# Mini Project Report

**(Mobile Application Development)**

**TITLE:** Smart Mobile Application as a Travel / Route Guide, Scenario - You are visiting. There is no local guide available. The previous users have commented on various locations where artifacts can be seen, photo are uploaded. The smart mobile application will give you directions / recommendations / suggestions on what to see and where, including narratives on the same.

## OBJECTIVES:

1. To study and understand the android operating system functionalities to develop application.
2. To understand how to use google maps and google places API.
3. To develop android program using java Concepts.

**PROBLEM STATEMENT:** To develop android mobile application project, where user can see his location and places around him. It should show recommendation , suggestion ,auto completion and information using google maps and google places API

## OUTCOMES:

1. Use of appropriate method to implement a local guidance app in android studio.
2. Use of appropriate GUI for its implementation.

## SOFTWARE & HARDWARE REQUIREMENTS:

**Software Requirements:**

1. Operating System : Ubuntu or Fedora
2. JDK/JRE, Eclipse
3. MySql

## Hardware Requirements:

1. 64 bit machine
2. 4GB or 8 GB RAM
3. 500 GB or 1TB HDD

## THEORY-CONCEPT:

Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android.

**Google maps:**

With the Maps SDK for Android, you can add maps based on Google Maps data to your application. The API automatically handles access to Google Maps servers, data downloading, map display, and response to map gestures. You can also use API calls to add markers, polygons, and overlays to a basic map, and to change the user's view of a particular map area. These objects provide additional information for map locations, and allow user interaction with the map. The API allows you to add these graphics to a map:

* Icons anchored to specific positions on the map (Markers).
* Sets of line segments (Polylines).
* Enclosed segments (Polygons).
* Bitmap graphics anchored to specific positions on the map (Ground Overlays).
* Sets of images which are displayed on top of the base map tiles (Tile Overlays).

**Steps to add google maps to project:**

## Download Android Studio.

## Install the Google Play services SDK.

## Create a Google Maps project.

## Get a Google Maps API key.

## Build and run your app.

## Steps to add key to project:

## Get an API key from the Google Cloud Platform Console

## Add the API key to your application

In AndroidManifest.xml, add the following element as a child of the [<application>](https://developer.android.com/guide/topics/manifest/application-element.html) element, by inserting it just before the closing </application> tag:

    <meta-data  
        android:name="com.google.android.geo.API\_KEY"  
        android:value="YOUR\_API\_KEY"/>

1. Save AndroidManifest.xml and re-build your application.

**Google places:**

The Places API is a service that returns information about places using HTTP requests. Places are defined within this API as establishments, geographic locations, or prominent points of interest.

**Introducing the API**

The following place requests are available:

* Place Search returns a list of places based on a user's location or search string.
* Place Details returns more detailed information about a specific place, including user reviews.
* Place Photos provides access to the millions of place-related photos stored in Google's Place database.
* Place Autocomplete automatically fills in the name and/or address of a place as users type.
* Query Autocomplete provides a query prediction service for text-based geographic searches, returning suggested queries as users type.

Each of the services is accessed as an HTTP request, and returns either an JSON or XML response. All requests to a Places service must use the https:// protocol, and include an API key.

The Places API uses a place ID to uniquely identify a place. For details about the format and usage of this identifier across the Places API and other APIs, see the Place IDs documentation.

**Steps to get an API key:**

### if you are using the standard Places API

### Go to the Google Cloud Platform Console.

### Create or select a project.

### Click ****Continue**** to enable the API.

### On the ****Credentials**** page, get an ****API key**** (and set the API key restrictions). Note: If you have an existing unrestricted API key, or a key with server restrictions, you may use that key.

### To prevent quota theft, secure your API key following best practices.

### (Optional) Enable billing. Check  Usage Limits and Billing .

**CONCLUSION:**

Demonstration of android mobile application project, for a local travel guide to find and view around the local places is successfully implemented using android-studio.

## DATE OF COMPLETITION:

**ASSESSMENT GRADE/MARKS AND ASSESSOR'S SIGN:**