Android

Android is the most popular and easily viable technology for Mobile applications developers. Therefore, I chose Android application development for APK 28 to upper APK level applications. As supporting middleware and plugin technologies, I used following technologies.

Google Play / GMS Libraries:

Google Play services are use as a Serviceable middleware and utility for google based services such as Google Maps, Firebase and google based plugins. Extensively provide environment to runnable google services and help to undergoing services.

Google Maps

As initializing google play services, we can safely launch Google Maps and its related functionalities. Google maps has dense layout which supports several facilities and possible expansions. Within my project development I used several expansions to improve map functionalities.

Google Maps for Android Expansion

Improve and facilitate map-based functionalities for Android / Java mobile applications.

Location API Expansion

Support location-based filtering and provide ability to get addresses or find by addresses. This facility used to improve search settings.

Direction API Expansion

Direction API provides facility to identify routes, possible routes between location, get duration and expected time to travel. These setting uses to implement and provide delivery path for both users and customers.

After having credentials and configuring application settings, I had to configure Meta data settings related application – internet accesses and Coars location permission to establish connection. After map establishment different settings used for following factors.

Set a Custom Marker – Google Maps Markers are used to highlight locations.

Get Users Location – With device’s location-based settings and Google map settings, mobile device’s location can be taken and mark on the given map.

Set Information – Using Google Maps Infor windows necessary contents are visualized give more idea on different markers.

Set Routes – With the help of direction API. Routes, possible routes and duration will be taken between locations.

With Google Maps API many other settings will be also implemented.

Firebase

Firebase is a Cloud based Database service which provides by Google. Specialty of Firebase is its support for Real time data transferring. Because of that dynamic activity developing became an easy task. Data request a thoroughly based on Promises and necessary asynchronous functions are handle by Android / Java runtime environment. Followings are the Firebase used functionalities that I implemented in mobile Application.

Users’ information handling

As an earlier task every user must register in this application as either customer or delivery staff member. With that related user settings will be stored and use credentials like username, password will be used to user verification. Those details will be requested from firebase in real time.

Orders’ information handling

Order’s detail will be handled as essential part of the project and stores essential information such as item name, address, location information and destination information like wise. Order details with its spatial data will be stored in firebase and later it can be retrieved into map.

Other necessary details will also be stored in firebase database.