**GLA SMART MAP**

**A PROJECT REPORT**

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*in partial fulfillment for the award of the degree*

*of*

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**CERTIFICATE**

**Certified that this project report “GLA SMART MAP” is the bonafide work of “**Natesh Chauhan(181500416)

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**who carried out the project work under my supervision.**

**Mr.Neeraj Khanna**

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**ABSTRACT**

The technology we are going to be using is Android Studio and Google API. Our main objective for selecting this platform was to learn about it. Android studio provide best platform to build an android application.

We experienced that GLA campus is very big and it is hard to navigate to a specific, academic block, lecture room, labs, staff room, departmental library, management offices, clubs ,playgrounds, and many more.

In our university we have seen many new students facing issue in moving from one block to another block they have to follow a long way to reach that place.

This can be solved by creating an app GLA SMART MAP and this will not only solve the problem for students, teacher but also for parents also.

**PROBLEM STATEMENT**

Create a app using Android Studio and Google API for a GLA Students. This app will serve the purpose of introducing students to reach to the block or place where they want to go and this app is very helpful for the newly joined students . It is completely responsive app.

**OBJECTIVE**

1. Help to navigate our way around GLA Campus to a wide range of features such as classrooms, parking,

ATM, clubs, grounds, elevators, accessible routes and much more

1. To provide information about Events of several clubs and sports departments.
2. The app even provide my friend feature to connect you with your friends via chatbox.
3. Provide study materials for student.

**TECHNOLOGY USED**

1. **ANDROID**

**2. GOOGLE API**

**ANDROID :-**

**Android** is a mobile operating system based on a modified version of the Linux kernel and other open source software, designed primarily for touchscreen mobile devices such as smartphones and tablets. Android is developed by a consortium of developers known as the Open Handset Alliance and commercially sponsored by Google. It was unveiled in November 2007, with the first commercial Android device launched in September 2008.

FEATURES:-

1.Interface:- Android's default user interface is mainly based on direct manipulation, using touch inputs that loosely correspond to real-world actions, like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects, along with a virtual keyboard. The response to user input is designed to be immediate and provides a fluid touch interface, often using the vibration capabilities of the device to provide haptic feedback  to the user.

2. Home screen:- Android devices boot to the home screen, the primary navigation and information "hub" on Android devices, analogous to the desktop found on personal computers. Android homescreens are typically made up of app icons and widgets; app icons launch the associated app, whereas widgets display live, auto-updating content, such as a weather forecast, the user's email inbox, or a news ticker directly on the homescreen.

3. Status bar:- Along the top of the screen is a status bar, showing information about the device and its connectivity. This status bar can be pulled (swiped) down from to reveal a notification screen where apps display important information or updates, as well as quick access to system controls and toggles such as display brightness, connectivity settings , audio mode, and flashlight Vendors may implement extended settings such as the ability to adjust the torch brightness.

#### 4. Notifications:- Notifications are "short, timely, and relevant information about your app when it's not in use", and when tapped, users are directed to a screen inside the app relating to the notification.

#### 5.App lists:- An "All Apps" screen lists all installed applications, with the ability for users to drag an app from the list onto the home screen. A Recents screen lets users switch between recently used apps.

**GOOGLE API:-**

**Google APIs** are application programming interfaces (APIs) developed by Google which allow communication with Google Services and their integration to other services. Examples of these include Search, Gmail, Translate or Google Maps. Third-party apps can use these APIs to take advantage of or extend the functionality of the existing services.

The APIs provide functionality like analytics, machine learning as a service (the Prediction API) or access to user data (when permission to read the data is given). Another important example is an embedded Google map on a website, which can be achieved using the Static maps API, Places API or Google Earth API.

FEATURES:-

* Cloud Machine Learning **Engine** API.
* Google Maps.
* Cloud Natural Language API.
* Google Cloud Vision API.
* Google Cloud Video Intelligence API.
* Cloud Speech-to-Text and Text-to-Speech APIs
* Cloud Translation API.
* Hangouts Chat API.

**SOFTWARE USED:-**

**ANDROID STUDIO:-**

**Android Studio** is the official integrated development environment (IDE) for Google's Android operating system ,built on JetBrains IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems or as a subscription-based service in 2020. It is a replacement for the Eclipse Android Development Tools(E-ADT) as the primary IDE for native Android application developmen.

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FEATURES:-

* Gradle-based build support
* Android-specific refactoring and quick fixes
* Lint tools to catch performance, usability, version compatibility and other problems
* ProGuard integration and app-signing capabilities
* Template-based wizards to create common Android designs and components.
* Support for building Android wear apps.