

- Course Module: MIT3206 Mobile Computing
- **Course Lecturer : Senior Lecturer Gihan P. Seneviratne Sir**
- Assignment 5 : (a). User can select One Option out of the Available Eight Options at a Time
  - (b). User Login and Signup
- GitHub Private Repository Link :

https://github.com/NavinduMadusanka/Assignment5-MIT3206-22550119.git

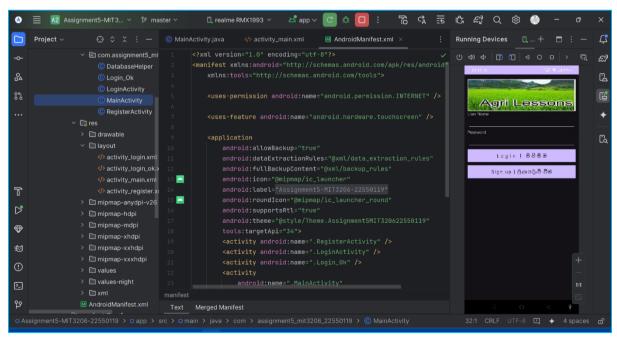
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Assignment5-MIT3206-22550119



# Assignment 5 : (a). User can select One Option out of the Available Eight Options at a Time

# (b). User Login and Signup

Below is a summary of what I have learned and focused on in this assignment.

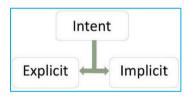
# 1. Android Components

#### API level

Android Version	API Level	Version Name
Android 7.0	24	Nougat

# Newly learned key points in this assignment

- Create User Login A login application is the screen that prompts you for your credentials in order to access a certain program
- Create a login screen and how to manage when false attempts are made
- Define two textView asking username and password of the user
- Toast Message
- Types of Intents



**Intent Type** 

Working with DatabaseHelper & Creat Database & Table for users,

```
public class DatabaseHelper extends SQLiteOpenHelper{
   public static final String DATABASE_NAME ="register.db";
   public static final String TABLE_NAME ="registeruser";
   public static final String COL_1 ="ID";
   public static final String COL_2 ="username";
   public static final String COL_3 ="password";
}
```



- Permission : uses-permission Access INTERNET
- tools:targetApi="34" in AndroidMainfest.xml
- uses-feature android:name="android.hardware.touchscreen"
- strings.xml in values
- User Login Name "navindu" and User Login Password "navindu"

# 2. Functionality of the mobile application

- Gives the opportunity to login or register when an item is clicked.
- Click on sign up to register.
- Navigates to the Register window.
- After entering the required data, the registration button should be pressed.
- Now offers the opportunity to Login.
- Allows you to log in after entering your username and password.

# 3. Layout & Attributes

LinearLayout

LinearLayout is a view group that aligns all children in a single direction, vertically or horizontally.

We can specify the layout direction with the android:orientation attribute.

Android LinearLayout is a view group that aligns all children in either vertically or horizontally.

### RelativeLayout

It gives us the flexibility to position our component / view based on the relative or sibling component's position.

For the same reason Relative layout is the most used layout after the Linear Layout in Android.

It allows its child view to position relative to each other or relative to the container or another container.



# 4. Running the Application on my android mobile device

I was running the android app for testing in my android mobile device.

My android mobile device is Realme X2 RMX1993.

Below is a Screenshots of my android mobile device (Realme X2 RMX1993) while the app was running.



Photo 1: Assignment5-MIT3206-22550119-UserLogin in Realme X2 RMX1993



Photo 2 : Assignment5-MIT3206-22550119-UserLogin in Realme X2 RMX1993



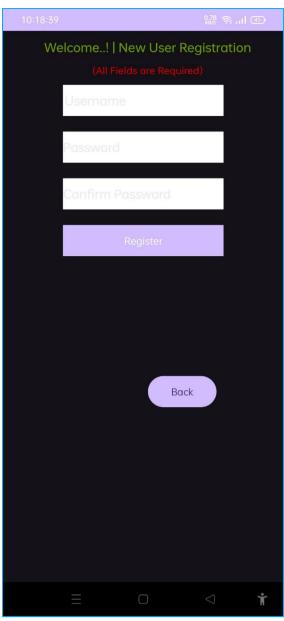


Photo 3 : Assignment5-MIT3206-22550119-UserSignup in Realme X2 RMX1993

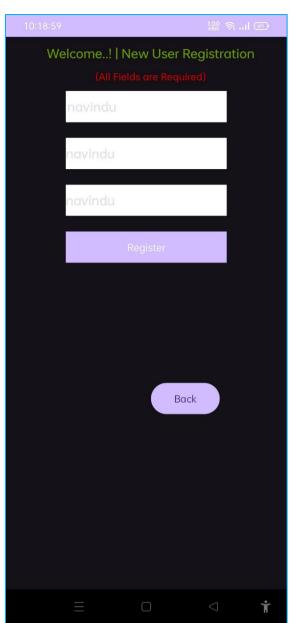
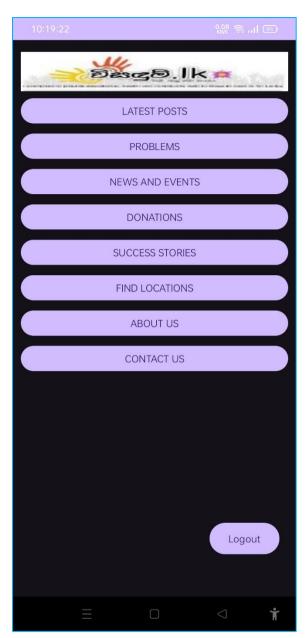
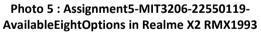


Photo 4 : Assignment5-MIT3206-22550119-UserSignup in Realme X2 RMX1993







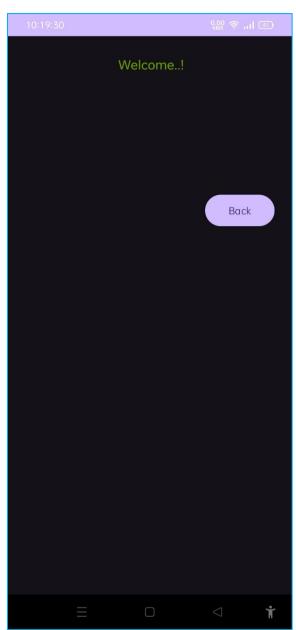


Photo 6: Assignment5-MIT3206-22550119-AvailableEightOptions in Realme X2 RMX1993



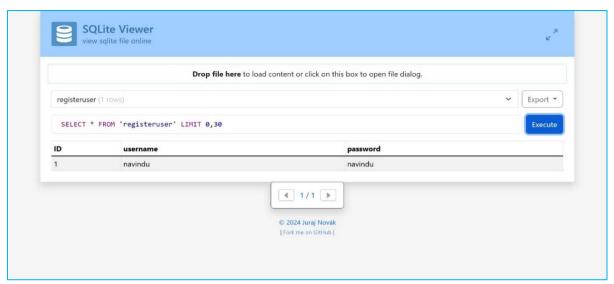


Photo 7: Assignment5-MIT3206-22550119-Database in Realme X2 RMX1993

# 5. Main Coding files

MainActivity.java

```
package com.assignment5 mit3206 22550119;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
  EditText mTextUsername;
  EditText mTextPassword;
  Button mButtonLogin;
 TextView mTextViewRegister;
  DatabaseHelper db;
  Button button;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
```



```
db = new DatabaseHelper(this);
    mTextUsername = (EditText)findViewById(R.id.edittext username);
    mTextPassword = (EditText)findViewById(R.id.edittext password);
    mButtonLogin = (Button)findViewById(R.id.button login);
    mButtonLogin.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        Intent registerIntent = new Intent(MainActivity.this,RegisterActivity.class);
        startActivity(registerIntent);
      }
    });
    mButtonLogin.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        String user = mTextUsername.getText().toString().trim();
        String pwd = mTextPassword.getText().toString().trim();
        Boolean res = db.checkUser(user, pwd);
        if(res == true)
        {
           Intent HomePage = new Intent(MainActivity.this,Login Ok.class);
           startActivity(HomePage);
           Intent i = new Intent(getApplicationContext(), Login Ok.class);
           startActivity(i);
        }
        else
           Toast.makeText(MainActivity.this,"Check Your User Name and
Password", Toast. LENGTH_SHORT). show();
        }
      }
    });
    button=findViewById(R.id.button__register);
    button.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        Intent i = new Intent(getApplicationContext(), RegisterActivity.class);
        startActivity(i);
      }
    });
 }
```



## • RegisterActivity.java

```
package com.assignment5 mit3206 22550119;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
public class RegisterActivity extends AppCompatActivity {
  DatabaseHelper db;
  EditText mTextUsername;
  EditText mTextPassword;
  EditText mTextCnfPassword;
  Button mButtonRegister;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_register);
    db = new DatabaseHelper(this);
    mTextUsername = (EditText)findViewById(R.id.edittext_username);
    mTextPassword = (EditText)findViewById(R.id.edittext_password);
    mTextCnfPassword = (EditText)findViewById(R.id.edittext_cnf_password);
    mButtonRegister = (Button)findViewById(R.id.button register);
    mButtonRegister.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        Intent LoginIntent = new Intent(RegisterActivity.this,MainActivity.class);
        startActivity(LoginIntent);
      }
    });
    mButtonRegister.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        String user = mTextUsername.getText().toString().trim();
        String pwd = mTextPassword.getText().toString().trim();
        String cnf_pwd = mTextCnfPassword.getText().toString().trim();
        if(pwd.equals(cnf pwd)){
          long val = db.addUser(user,pwd);
          if(val > 0){
```



```
Toast.makeText(RegisterActivity.this,"Welcome..! | You have
Registered", Toast. LENGTH SHORT). show();
             Intent moveToLogin = new Intent(RegisterActivity.this,MainActivity.class);
             startActivity(moveToLogin);
          }
          else{
             Toast.makeText(RegisterActivity.this,"Sorry..! | Registration
Error",Toast.LENGTH SHORT).show();
        }
        else{
          Toast.makeText(RegisterActivity.this,"Sorry..! | Password Missed
Matched", Toast. LENGTH_SHORT). show();
      }
    });
    Button backButton = findViewById(R.id.button back);
    backButton.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        Intent intent = new Intent(RegisterActivity.this, MainActivity.class);
        startActivity(intent);
        finish(); // finish the current activity
      }
    });
 }
}
       Login Ok.java
package com.assignment5_mit3206_22550119;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import androidx.appcompat.app.AppCompatActivity;
public class Login_Ok extends AppCompatActivity {
  Button button;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
```



```
super.onCreate(savedInstanceState);
setContentView(R.layout.activity login ok);
button=findViewById(R.id.button1);
button.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    Intent i = new Intent(getApplicationContext(), LoginActivity.class);
    startActivity(i);
  }
});
button=findViewById(R.id.button2);
button.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    Intent i = new Intent(getApplicationContext(), LoginActivity.class);
    startActivity(i);
  }
});
button=findViewById(R.id.button3);
button.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    Intent i = new Intent(getApplicationContext(), LoginActivity.class);
    startActivity(i);
  }
});
button=findViewById(R.id.button4);
button.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    Intent i = new Intent(getApplicationContext(), LoginActivity.class);
    startActivity(i);
  }
});
button=findViewById(R.id.button5);
button.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    Intent i = new Intent(getApplicationContext(), LoginActivity.class);
    startActivity(i);
  }
});
```



```
button=findViewBvId(R.id.button6);
button.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    Intent i = new Intent(getApplicationContext(), LoginActivity.class);
    startActivity(i);
  }
});
button=findViewById(R.id.button7);
button.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    Intent i = new Intent(getApplicationContext(), LoginActivity.class);
    startActivity(i);
  }
});
button=findViewById(R.id.button8);
button.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    Intent i = new Intent(getApplicationContext(), LoginActivity.class);
    startActivity(i);
  }
});
Button logoutButton = findViewById(R.id.button logout);
logoutButton.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    Intent intent = new Intent(Login Ok.this, MainActivity.class);
    startActivity(intent);
    finish(); // finish the current activity
  }
});
```

}



## databaseHelper.java

```
package com.assignment5 mit3206 22550119;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sglite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
public class DatabaseHelper extends SQLiteOpenHelper{
  public static final String DATABASE NAME ="register.db";
  public static final String TABLE_NAME = "registeruser";
  public static final String COL 1 ="ID";
  public static final String COL_2 ="username";
  public static final String COL_3 ="password";
  public DatabaseHelper(Context context) {
    super(context, DATABASE NAME, null, 1);
  }
  @Override
  public void onCreate(SQLiteDatabase sqLiteDatabase) {
    sqLiteDatabase.execSQL("CREATE TABLE registeruser (ID INTEGER PRIMARY KEY
AUTOINCREMENT, username TEXT, password TEXT)");
 }
  @Override
  public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {
    sqLiteDatabase.execSQL(" DROP TABLE IF EXISTS " + TABLE NAME);
    onCreate(sqLiteDatabase);
  }
  public long addUser(String user, String password){
    SQLiteDatabase db = this.getWritableDatabase();
    ContentValues contentValues = new ContentValues();
    contentValues.put("username",user);
    contentValues.put("password",password);
    long res = db.insert("registeruser",null,contentValues);
    db.close();
    return res;
  }
  public boolean checkUser(String username, String password){
    String[] columns = { COL 1 };
    SQLiteDatabase db = getReadableDatabase();
```



```
String selection = COL_2 + "=?" + " and " + COL_3 + "=?";
    String[] selectionArgs = { username, password };
    Cursor cursor = db.query(TABLE_NAME,columns,selection,selectionArgs,null,null,null);
    int count = cursor.getCount();
    cursor.close();
    db.close();
    if(count>0)
      return true;
    else
      return false;
  }
}
       LoginActivity.java
package com.assignment5 mit3206 22550119;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import androidx.appcompat.app.AppCompatActivity;
public class LoginActivity extends AppCompatActivity {
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity login);
    Button backButton = findViewById(R.id.button back);
    backButton.setOnClickListener(new View.OnClickListener() {
       @Override
      public void onClick(View view) {
         Intent intent = new Intent(LoginActivity.this, Login Ok.class);
         startActivity(intent);
         finish(); // finish the current activity
      }
    });
  }
}
```



## · activity main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
  android:layout width="match parent"
  android:layout height="match parent"
  android:padding="10dp"
  android:orientation="vertical">
  <lmageView
    android:id="@+id/imageView"
    android:layout width="match parent"
    android:textStyle="bold"
    android:layout_height="100dp"
    android:layout marginTop="5dp"
    android:background="@drawable/agrilessons"
    android:visibility="visible" />
  <TextView
    android:layout width="match parent"
    android:layout height="wrap content"
    android:textStyle="bold"
    android:text="User Name"
    android:textColor="@android:color/darker gray" />
  <EditText
    android:id="@+id/edittext username"
    android:layout width="match parent"
    android:textStyle="bold"
    android:layout height="40dp"/>
  <TextView
    android:layout width="match parent"
    android:layout height="wrap content"
    android:textStyle="bold"
    android:text="Password"
    android:textColor="@android:color/darker gray" />
  <EditText
    android:id="@+id/edittext password"
    android:layout width="match parent"
    android:textStyle="bold"
    android:inputType="textPassword"
    android:layout height="40dp" />
  <Button
    android:id="@+id/button login"
```



```
android:background="@android:color/darker gray"
    android:inputType="textCapSentences"
    android:textStyle="bold"
    android:letterSpacing="0.40"
    android:text="Login | පිවිසීම"
    android:textColor="@android:color/background dark"
    android:textSize="16sp" />
  <Button
    android:id="@+id/button register"
    android:layout width="match parent"
    android:layout height="41dp"
    android:layout marginTop="10dp"
    android:background="@android:color/darker gray"
    android:inputType="textCapSentences"
    android:textStyle="bold"
    android:letterSpacing="0.15"
    android:text="Sign up | ලියාපදිංචි වීම"
    android:textColor="@android:color/background dark"
    android:textSize="16sp" />
</LinearLayout>
       activity login ok.xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  xmlns:tools="http://schemas.android.com/tools"
  android:layout width="match parent"
  android:layout height="match parent"
  android:orientation="vertical"
  android:visibility="visible"
  android:padding="10dp"
  tools:context=".Login Ok"
  tools:visibility="visible">
  < Image View
    android:id="@+id/imageView"
    android:layout width="match parent"
    android:layout height="50dp"
    android:layout alignParentStart="true"
    android:layout alignParentTop="true"
    android:layout centerHorizontal="true"
```

android:layout width="match parent"

android:layout\_height="40dp"
android:layout marginTop="5dp"



```
android:layout_marginTop="5dp"
android:textStyle="bold"
android:background="@drawable/pic1"
android:visibility="visible"
tools:srcCompat="@drawable/ic_launcher_background" />
```

#### <Button

```
android:id="@+id/button1"
android:layout_width="match_parent"
android:layout_height="40dp"
android:layout_alignParentTop="true"
android:layout_alignParentEnd="true"
android:layout_centerHorizontal="true"
android:textStyle="bold"
android:layout_marginTop="60dp"
android:text="LATEST POSTS" />
```

#### <Button

```
android:id="@+id/button2"
android:layout_width="match_parent"
android:layout_height="40dp"
android:layout_alignParentTop="true"
android:layout_alignParentEnd="true"
android:layout_centerHorizontal="true"
android:textStyle="bold"
android:layout_marginTop="105dp"
android:text="PROBLEMS" />
```

#### <Button

```
android:id="@+id/button3"
android:layout_width="match_parent"
android:layout_height="40dp"
android:layout_alignParentTop="true"
android:layout_alignParentEnd="true"
android:layout_centerHorizontal="true"
android:textStyle="bold"
android:layout_marginTop="150dp"
android:text="NEWS AND EVENTS" />
```

#### <Button

```
android:id="@+id/button4"
android:layout_width="match_parent"
android:layout_height="40dp"
android:layout_alignParentTop="true"
android:layout_alignParentEnd="true"
android:layout_centerHorizontal="true"
android:textStyle="bold"
```



```
android:layout_marginTop="195dp"
android:text="DONATIONS" />
```

#### <Button

```
android:id="@+id/button5"
android:layout_width="match_parent"
android:layout_height="40dp"
android:layout_alignParentTop="true"
android:layout_alignParentEnd="true"
android:layout_centerHorizontal="true"
android:textStyle="bold"
android:layout_marginTop="240dp"
android:text="SUCCESS STORIES" />
```

## <Button

```
android:id="@+id/button6"
android:layout_width="match_parent"
android:layout_height="40dp"
android:layout_alignParentTop="true"
android:layout_alignParentEnd="true"
android:layout_centerHorizontal="true"
android:textStyle="bold"
android:layout_marginTop="285dp"
android:text="FIND LOCATIONS" />
```

#### <Button

```
android:id="@+id/button7"
android:layout_width="match_parent"
android:layout_height="40dp"
android:layout_alignParentTop="true"
android:layout_alignParentEnd="true"
android:layout_centerHorizontal="true"
android:textStyle="bold"
android:layout_marginTop="330dp"
android:text="ABOUT US" />
```

# <Button

```
android:id="@+id/button8"
android:layout_width="match_parent"
android:layout_height="40dp"
android:layout_alignParentTop="true"
android:layout_alignParentEnd="true"
android:layout_centerHorizontal="true"
android:textStyle="bold"
android:layout_marginTop="375dp"
android:text="CONTACT US" />
```



```
<Button
android:id="@+id/button_logout"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:textStyle="bold"
android:layout_marginStart="240dp"
android:layout_marginTop="600dp"
android:text="Logout" />

</RelativeLayout>

• activity_register.xml

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemandroid:layout_width="match_parent"
```

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  android:layout height="match parent"
  android:orientation="vertical"
  android:gravity="center horizontal">
  <TextView
    android:id="@+id/textView"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout marginTop="10dp"
    android:paddingLeft="12dp"
    android:textStyle="bold"
    android:text="Welcome..! | New User Registration"
    android:textColor="@android:color/holo green dark"
    android:textSize="18sp" />
  <TextView
    android:id="@+id/textView1"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout marginTop="10dp"
    android:paddingLeft="12dp"
    android:textStyle="bold"
    android:text="(All Fields are Required)"
    android:textColor="@android:color/holo red dark"
    android:textSize="14sp" />
  <EditText
    android:id="@+id/edittext username"
    android:textStyle="bold"
    android:layout_width="206dp"
```



```
android:layout height="40dp"
    android:layout marginTop="10dp"
    android:paddingLeft="2dp"
    android:background="#ffffff"
    android:hint="Username" />
  <EditText
    android:id="@+id/edittext password"
    android:textStyle="bold"
    android:layout width="206dp"
    android:layout height="40dp"
    android:layout marginTop="20dp"
    android:background="#ffffff"
    android:hint="Password"/>
  <EditText
    android:id="@+id/edittext cnf password"
    android:textStyle="bold"
    android:layout width="206dp"
    android:layout height="40dp"
    android:layout marginTop="20dp"
    android:background="#ffffff"
    android:hint="Confirm Password"/>
  <Button
    android:id="@+id/button register"
    android:textStyle="bold"
    android:layout width="206dp"
    android:layout height="40dp"
    android:layout marginTop="20dp"
    android:background="@android:color/holo blue dark"
    android:text="Register"
    android:textColor="#ffffff"
    android:textSize="15sp" />
  <Button
    android:id="@+id/button back"
    android:textStyle="bold"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout marginStart="50dp"
    android:layout marginTop="150dp"
    android:text="Back" />
</LinearLayout>
```



## activity login.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
  xmlns:tools="http://schemas.android.com/tools"
  android:layout width="match parent"
  android:layout height="match parent"
  android:orientation="vertical"
  tools:context=".LoginActivity">
  <TextView
    android:layout width="match parent"
    android:layout height="wrap content"
    android:layout marginTop="25dp"
    android:paddingLeft="140dp"
    android:textStyle="bold"
    android:text="Welcome..!"
    android:textColor="@android:color/holo green dark"
    android:textSize="18sp" />
  <Button
    android:id="@+id/button back"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:textStyle="bold"
    android:layout marginStart="250dp"
    android:layout marginTop="150dp"
    android:text="Back" />
</LinearLayout>
```

### strings.xml

```
<resources>
    <string name="app_name">Assignment5-MIT3206-22550119</string>
    <string name="action_settings">Settings</string>
    //lines to be added are below
    <string name="login">LOGIN</string>
    <string name="username">Username</string>
    <string name="password">Password</string>
    <string name="not_registered">Not Registered?</string>
    <string name="register">Register</string>
    <string name="register">Register</string>
    <string name="confirm_password">Confirm Password</string>
    <string name="already_registered">Already Registered?</string>
    <string name="welcome_user">Welcome User</string>
    </resources>
```



### AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
  xmlns:tools="http://schemas.android.com/tools">
  <uses-permission android:name="android.permission.INTERNET" />
  <uses-feature android:name="android.hardware.touchscreen" />
  <application
    android:allowBackup="true"
    android:dataExtractionRules="@xml/data extraction rules"
    android:fullBackupContent="@xml/backup rules"
    android:icon="@mipmap/ic launcher"
    android:label="@string/app name"
    android:roundIcon="@mipmap/ic launcher round"
    android:supportsRtl="true"
    android:theme="@style/Theme.Assignment5MIT320622550119"
    tools:targetApi="34">
    <activity android:name=".RegisterActivity" />
    <activity android:name=".Login Ok" />
    <activity android:name=".LoginActivity" />
    <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>
```

## drawable





pic1