

PRACTICAL:11

AIM: Creating an application that provides Single Sign-on (SSO) with Chrome Custom Tabs via the AppAuth library, and optionally push managed configuration to provide a user login hint.

Source Code:

Program: activity_main.xml

activity_main.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"
    tools:context=".MainActivity"
    android:background="@color/colorPrimary">

    <com.google.android.gms.common.SignInButton
        android:id="@+id/sign_in_button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true"/>

</RelativeLayout>
```

activity_main2.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"
    tools:context=".Main2Activity">

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true">
```

```
<ImageView
    android:layout_width="80dp"
    android:layout_height="80dp"
    android:background="@drawable/ic_person"
    android:layout_gravity="center"
    android:id="@+id/photo"/>
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/name"
    android:text="Name: NAME HERE"
    android:textSize="18sp"
    android:textColor="@color/colorPrimary"
    android:layout_gravity="center"/>
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/email"
    android:text="Email: EMAIL HERE"
    android:textSize="18sp"
    android:textColor="@color/colorPrimary"
    android:layout_gravity="center"/>

</LinearLayout>

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/log_out"
    android:text="Sign out"
    android:layout_centerHorizontal="true"
    android:layout_alignParentBottom="true"
    android:layout_marginBottom="20dp"
    android:background="@color/colorPrimary"
    android:textColor="#fff"/>

</RelativeLayout>
```

Program: MainActivity.java

```
package com.example.a17it104_wcmc_pr11;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.content.Intent;
```

```
import android.util.Log;
import android.view.View;
import android.widget.Toast;
import com.google.android.gms.auth.api.signin.GoogleSignIn;
import com.google.android.gms.auth.api.signin.GoogleSignInAccount;
import com.google.android.gms.auth.api.signin.GoogleSignInClient;
import com.google.android.gms.auth.api.signin.GoogleSignInOptions;
import com.google.android.gms.common.SignInButton;
import com.google.android.gms.common.api.ApiException;
import com.google.android.gms.tasks.Task;

public class MainActivity extends AppCompatActivity {

    int RC_SIGN_IN = 0;
    SignInButton signInButton;
    GoogleSignInClient mGoogleSignInClient;

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

        signInButton = findViewById(R.id.sign_in_button);

        GoogleSignInOptions gso = new
GoogleSignInOptions.Builder(GoogleSignInOptions.DEFAULT_SIGN_IN)
            .requestEmail()
            .build();

        mGoogleSignInClient = GoogleSignIn.getClient(this, gso);

        signInButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                signIn();
            }
        });
    }

    private void signIn() {
        Intent signInIntent = mGoogleSignInClient.getSignInIntent();
        startActivityForResult(signInIntent, RC_SIGN_IN);
    }
}
```

```

    }

    @Override
    public void onActivityResult(int requestCode, int resultCode, Intent data) {
        super.onActivityResult(requestCode, resultCode, data);

        if (requestCode == RC_SIGN_IN) {
            Task<GoogleSignInAccount> task = GoogleSignIn.getSignedInAccountFromIntent(data);
            handleSignInResult(task);
        }
    }

    private void handleSignInResult(Task<GoogleSignInAccount> completedTask) {
        try {
            GoogleSignInAccount account = completedTask.getResult(ApiException.class);
            startActivity(new Intent(MainActivity.this, Main2Activity.class));
        } catch (ApiException e) {
            Log.w("Google Sign In Error", "signInResult:failed code=" + e.getStatusCode());
            Toast.makeText(MainActivity.this, "Failed ", Toast.LENGTH_LONG).show();
        }
    }

    @Override
    protected void onStart() {
        GoogleSignInAccount account = GoogleSignIn.getLastSignedInAccount(this);
        if(account != null) {
            startActivity(new Intent(MainActivity.this, Main2Activity.class));
        }
        super.onStart();
    }
}

Main2Activity

package com.example.a17it104_wcmc_pr11;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.content.Intent;
import android.net.Uri;
import androidx.annotation.NonNull;

import android.view.View;

```

```
import android.widget.Button;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;
import com.google.android.gms.auth.api.signin.GoogleSignIn;
import com.google.android.gms.auth.api.signin.GoogleSignInAccount;
import com.google.android.gms.auth.api.signin.GoogleSignInClient;
import com.google.android.gms.auth.api.signin.GoogleSignInOptions;
import com.google.android.gms.tasks.OnCompleteListener;
import com.google.android.gms.tasks.Task;

import java.net.URI;

public class Main2Activity extends AppCompatActivity{
    GoogleSignInClient mGoogleSignInClient;
    Button sign_out;
    TextView nameTV;
    TextView emailTV;
    ImageView photoIV;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);
        sign_out = findViewById(R.id.log_out);
        nameTV = findViewById(R.id.name);
        emailTV = findViewById(R.id.email);
        photoIV = findViewById(R.id.photo);
        GoogleSignInOptions gso = new
GoogleSignInOptions.Builder(GoogleSignInOptions.DEFAULT_SIGN_IN)
            .requestEmail()
            .build();
        mGoogleSignInClient = GoogleSignIn.getClient(this, gso);
        GoogleSignInAccount acct = GoogleSignIn.getLastSignedInAccount(Main2Activity.this);
        if (acct != null) {
            String personName = acct.getDisplayName();
            String personGivenName = acct.getGivenName();
            String personFamilyName = acct.getFamilyName();
            String personEmail = acct.getEmail();
            String personId = acct.getId();
            Uri personPhoto = acct.getPhotoUrl();
```

```
        nameTV.setText("Name: "+personName);
        emailTV.setText("Email: "+personEmail);
    }

    sign_out.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            signOut();
        }
    });
}

private void signOut() {
    mGoogleSignInClient.signOut()
        .addOnCompleteListener(this, new OnCompleteListener<Void>() {
            @Override
            public void onComplete(@NonNull Task<Void> task) {
                Toast.makeText(Main2Activity.this, "Successfully signed
out", Toast.LENGTH_SHORT).show();
                startActivity(new Intent(Main2Activity.this, MainActivity.class));
                finish();
            }
        });
}
```

Output:



