



Department of  
**Bachelor of Computer Applications**

**Android Operating System**  
Lab File – CA 12

**Subject Code:** 19BCA4C03L  
**Class:** II<sup>nd</sup> Year II<sup>nd</sup> Semester

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## Question 01 :

Program for AlInternet Connection Check using Button.

### Code :

activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/btn_check"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:text="Check Internet Connection"
        tools:layout_editor_absoluteX="71dp"
        tools:layout_editor_absoluteY="341dp" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.myapplication15;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.content.DialogInterface;
import android.net.ConnectivityManager;
import android.net.NetworkCapabilities;
import android.os.Build;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    Button btn_check;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        btn_check = findViewById(R.id.btn_check);
        btn_check.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if (!isNetworkAvailable() == true) {
                    new AlertDialog.Builder(getApplicationContext())
                        .setIcon(android.R.drawable.ic_dialog_alert)
```

```

        .setTitle("Internet Connection Alert")
        .setMessage("Please Check Your Internet
Connection")
        .setPositiveButton("Close", new
DialogInterface.OnClickListener() {
            @Override
            public void onClick(DialogInterface
dialogInterface, int i) {
                finish();
            }
        }).show();
    } else if (isNetworkAvailable() == true) {
        Toast.makeText(MainActivity.this, "Welcome",
Toast.LENGTH_LONG).show();
    }
}

    public boolean isNetworkAvailable() {
        ConnectivityManager connectivityManager =
        (ConnectivityManager) getSystemService(Context.CONNECTIVITY_SERVICE);
        if (connectivityManager != null) {
            if (android.os.Build.VERSION.SDK_INT >=
Build.VERSION_CODES.Q) {
                NetworkCapabilities capabilities =
connectivityManager.getNetworkCapabilities(connectivityManager.getActiveNet
work());
                if (capabilities != null) {
                    if
(capabilities.hasTransport(NetworkCapabilities.TRANSPORT_CELLULAR)) {
                        return true;
                    } else if
(capabilities.hasTransport(NetworkCapabilities.TRANSPORT_WIFI)) {
                        return true;
                    } else if
(capabilities.hasTransport(NetworkCapabilities.TRANSPORT_ETHERNET)) {
                        return true;
                    }
                }
            }
        }
        return false;
    }
}
});
}
}

```

## AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.myapplication15">

    <uses-permission android:name="android.permission.INTERNET"> </uses-
permission>
    <uses-permission android:name="android.permission.ACCESS_WIFI_STATE">
</uses-permission>
    <uses-permission
android:name="android.permission.ACCESS_NETWORK_STATE"> </uses-permission>

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"

```

```

        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.MyApplication15">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER"
            />
            </intent-filter>
        </activity>
    </application>

</manifest>

```

## Output :

