Mobile Application Development

Task: Database SignIn SignUp Application

Submitted by: Chakshu Shaktawat

Reg. No. 20BCE10376

DB helper class:

```java
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import androidx.annotation.Nullable;

public class DBHelper extends SQLiteOpenHelper {
    public static final String DBNAME = "Login.db";
    public DBHelper(Context context) {
        super(context, "Login.db", null, 1);
    }

    @Override
    public void onCreate(SQLiteDatabase MyDB) {
        MyDB.execSQL("create Table users(username TEXT primary key, password TEXT)");
    }

    @Override
    public void onUpgrade(SQLiteDatabase MyDB, int i, int i1) {
        MyDB.execSQL("drop Table if exists users");
    }
    public Boolean insertData(String username, String password){
        SQLiteDatabase MyDB = this.getWritableDatabase();
        ContentValues contentValues= new ContentValues();
        contentValues.put("username", username);
        contentValues.put("password", password);
        long result = MyDB.insert("users", null, contentValues);
        if(result==-1)
            return false;
        else
            return true;
    }

    public Boolean checkusername(String username) {
        SQLiteDatabase MyDB = this.getWritableDatabase();
        Cursor cursor = MyDB.rawQuery("Select * from users where username = ?", new
String[]{username});
        if (cursor.getCount() > 0)
            return true;
        else
            return false;
    }
    public Boolean checkusernamepassword(String username, String password){
        SQLiteDatabase MyDB = this.getWritableDatabase();
```

```java
        Cursor cursor = MyDB.rawQuery("Select * from users where username = ? and
password = ?", new String[] {username,password});
        if(cursor.getCount()>0)
            return true;
        else
            return false; }
    }
```

(Register Page) Main_activity.xml:

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
 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"
    android:padding="10dp"
    tools:context=".MainActivity">

<EditText
    android:id="@+id/username"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="User Name"
    android:layout_marginTop="50dp"/>

<EditText
    android:id="@+id/password"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Password"
    android:layout_marginTop="50dp"
    android:layout_below="@+id/username"/>

<EditText android:id="@+id/repassword"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Retype Password"
    android:layout_marginTop="50dp"
    android:layout_below="@+id/password"/>

<Button android:id="@+id/btnsignup"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Register"
```

```xml
        android:layout_marginTop="50dp"
        android:layout_below="@+id/repassword"/>

<Button android:id="@+id/btnsignin"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Existing user! Go to Sign in page"
        android:layout_marginTop="50dp"
        android:layout_below="@+id/btnsignup"/>

</RelativeLayout>
```

mainActivity.java:

```java
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    EditText username, password, repassword;
    Button signup, signin;
    DBHelper DB;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        username = (EditText) findViewById(R.id.username);
        password = (EditText) findViewById(R.id.password);
        repassword = (EditText) findViewById(R.id.repassword);
        signup = (Button) findViewById(R.id.btnsignup);
        signin = (Button) findViewById(R.id.btnsignin);
        DB = new DBHelper(this);

        signup.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String user = username.getText().toString();
                String pass = password.getText().toString();
                String repass = repassword.getText().toString();
```

```java
                    if(user.equals("")||pass.equals("")||repass.equals(""))
                        Toast.makeText(MainActivity.this, "Please enter all the fields",
Toast.LENGTH_SHORT).show();
                    else{
                        if(pass.equals(repass)){
                            Boolean checkuser = DB.checkusername(user);
                            if(checkuser==false){
                                Boolean insert = DB.insertData(user, pass);
                                if(insert==true){
                                    Toast.makeText(MainActivity.this, "Registered successfully",
Toast.LENGTH_SHORT).show();
                                    Intent intent = new
Intent(getApplicationContext(),HomeActivity.class);
                                    startActivity(intent);
                                }else{
                                    Toast.makeText(MainActivity.this, "Registration failed",
Toast.LENGTH_SHORT).show();
                                }
                            } else{
                                Toast.makeText(MainActivity.this, "User already exists! please
sign in", Toast.LENGTH_SHORT).show();
                            }
                        }else{
                            Toast.makeText(MainActivity.this, "Passwords not matching",
Toast.LENGTH_SHORT).show();
                        }
                    } }
                });
                signin.setOnClickListener(new View.OnClickListener() {
                    @Override
                    public void onClick(View view) {
                        Intent intent = new Intent(getApplicationContext(),
LoginActivity.class);
                        startActivity(intent);
                    }
                });
        }
}
```

(Login Page) Main_activity.xml:

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
```

```xml
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="10dp"
    tools:context=".LoginActivity">

<EditText
    android:id="@+id/username1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="User Name"
    android:layout_marginTop="50dp"/>

<EditText android:id="@+id/password1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Password"
    android:layout_marginTop="50dp"
    android:layout_below="@+id/username1"/>

<Button android:id="@+id/btnsignin1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Sign in"
    android:layout_marginTop="50dp"
    android:layout_below="@+id/password1"/>

</RelativeLayout>
```

mainActivity.java:

```java
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class LoginActivity extends AppCompatActivity {
    EditText username, password; Button btnlogin;
    DBHelper DB;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
```
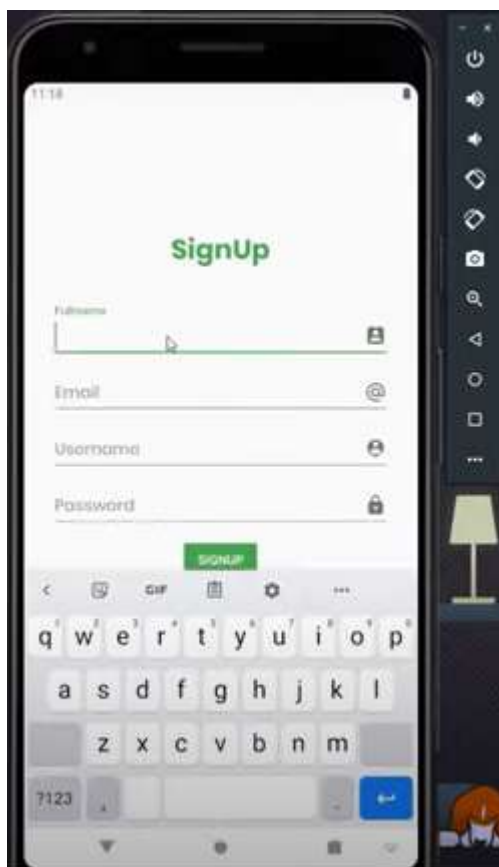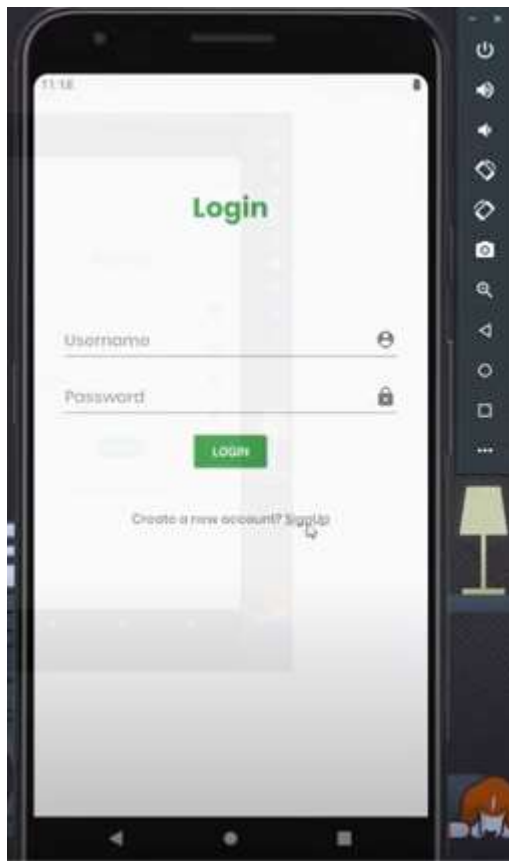
```java
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_login);
        username = (EditText) findViewById(R.id.username1);
        password = (EditText) findViewById(R.id.password1);
        btnlogin = (Button) findViewById(R.id.btnsignin1);
        DB = new DBHelper(this); btnlogin.setOnClickListener(new View.OnClickListener()
{
            @Override
            public void onClick(View view) {
                String user = username.getText().toString();
                String pass = password.getText().toString();
                if(user.equals("")||pass.equals(""))
                    Toast.makeText(LoginActivity.this, "Please enter all the fields",
Toast.LENGTH_SHORT).show();
                else{
                    Boolean checkuserpass = DB.checkusernamepassword(user, pass);
                    if(checkuserpass==true){
                        Toast.makeText(LoginActivity.this, "Sign in successfull",
Toast.LENGTH_SHORT).show();
                        Intent intent = new Intent(getApplicationContext(),
HomeActivity.class);
                        startActivity(intent);
                    }else{
                        Toast.makeText(LoginActivity.this, "Invalid Credentials",
Toast.LENGTH_SHORT).show();
                    }
                }}
        });
    }
}
```

Mobile Application Development

ASSIGNMENT 2

Submitted by: Chakshu Shaktawat

Reg. No. 20BCE10376

1. Design the given GUI in Table Layout

XML Code:

```xml
<?xml version="1.0" encoding="utf-8"?>
<TableLayout 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"
    android:orientation="vertical"
    android:padding="24dp"
    android:background="@drawable/bgd"
    tools:context=".login">

<TableRow
    <ImageView
        android:layout_width="200dp"
        android:layout_height="200dp"
        android:id="@+id/imageview"
        android:layout_gravity="center"
        android:layout_marginTop="25dp"
        android:src="@drawable/newsnaut1"/>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:layout_gravity="center"
        android:layout_marginTop="25sp">
        <TextView
            android:layout_width="match_parent"
```

```xml
    android:layout_height="wrap_content"

    android:text="Login"

    android:textSize="30sp"

    android:textStyle="bold"

    android:textColor="@color/black"

    android:gravity="center_horizontal"

    android:layout_marginVertical="16dp"/>
<com.google.android.material.textfield.TextInputLayout

    android:layout_width="match_parent"

    style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"

    android:layout_height="wrap_content">


    <com.google.android.material.textfield.TextInputEditText

        android:id="@+id/log_email"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:hint="Email"

        android:textStyle="bold"

        android:inputType="textEmailAddress"/>
</com.google.android.material.textfield.TextInputLayout>



<com.google.android.material.textfield.TextInputLayout

    android:layout_width="match_parent"

    style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"

    android:layout_height="wrap_content"

    android:layout_marginTop="12dp">


    <com.google.android.material.textfield.TextInputEditText

        android:id="@+id/log_pass"

        android:layout_width="match_parent"
```

```xml
            android:layout_height="wrap_content"

            android:hint="Password"

            android:textStyle="bold"

            android:inputType="textPassword"/>

    </com.google.android.material.textfield.TextInputLayout>


    <com.google.android.material.button.MaterialButton

        android:id="@+id/login_btn"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_marginTop="24dp"

        android:textStyle="bold"

        android:text="LOGIN"/>


    <

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_marginTop="15dp"

        android:gravity="center"

        android:orientation="horizontal">


        <TextView

            android:layout_width="wrap_content"

            android:layout_height="wrap_content"

            android:text="Not registered yet"

            android:textStyle="bold"

            android:textSize="16sp"/>


        <TextView

            android:id="@+id/tvRegisterHere"

            android:layout_width="wrap_content"
```

```
            android:layout_height="wrap_content"

            android:layout_marginLeft="8dp"

            android:text="Register here"

            android:textColor="@color/purple_500"

            android:textStyle="bold"

            android:textSize="20sp"/>


    </LinearLayout>
</TableLayout>
```

2. Design the given GUI in Constrain(relative) Layout.

XML Code:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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"

    android:orientation="vertical"

    android:padding="24dp"

    android:background="@drawable/bgd"

    tools:context=".login">


    <ImageView

        android:layout_width="200dp"

        android:layout_height="200dp"

        android:id="@+id/imageview"
```

```xml
        android:layout_gravity="center"

        android:layout_marginTop="25dp"

        android:src="@drawable/newsnaut1"/>


    <RelativeLayout

        android:layout_width="match_parent"

        android:layout_height="match_parent"

        android:orientation="vertical"

        android:layout_gravity="center"

        android:layout_marginTop="25sp">

        <TextView

            android:layout_width="match_parent"

            android:layout_height="wrap_content"

            android:text="Login"

            android:textSize="30sp"

            android:textStyle="bold"

            android:textColor="@color/black"

            android:gravity="center_horizontal"

            android:layout_marginVertical="16dp"/>

        <com.google.android.material.textfield.TextInputLayout

            android:layout_width="match_parent"

            style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"

            android:layout_height="wrap_content">


            <com.google.android.material.textfield.TextInputEditText

                android:id="@+id/log_email"

                android:layout_width="match_parent"

                android:layout_height="wrap_content"

                android:hint="Email"

                android:textStyle="bold"

                android:inputType="textEmailAddress"/>
```

```xml
    <com.google.android.material.textfield.TextInputEditText

        android:id="@+id/log_pass"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:hint="Password"

        android:inputType="textPassword"

        android:textStyle="bold" />
</com.google.android.material.textfield.TextInputLayout>


<com.google.android.material.textfield.TextInputLayout

    android:layout_width="match_parent"

    style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"

    android:layout_height="wrap_content"

    android:layout_marginTop="12dp">


</com.google.android.material.textfield.TextInputLayout>


<com.google.android.material.button.MaterialButton

    android:id="@+id/login_btn"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:layout_marginTop="24dp"

    android:textStyle="bold"

    android:text="LOGIN"/>


<RelativeLayout

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:layout_marginTop="15dp"
```

```xml
        android:gravity="center"

        android:orientation="horizontal">


        <TextView

            android:layout_width="wrap_content"

            android:layout_height="wrap_content"

            android:layout_alignParentStart="true"

            android:layout_alignParentEnd="true"

            android:layout_marginStart="68dp"

            android:layout_marginEnd="108dp"

            android:text="Not registered yet"

            android:textSize="16sp"

            android:textStyle="bold" />


    </RelativeLayout>


    <TextView

        android:id="@+id/tvRegisterHere"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginLeft="8dp"

        android:text="Register here"

        android:textColor="@color/purple_500"

        android:textSize="20sp"

        android:textStyle="bold" />

    </RelativeLayout>

</RelativeLayout>
```