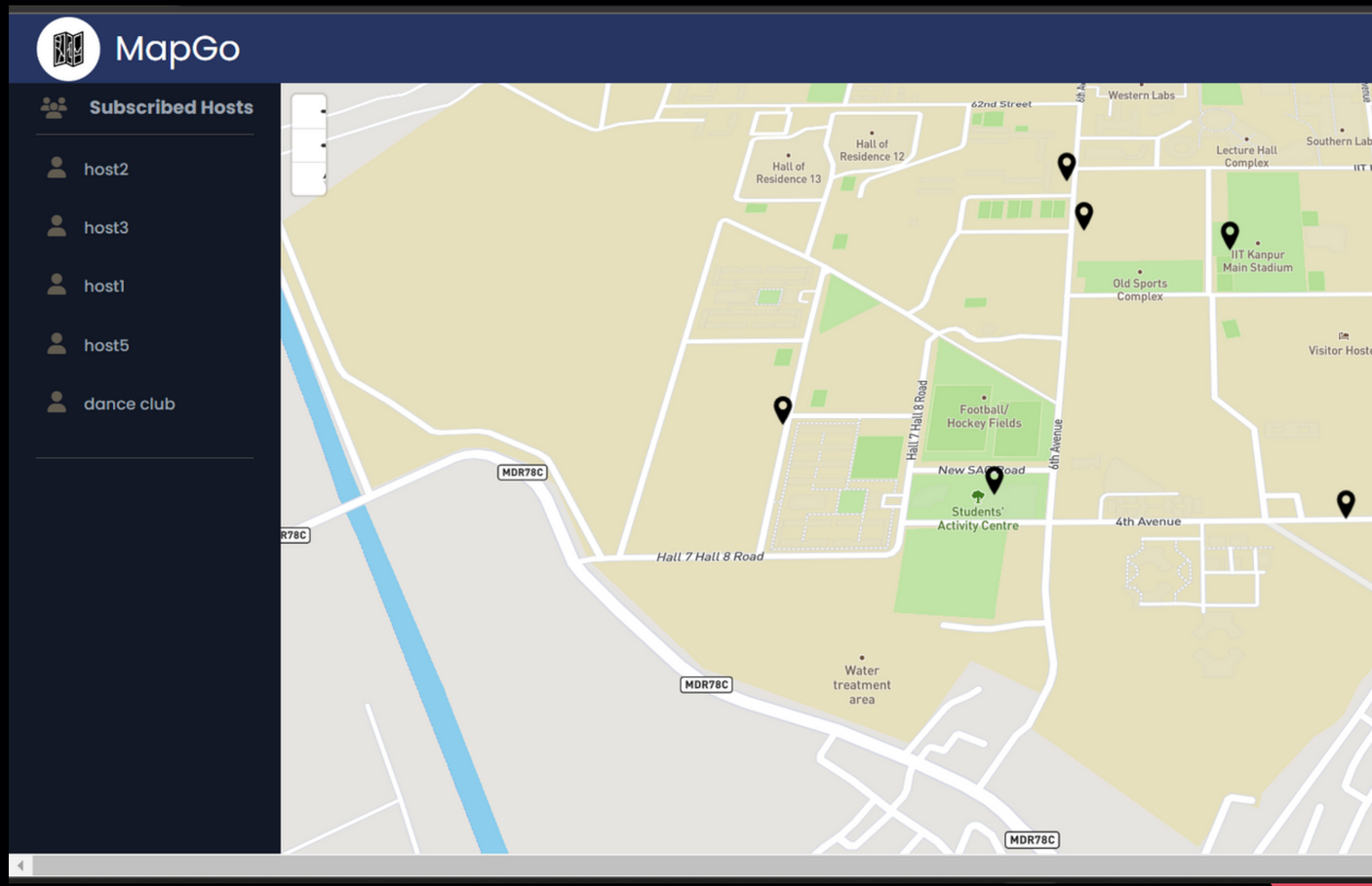
APPLICATION OVERVIEW

MapGo is a website developed for the IIT-K junta, which provides the user an all-in- one go-to application to navigate through the campus as well as schedule, organise and announce events. The application provides a personalised maps where they can mark their areas of interest, and use it to navigate through the large campus.
Organising bodies get to use this application to announce their events, along with entire details of the event like timings, venue, description, images etc. These events are announced under the label of verified channels, to which a user can subscribe to in order to get the updates specific to that organising group. This feature is also useful to the business and shop owners who can advertise their businesses while also declare if their opening and closing times.



WHO WILL USE MAPGO?

subscribe to view events

announce and publish events

User

This is anyone inside iitk campus with a valid iitk email, who wishes to keep track of the events happening in the campus

Host

This is a hosting group/club/organisation/business inside iitk, who wish to announce their events to the public

WHAT ARE THE REQUIREMENTS TO RUN MAPGO?

For a user to be able to use the application, they need to have a fast internet connection.
A user also needs a valid iitk email to register.

SOFTWARE IN DETAIL

Design of the application

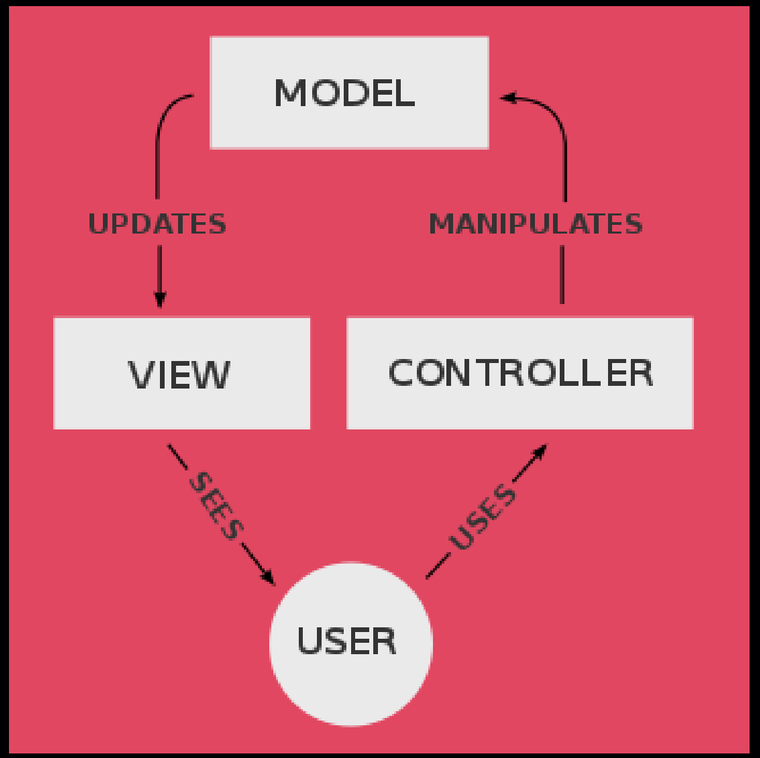
Implementation decision

Demonstration

DESIGN OF MAPGO

uses a MVC Architecture to achieve efficient structuring of web application

MVC is preferred for web application for its efficient distribution of code into 3 components.



IMPLEMENTATION DECISIONS

Version Control environment

git: used as our version control system

Github: used to host git repositories and collaborate with other team members.

git provides the feature of branching which made it easier for our team to distribute programming different features and merge them once done.

github makes hosting, cloning and collaborating on the same repository very easy using its user friendly graphical interface and features.

DEVELOPMENT TOOLS

We used MERN tech stack, making the application primarily written in javascript

Mongodb: to store non SQL database

Express: js framework with many functions provided for web application

React: js framework for frontend dev, single page application

Nodejs: to run Javascript on the server side

DEPENDENCIES

These are the 3rd party applications that are used by mapGo

Mapbox: Mapbox is a mapping and location cloud platform for developers. It is used in our application for marking current events and navigate through

Nodemailer: Nodemailer is a node library that enables one to send mails that can be generated using javascript. It is used to send OTP.

JSON Web Token: Popularly known as jwt, is a library used for login functionality and render user-specific pages.

DESIGN TOOLS

BOOTSTRAP

CSS

JAVASCRIPT

SOFTWARE DEMONSTRATION

TESTING IN DETAIL

Why testing team seperate is better? methods of testing....

We had an Independent Testing team composed of 4 of the group members.The reason for this was that both the processes were running simultaneously, as soon we found a bug the soon it got fixed. we can identify issues that the development team may have missed due to their proximity to the code

We majorly have done manual testing. For that, we used **Postman** for unit testing and worked upon various test cases to detect any possible bugs.

At the end of our software testing, we worked upon the bugs detected by our testing team and those reported by the other team.

FUTURE DEVELOPMENT PLANS

The following are some of the features that we have decided to implement in order to improve the application:

GROUPS: Each user shall be able to group together their friends in order to announce events only to that group.

Voice Commands for map and directions: implementing similar features as to google maps software to improve user experience.

User-suggested host and event suggestions: applying search based algorithm to suggest events and hosts that a particular user might be interested in based on their past activities.

LESSONS LEARNT

The systematic process in which a software is built.

We learned to appreciate the process followed in building much complex softwares by a large team, and how documentation, communication and collaboration takes place at that scale.

Importance of Documentation

Every document produced related to the software was felt extremely necessary throughout the development process.

Clean coding methods are a MUST!!

Working on the same repository as a team, it was seen that it's extremely necessary to write easily-understandable code following good practices.

Rigorous Testing

There's always some bug or error that goes unnoticed to the naked eyes of the developer. Unbiased, sharp-eyed testers are just as much needed for the development process as the programmer. For our software, we did manual testing. But in future, we could do automated testing.

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Q&A

You may ask us anything about the application and the development process


THANK YOU