

Android Application Name - **Network Analyzer**

Project Members

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### **Description of the Project**

Network Analyzer is equipped with features for analyzing the WiFi networks available around the user. It provides user with details like signal strength of different WiFi networks, information on their access (whether password protected or freely available). The app acts as a standard WiFi connection interface, allowing user to connect to WiFi networks. This app would best fit, but not limited to, a network connection engineer to test for available networks and their strengths in making design choices.

The other features that the app include -

Connection Details

- Displays all the details of the WiFi network connected to, including the IP Address, Security, Strength, Speed.

Link Speed Check

- Graphical Gauge display of the link speed of the WiFi network

Location Details

- Gives a Maps View of the current location in case user wants to check for the current location he is in.

Ping Time

- Gives an option to ping the WiFi devices and get the packet transmission and round trip statistics.

### **Third Party Libraries**

Network Analyzer uses a third party library called FusionCharts([www.fusioncharts.com](http://www.fusioncharts.com)). FusionCharts Suite XT provides libraries for displaying charts on web/mobile application. For this project, we use a trial version of FusionCharts Suite XT. However we wish to purchase full version of the libraries when we work on this project to release on Google Play Store, meeting the design and

functionality requirements. The libraries are already added in the project file and need not be downloaded from the website.

We need updated Google Play Store Service to display current location with address. This falls as a requirement to this project and hence user needs to install Google Play Services in the SDK Manager. Also, on the android device, Mode needs to be set to 'High Accuracy' and Location needs to be enables in Location Settings. <https://developers.google.com/maps/documentation/android/start> is followed to set SHA-1 fingerprint to this project in order to activate Maps.

## **Issues**

1. When new WiFi connection is selected and connected to, it takes around 3 seconds to reflect on the main screen.
2. Should update Google Play Services for the location part of the app to be run.
3. After enabling WiFi from disabled mode, we need to wait for a minute for the inbuilt WiFi Manager to scan for available WiFi networks and display the list in WiFi Analyzer Activity. In the meantime, user can check other options like link speed, ping time, location etc.
4. When Ping Time is clicked, it takes around 3 seconds to move to next activity displaying the Ping Statistics.
5. For unsecured networks, the default password varies for different device manufacturers and hence the authentication of the password couldn't be verified. The app doesn't connect to unsecured networks provided it is not connected via standard device WiFi settings.