**VELAGAPUDI RAMAKRISHNA SIDDHARTHA ENGINEERING COLLEGE**

**(AUTONOMOUS - AFFILIATED TO JNTU-K, KAKINADA)**

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**20IT5301 – Computer Networks**

**Project**

**Submitted To: Submitted By:**

**Dr.N.Neelima A. Charan (208W1A1268)**

**Assistant professor Md.Rizwanullah (208W1A1291)**

**Dept of IT N.Ajay kumar varma (208W1A12A1)**

**AIM:**

Developing an Chat Application using Bluetooth

**PROBLEM:**

Our primary goal is to create a chat with the people who are connected to Bluetooth of our device

**DESCRIPTION:**

Two devices are able to use Bluetooth to set up a secure peer-to-peer connection. It’s the same technology when you use Bluetooth to transfer music or images from one device to another. The maximum range between devices is about 300 feet, or 100 meters.

### PROCEDURE:

### Step 1. Setting up the Project

Let’s begin with setting up the project.

### ****Step 1.1. Download Android Studio****

* You can download Android studio for your platform by clicking on[this](https://developer.android.com/studio?authuser=1) link. Then install the latest sdk’s for better development pace

**Step 1.2. Create a Empty project**

* Open Android Studio an select New project in the pop up displayed
* Then a window containing different projects will be displayed then select the Empty Project

**Step 1.3. Get Bluetooth Service**

* We need the Android Bluetooth service for this tutorial to work. In order to use Bluetooth service, declare**[BLUETOOTH](https://developer.android.com/reference/android/Manifest.permission.html" \l "BLUETOOTH" \t "https://www.theappguruz.com/blog/_blank)**permission in manifest file.
* Add the following code in android manifest.xml file <uses-permission android:name="android.permission.BLUETOOTH" />
* Now to initiate device discovery and to access Bluetooth setting declare **[BLUETOOTH\_ADMIN](https://developer.android.com/reference/android/Manifest.permission.html" \l "BLUETOOTH_ADMIN" \t "https://www.theappguruz.com/blog/_blank)** permission.
* Add the following code in android manifest.xml file

<uses-permission android:name="android.permission.BLUETOOTH\_ADMIN" />

# Step 2. Bluetooth Adapter Class

**Now to check whether Bluetooth is supported on device or not, we use object of BluetoothAdapter class.**

**BluetoothAdapter bluetoothAdapter = BluetoothAdapter.getDefaultAdapter();**

**If this method returns null, then it means that Bluetooth is not supported on the device and so we will close the application**

****Step3: isEnable() method:****

**To check Bluetooth is enabled or not, we will use **isEnabled()** method on object of BluetoothAdapter class.**

**If Bluetooth is disabled then we request the user to enable it. And we perform this action by calling **startActivityForResult()**with **REQUEST\_ENABLE\_BT** action. This will open dialog to enable Bluetooth on the devic**e.****

**If the user clicks Allow then the **[onActivityResult()](https://developer.android.com/reference/android/app/Activity.html" \l "onActivityResult(int, int, android.content.Intent)" \t "https://www.theappguruz.com/blog/_blank)**method receives RESULT\_OK and if the user clicks Deny (or due to internal problem in device), **[RESULT\_CANCELED](https://developer.android.com/reference/android/app/Activity.html" \l "RESULT_CANCELED" \t "https://www.theappguruz.com/blog/_blank)** is received. If returned value RESULT\_OK is received then we will initiate the chat service.**

****Step4: Discover Bluetooth****

**Now in android, device is not discoverable by default. To make device discoverable, call**startActivityForResult()** with BluetoothAdapter.**ACTION\_REQUEST\_DISCOVERABLE** action. By default device is discoverable for 120 seconds. To set discoverable duration, add **[EXTRA\_DISCOVERABLE\_DURATION](https://developer.android.com/reference/android/bluetooth/BluetoothAdapter.html" \l "EXTRA_DISCOVERABLE_DURATION" \t "https://www.theappguruz.com/blog/_blank)** in intent extra. The maximum value for duration is 360 seconds.**

****Code:****

****Intent discoverableIntent = new Intent(****

****BluetoothAdapter.ACTION\_REQUEST\_DISCOVERABLE);****

****discoverableIntent.putExtra(****

****BluetoothAdapter.EXTRA\_DISCOVERABLE\_DURATION, 300);****

****startActivity(discoverableIntent);****

****Step5: Bluetooth Connection****