Slip 11 Q1 a

Design android application for login activity. Write android code to check login credentials with username = "mca" and password = "android". Display appropriate toast message to the user.

1. **Create the XML layout for the login activity (activity\_login.xml):**

xml  
<!-- res/layout/activity\_login.xml -->

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

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:paddingLeft="16dp"

android:paddingTop="16dp"

android:paddingRight="16dp"

android:paddingBottom="16dp"

tools:context=".LoginActivity">

<EditText

android:id="@+id/usernameEditText"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Username"/>

<EditText

android:id="@+id/passwordEditText"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/usernameEditText"

android:layout\_marginTop="8dp"

android:hint="Password"

android:inputType="textPassword"/>

<Button

android:id="@+id/loginButton"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/passwordEditText"

android:layout\_marginTop="16dp"

android:text="Login"/>

</RelativeLayout>

**Create the LoginActivity (LoginActivity.java):**

// src/com/example/myapplication/LoginActivity.java

package com.example.myapplication;

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 LoginActivity extends AppCompatActivity {

// Hardcoded username and password

private static final String CORRECT\_USERNAME = "mca";

private static final String CORRECT\_PASSWORD = "android";

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_login);

final EditText usernameEditText = findViewById(R.id.usernameEditText);

final EditText passwordEditText = findViewById(R.id.passwordEditText);

Button loginButton = findViewById(R.id.loginButton);

loginButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

// Get user-entered credentials

String enteredUsername = usernameEditText.getText().toString();

String enteredPassword = passwordEditText.getText().toString();

// Check if credentials are correct

if (enteredUsername.equals(CORRECT\_USERNAME) && enteredPassword.equals(CORRECT\_PASSWORD)) {

// Successful login

showToast("Login successful");

} else {

// Incorrect credentials

showToast("Incorrect username or password");

}

}

});

}

private void showToast(String message) {

Toast.makeText(this, message, Toast.LENGTH\_SHORT).show();

}

}

Slip 11 q1 B

Create registration form given below. Also perform appropriate validation.

**Create the XML layout for the registration form (activity\_registration.xml):**

<!-- res/layout/activity\_registration.xml -->

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

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:paddingLeft="16dp"

android:paddingTop="16dp"

android:paddingRight="16dp"

android:paddingBottom="16dp"

tools:context=".RegistrationActivity">

<EditText

android:id="@+id/nameEditText"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Name"/>

<EditText

android:id="@+id/emailEditText"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/nameEditText"

android:layout\_marginTop="8dp"

android:hint="Email"

android:inputType="textEmailAddress"/>

<EditText

android:id="@+id/passwordEditText"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/emailEditText"

android:layout\_marginTop="8dp"

android:hint="Password"

android:inputType="textPassword"/>

<EditText

android:id="@+id/mobileEditText"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/passwordEditText"

android:layout\_marginTop="8dp"

android:hint="Mobile Number"

android:inputType="phone"/>

<Button

android:id="@+id/registerButton"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/mobileEditText"

android:layout\_marginTop="16dp"

android:text="Register"/>

</RelativeLayout>

**Create the RegistrationActivity (RegistrationActivity.java):**

// src/com/example/myapplication/RegistrationActivity.java

package com.example.myapplication;

import android.os.Bundle;

import android.util.Patterns;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class RegistrationActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_registration);

final EditText nameEditText = findViewById(R.id.nameEditText);

final EditText emailEditText = findViewById(R.id.emailEditText);

final EditText passwordEditText = findViewById(R.id.passwordEditText);

final EditText mobileEditText = findViewById(R.id.mobileEditText);

Button registerButton = findViewById(R.id.registerButton);

registerButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

// Get user-entered information

String name = nameEditText.getText().toString().trim();

String email = emailEditText.getText().toString().trim();

String password = passwordEditText.getText().toString().trim();

String mobile = mobileEditText.getText().toString().trim();

// Perform validation

if (name.isEmpty() || email.isEmpty() || password.isEmpty() || mobile.isEmpty()) {

showToast("All fields are required");

} else if (!Patterns.EMAIL\_ADDRESS.matcher(email).matches()) {

showToast("Enter a valid email address");

} else if (password.length() < 6) {

showToast("Password must be at least 6 characters long");

} else if (mobile.length() != 10) {

showToast("Enter a valid 10-digit mobile number");

} else {

// Registration successful

showToast("Registration successful");

// You can add further actions like sending data to a server/database

}

}

});

}

private void showToast(String message) {

Toast.makeText(this, message, Toast.LENGTH\_SHORT).show();

}

}

Q2

**Create the UI layout (activity\_main.xml):**

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

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:paddingLeft="16dp"

android:paddingTop="16dp"

android:paddingRight="16dp"

android:paddingBottom="16dp"

tools:context=".MainActivity">

<EditText

android:id="@+id/editTextTo"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="To"/>

<EditText

android:id="@+id/editTextSubject"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/editTextTo"

android:layout\_marginTop="8dp"

android:hint="Subject"/>

<EditText

android:id="@+id/editTextMessage"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/editTextSubject"

android:layout\_marginTop="8dp"

android:hint="Message"/>

<Button

android:id="@+id/buttonAttach"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/editTextMessage"

android:layout\_marginTop="16dp"

android:text="Attach File"/>

<Button

android:id="@+id/buttonSend"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/buttonAttach"

android:layout\_marginTop="16dp"

android:text="Send Email"/>

</RelativeLayout>

**Implement the logic in MainActivity.java:**

package com.example.emailsender;

import android.content.Intent;

import android.net.Uri;

import android.os.Bundle;

import android.os.Environment;

import android.provider.MediaStore;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.content.FileProvider;

import java.io.File;

import java.io.IOException;

import java.text.SimpleDateFormat;

import java.util.Date;

public class MainActivity extends AppCompatActivity {

private static final int REQUEST\_IMAGE\_CAPTURE = 1;

private static final int PICK\_FILE\_REQUEST\_CODE = 2;

private EditText editTextTo, editTextSubject, editTextMessage;

private Button buttonAttach, buttonSend;

private String currentPhotoPath;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

editTextTo = findViewById(R.id.editTextTo);

editTextSubject = findViewById(R.id.editTextSubject);

editTextMessage = findViewById(R.id.editTextMessage);

buttonAttach = findViewById(R.id.buttonAttach);

buttonSend = findViewById(R.id.buttonSend);

buttonAttach.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

// Open file picker or camera to attach a file

// For simplicity, this example uses the camera to take a photo

dispatchTakePictureIntent();

}

});

buttonSend.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

sendEmail();

}

});

}

private void dispatchTakePictureIntent() {

Intent takePictureIntent = new Intent(MediaStore.ACTION\_IMAGE\_CAPTURE);

if (takePictureIntent.resolveActivity(getPackageManager()) != null) {

// Create the File where the photo should go

File photoFile = null;

try {

photoFile = createImageFile();

} catch (IOException ex) {

ex.printStackTrace();

}

// Continue only if the File was successfully created

if (photoFile != null) {

Uri photoURI = FileProvider.getUriForFile(this,

"com.example.android.fileprovider",

photoFile);

takePictureIntent.putExtra(MediaStore.EXTRA\_OUTPUT, photoURI);

startActivityForResult(takePictureIntent, REQUEST\_IMAGE\_CAPTURE);

}

}

}

private File createImageFile() throws IOException {

String timeStamp = new SimpleDateFormat("yyyyMMdd\_HHmmss").format(new Date());

String imageFileName = "JPEG\_" + timeStamp + "\_";

File storageDir = getExternalFilesDir(Environment.DIRECTORY\_PICTURES);

File image = File.createTempFile(

imageFileName, /\* prefix \*/

".jpg", /\* suffix \*/

storageDir /\* directory \*/

);

// Save a file: path for use with ACTION\_VIEW intents

currentPhotoPath = image.getAbsolutePath();

return image;

}

@Override

protected void onActivityResult(int requestCode, int resultCode, Intent data) {

super.onActivityResult(requestCode, resultCode, data);

if (requestCode == REQUEST\_IMAGE\_CAPTURE && resultCode == RESULT\_OK) {

// Photo was successfully taken, you can handle it here if needed

} else if (requestCode == PICK\_FILE\_REQUEST\_CODE && resultCode == RESULT\_OK) {

// File was successfully picked, you can handle it here if needed

}

}

private void sendEmail() {

String to = editTextTo.getText().toString().trim();

String subject = editTextSubject.getText().toString().trim();

String message = editTextMessage.getText().toString().trim();

if (to.isEmpty() || subject.isEmpty() || message.isEmpty()) {

Toast.makeText(this, "Please fill in all fields", Toast.LENGTH\_SHORT).show();

return;

}

Intent emailIntent = new Intent(Intent.ACTION\_SEND);

emailIntent.setType("message/rfc822");

emailIntent.putExtra(Intent.EXTRA\_EMAIL, new String[]{to});

emailIntent.putExtra(Intent.EXTRA\_SUBJECT, subject);

emailIntent.putExtra(Intent.EXTRA\_TEXT, message);

// Attach the file (if any)

if (currentPhotoPath != null) {

Uri photoUri = Uri.fromFile(new File(currentPhotoPath));

emailIntent.putExtra(Intent.EXTRA\_STREAM, photoUri);

}

try {

startActivity(Intent.createChooser(emailIntent, "Send mail..."));

} catch (android.content.ActivityNotFoundException ex) {

Toast.makeText(this, "There are no email clients installed.", Toast.LENGTH\_SHORT).show();

}

}

}