Department of Computer Science and Engineering

[CS8611]-MINI PROJECT

GEOFENCING

GUIDED BY,

PRESENTED BY,

Er.R.SIVARANJINI, M.E/ AP / CSE

K.PAVITHRA (Reg.No:421320104024)

__ABSTRACT__

➢ Geofencing creates a **virtual geographical boundary** that triggers a marketing action to a mobile device when a user enters or exits that boundary.

➢ While businesses and marketers commonly use geofencing, individual users can also set up geofencing in the mobile apps.

➢ The app allow them to select an address or location where they want to trigger a specific **alert** or **push notification**.

Cont…

➢ The app gets a notification when the device crosses a geofence, which allows you to provide a useful experience when users are in the vicinity.

➢ A **geofence** is usually defined within the code of a mobile app. To make use of it, an administrator or app developer must set up the **virtual boundary**.

➢ This virtual boundary will then trigger pre-programmed actions (such as mobile alerts, in-app content, or data insights).

REQUIREMENTS

SOFTWARE REQUIREMENTS

1.Laptop or PC

- Windows 7 or higher
- Java, XML
- SQL database
- Android Studio

2.Android Phone or Tablet

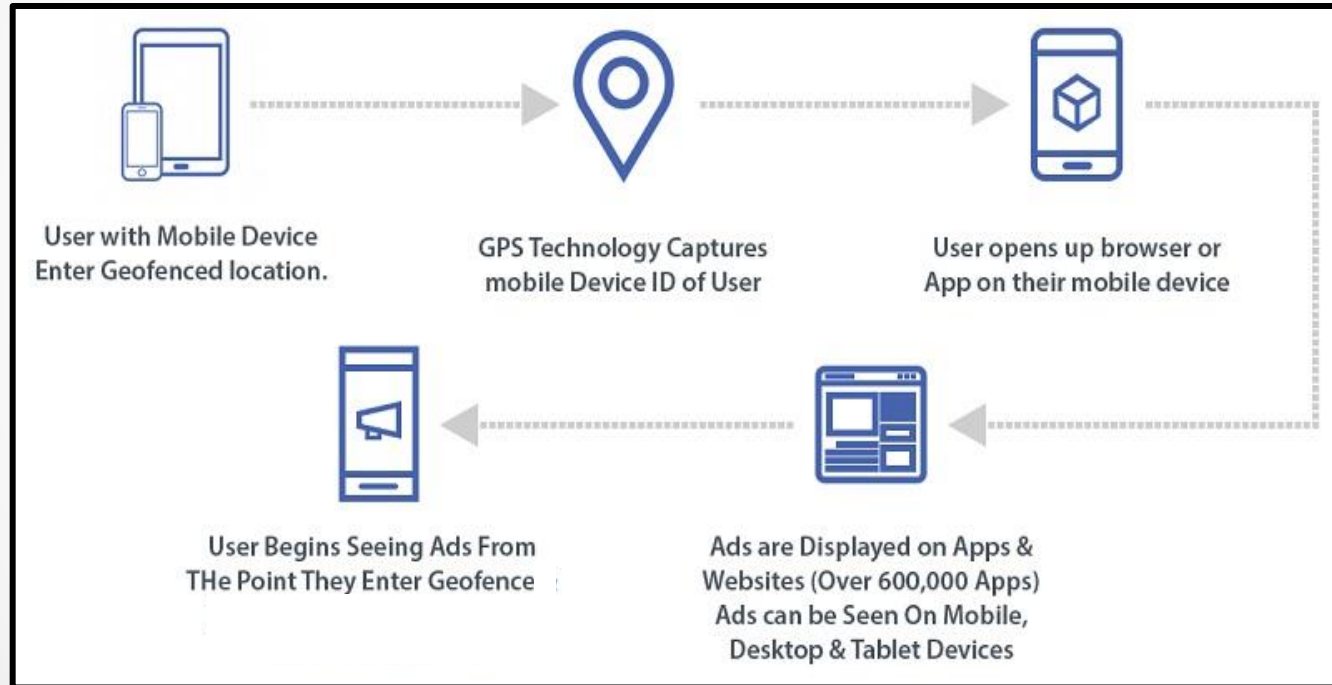- Android v6.0 or higher

HARDWARE REQUIREMENTS

1.Laptop or PC

- Processor – Intel i3 processor based or higher
- RAM – 6 GB(minimum)
- Hard Disk – 10 GB(minimum)

2.Android Phone or Tablet

- Android v6.0 or higher

OVERVIEW OF GEOFENCING PROCESS

User with Mobile Device Enter Geofenced location.

GPS Technology Captures mobile Device ID of User

User opens up browser or App on their mobile device

User Begins Seeing Ads From THe Point They Enter Geofence

Ads are Displayed on Apps & Websites (Over 600,000 Apps) Ads can be Seen On Mobile, Desktop & Tablet Devices

LIST OF MODULES

    1.**Admin** Module.

    2.**Parent** / **User** Module.

    3.**Child** Module.

    4.**Register** / **Sign Up** Module.

MODULE-1

ADMIN MODULE

- **Login:** After successful registration, user needs to login using their valid login credentials.

- **Tracking:** User can track his current location.

- **Add Waypoint:** The use can add waypoints using Maps for the task added.

- **Perform Task**: The user can track his journey to the destination in Google maps where he can see all the way points, current location and destination.

MODULE-2

PARENT / USER MODULE

- **Add/Delete Child:** Parent can add or delete details of child from the application. While registering the name of child, parent need to create login credentials for children and also need to set a geo fence around their children.

- **Update Geo Fence:** Parent can update geo fence of their child whenever required.

- **Track Child:** Parent can track child location anytime anywhere.

- **View Notification:** Parent application will receive notification whenever a child exists or enters the geo fence.
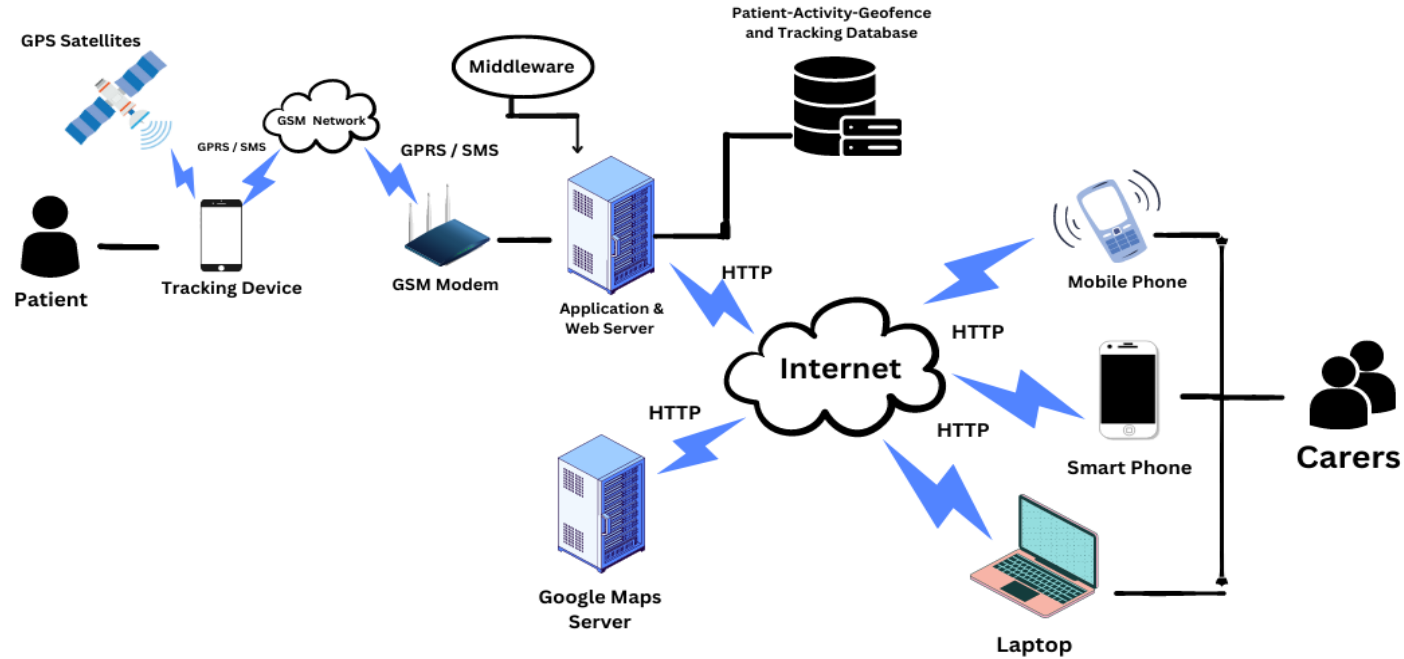
MODULE-3

CHILD MODULE

- **Login:** Child can login his account by entering valid login credentials provided by a parent.

- **Emergency:** Will send a notification to parent in case of any emergency occurs.

- **Logout:** Child can logout from his account.

MODULE-4

REGISTER / SIGN UP MODULE

- **Register:** User need to register themselves by filling up basic registration details and by creating valid login credentials.

  - ➢ User Mail ID
  - ➢ User Password

SYSTEM ARCHITECTURE

IMPLEMENTATION PROCEDURE

➢ Check if the current location coordinate (**latitude, longitude**) of an entity is entering or exiting a geofence.

➢ When a user is near a service point For example: If a person's car is up for service, send a message to remind them of the upcoming service or provide an incentive offer to come in.

➢ A geofence can be used once the **geolocation** data of an entity is available.

FEATURES

➢ Safety alerts

➢ Accuracy & battery optimization

➢ Location data collection

➢ Easy geofence management

➢ Easy Navigation

PROS AND CONS [Existing Application]

PROs:

➢ Geofencing allows you to precisely target your content.

➢ Geofencing allows you to get the right content out at the right moment.

➢ Geofencing is **cost-effective**.

CONs:

➢ Maintenance can be **time-consuming**.

➢ Pushback Due to **Privacy Concerns**.

➢ Battery and **Data Draining**.

AREA OF APPLICATION

Marketing & User Engagement: One of the most common geofencing use cases is marketing and user engagement.

Location insights: Another common geofencing application is data collection.
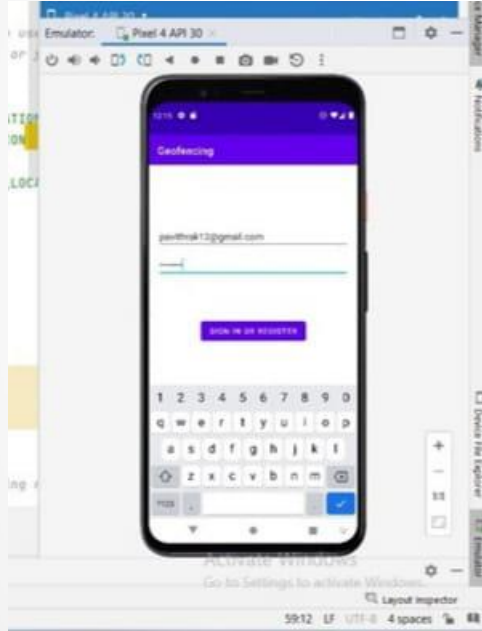
Navigation: Geofencing can be used to help app users navigate their way around, for instance is a navigation app.

Personal Location Tracking: It's not just businesses who use geofencing. Another popular use case is for personal location tracking.
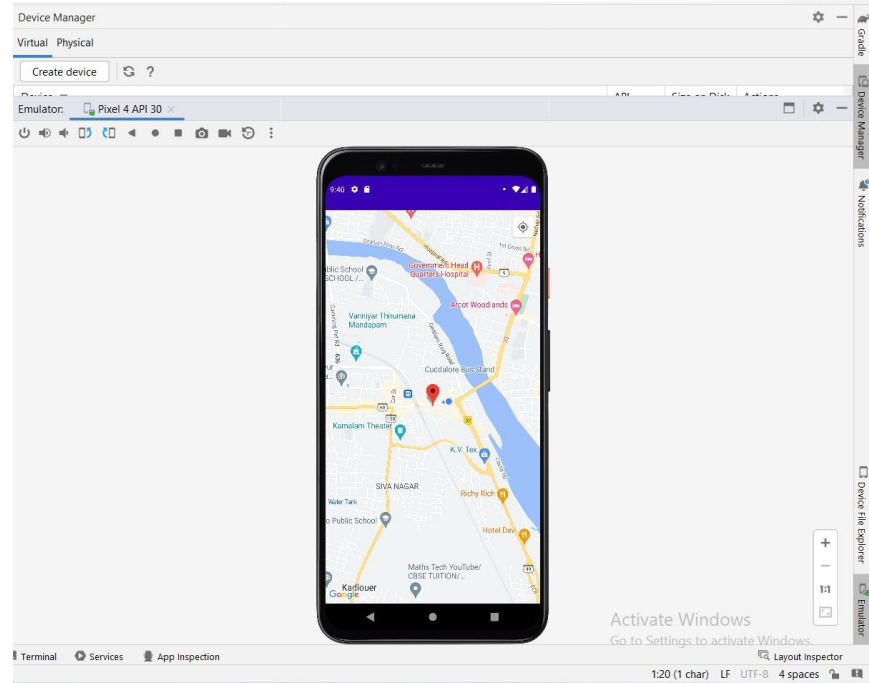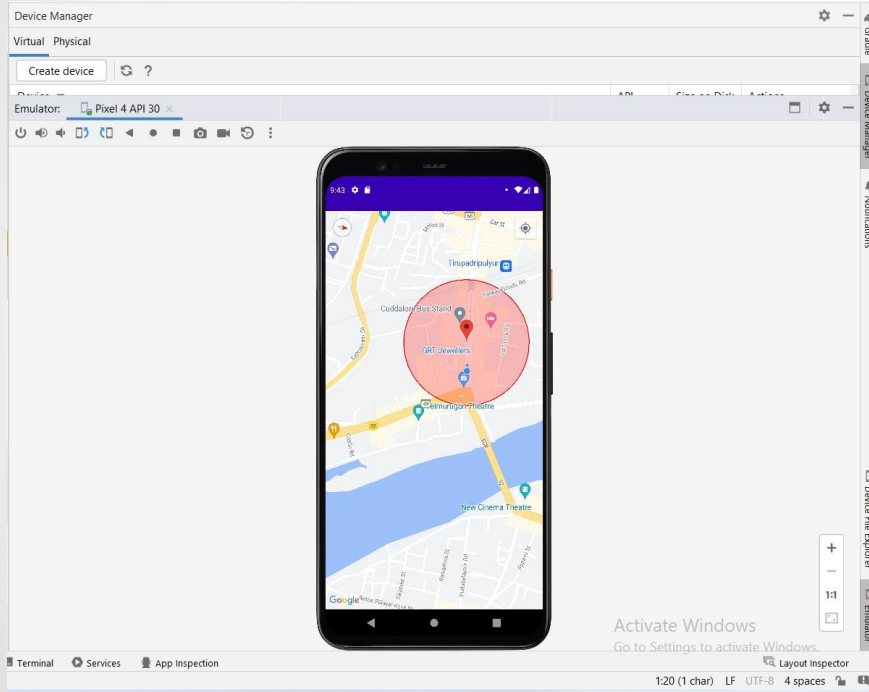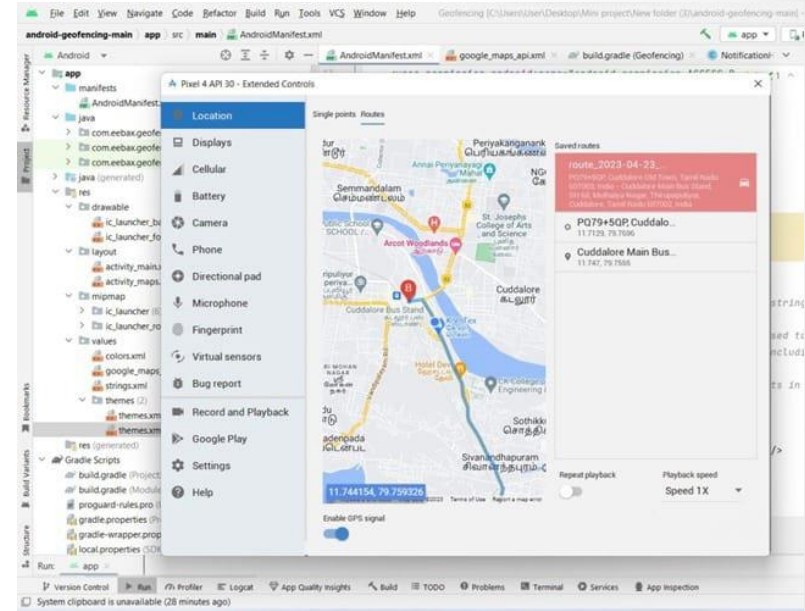
SCREENSHOTS

Register/Signup Module

Admin Module

Parent/User Module

Child Module

CONCLUSION

❖ Geofencing is a powerful and versatile technology that can offer a range of benefits to businesses and individuals.

❖ However, careful planning and consideration are required to ensure it is used effectively and ethically.

❖ As technology continues to evolve, it will be interesting to see how geofencing is used in new and innovative ways to solve complex problems and improve our experience with mobile apps.

Thank you

Any Question?