An Android based Application for Event Management

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ABSTRACT

Event Management Application is a project intended to solve the problems of propagating news and information, also to eliminate lot of paper work and long queues at the registration desk. The objective of this project is to develop an android application which provides user all the information about the events and news on their fingertips. Moreover, user can buy tickets and participate in the event through this application. This application provides the user the exact location of the event so that the user can reach their right destination on time.In other words, user and event manager can use this application to save time and organize their events. Moreover, it will provide all the information and the exact location of the event and will be able to reach on time. Also to sort the events according to the choice.

*Keywords—*event management; android application; google maps

INTRODUCTION

Now-a-days a smartphone is a common device that is possessed by the most the people, almost everything is now on the fingertips of every person and the trend is going to increase. This is the inspiration behind creating this application so that the information can be reached anywhere in the real time. Managing all the events manually would be a difficult task and the possibility of mistakes increases, it would be difficult for both customers as wall as manager and time consuming. This application would be user friendly and convenient to use and also it would save lot of time.

This application focuses on the issues related to event registration and management by eliminating the queues and manual work and also providing all the information and the location of the event. At first user can manage and book their events also user can select the favorite events which will help the user to find it easily. User will also get QR code to scan get all the information without any hesitation. User can also categorize events according to their interests.

RELATED TECHNOLOGY

A.   Android Operating System [1]

Android is an open source operating system which based on the Linux kernel. It was released by the Android Inc. in the year 2007 which was later purchased by the Google and OHA which is a consortium of 84 countries. The Android SDK allows us to develop applications for the Android platform.Mainly java language is used to create android application though other languages are also used.

B.   Java Programming Language [2]

Java is high level programming language which was originally developed by the Sun Microsystems and released in the year 1995. IT is an object oriented platform independent programming language which helps to run the same program on different machines irrespective of their operating system and specs.

C.   Node.js (JavaScript Code) [3]

Node.js is a platform which is based on javascript. It is very powerful library to run the JavaScript server-side applications. It helps the users to create networking application using javascript. It's an open-source environment built on Chrome's V8 JavaScript engine.Node.js provides a synchronous Input Output and cross platform runtime environment.

D.   MongoDB (Mongo Database) [4]

MongoDB is an open source database which uses JSON like document. It's a document based database program, which was developed by MongoDB Inc. and released in the year 2009. MongoDB is classified as NoSQL leading database program.It was initially developed as Platform as a Service but later on it was introduced as Open Source in the market.

E. *Google API [5]*

It's an Application programming interface which was developed by the Google which helps in the communication with Google services. Third party can also use Google APIs in their application so that developing the same functionality can be eliminated.

F. *QR Code (Quick Response Code) [6]*

A QR code is a two dimensional barcode which was invented by the Japanese automotive company Denso Wave in the year 1994. It's a machine readable label that contains specific information about any event or item.

RESULTS

A. *System Architecture*

The Event Management Application was consist of two components i.e the front-end system and back-end system. The system Architecture of the back-end shown in figure 1

- **The Front-end System** is the displaying section which requests the data from the back-end and shows it the user. User can interact with the application through the front-end of the application.

- **The Back-end System** is the information storing section which sends the data to the front-end whenever required. It is implemented by the Node.js and Express which stores the data to the MongoDB server.
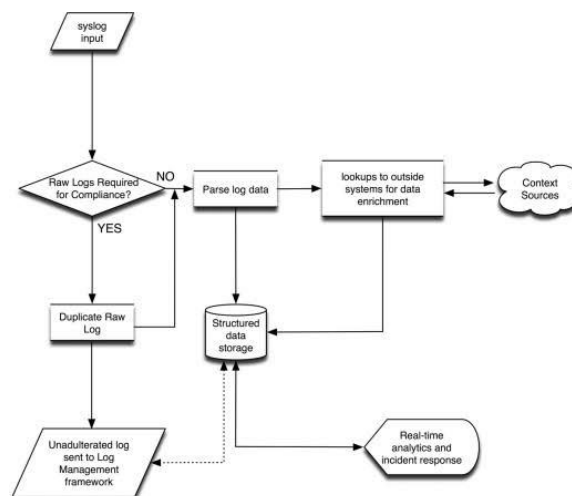

Figure 1: System Architecture

B. *System Structure*

This application consists of five models mainly Event Management, Favorite Events, Creating Events, Tickets Management, Authentication System.

- **Event Management:**This manages all the upcoming as well as Expired events in the back-end system and show it whenever required.

  o **Google Map:** It shows the exact location of the event so that the participants can get on time. Also it provides the shortest route to the desired location for the user convince.

  o **QR Scanning:** User can verify the QR code to get all the detailed description about the event, it's timing and location.
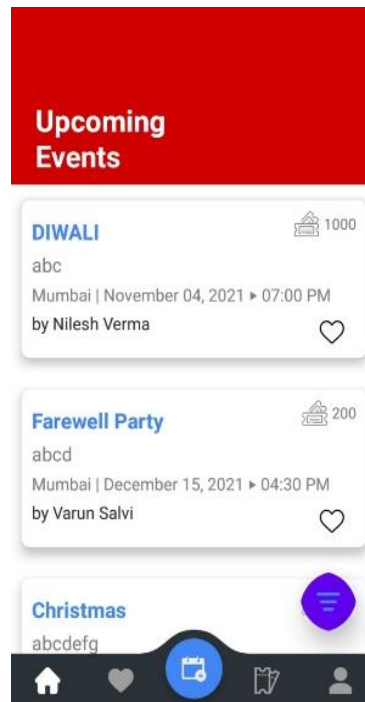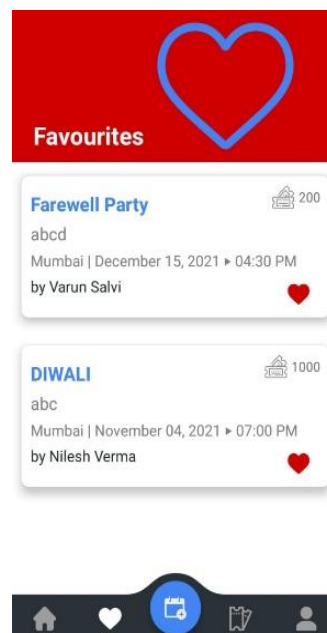
Figure 2: Upcoming Events

Figure 3: Favourite Events

- **Favorite Events:**This manages all the favorite upcoming events selected by the users in the back-end system and show it whenever required.

- **Creating Events:**Event Manager can create an event with its date and timing and the location of the event which will be stored in the back-end System. While creating the events user must enter the number of tickets for the participants with its price.
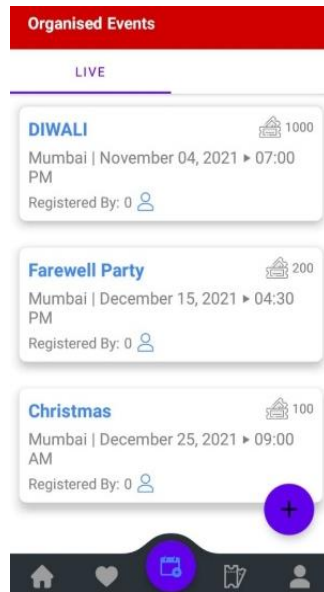
Figure 4: Organized Events

- **Tickets Management:**This shows all the available amount of tickets for the particular event with its exact price.
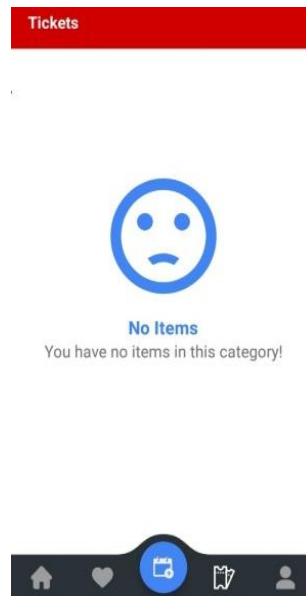

Figure 5: Tickets

- **Authentication System:** Authentication Systems provides the security so that only the authorized persons can only manage the events and participate in it.

  o **Member Registration System**: This allows newly joined user to register into the application and create an account so that they can get access to the application

  o **Log-in System:** This allows already registered user to get the access to the application and participate in the event.

IMPLEMENTATION

This application is an android application based on Java Programming Language and Kotlin which worksd simultaneously with database implemented by MongoDB Server. This Application consists of two components i.e front-end and back-end systems.

• The Front-end system shows the data and information of the events to user. It interacts with the backend database implemented by Mongodb server.

• The Back-end system, is a web application implemented by Node.js and Express,which stores the data to the MongoDB server. This Application uses the Google API to show the live location of the event with proper direction and timings which helps the user to better interact with the application and save time.

CONCLUSION

This application helps to solve the problems about propagating news and information, also to reduce the manual work of users as well as event providers. Moreover, this application gives all information about the events so that it can be easily reached to every users and they'll be able to attend the event. Also this application can be used by anyone from anywhere around the world at any time. More importantly it provides the Google maps location so that the user can reach their right destination on time, also it provides the QR code for more convenience of the users as it will able to complete authentication in one scan.

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