**Practical 9 : Implement file handling program which does following**

**1) Write the contents to the file**

**2) Read the contents from the file**

**3) Delete a file**

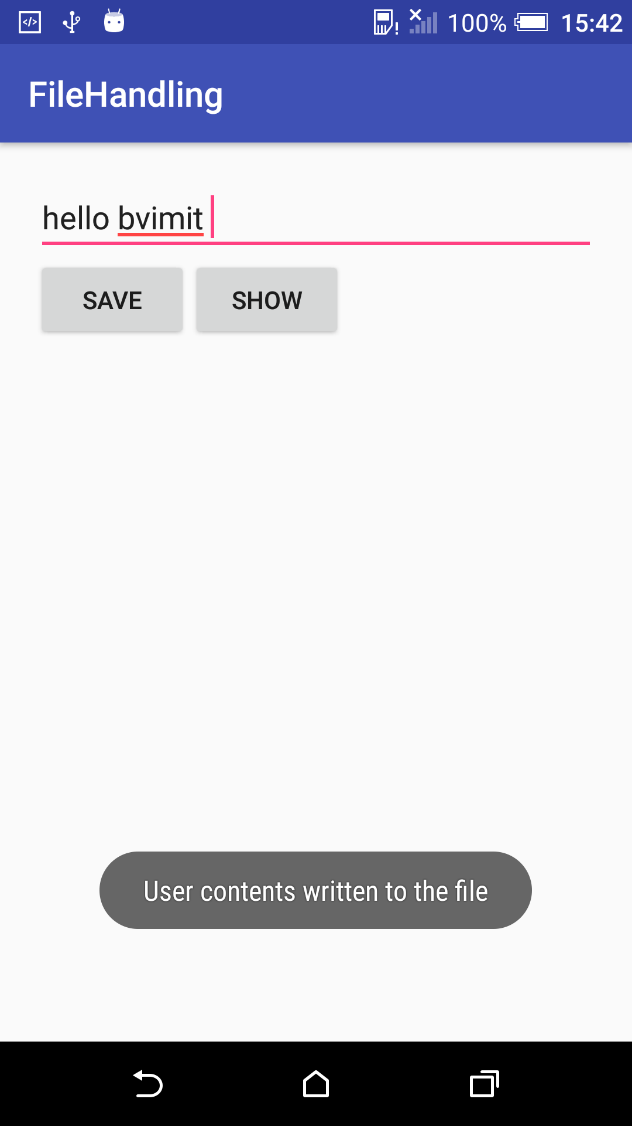
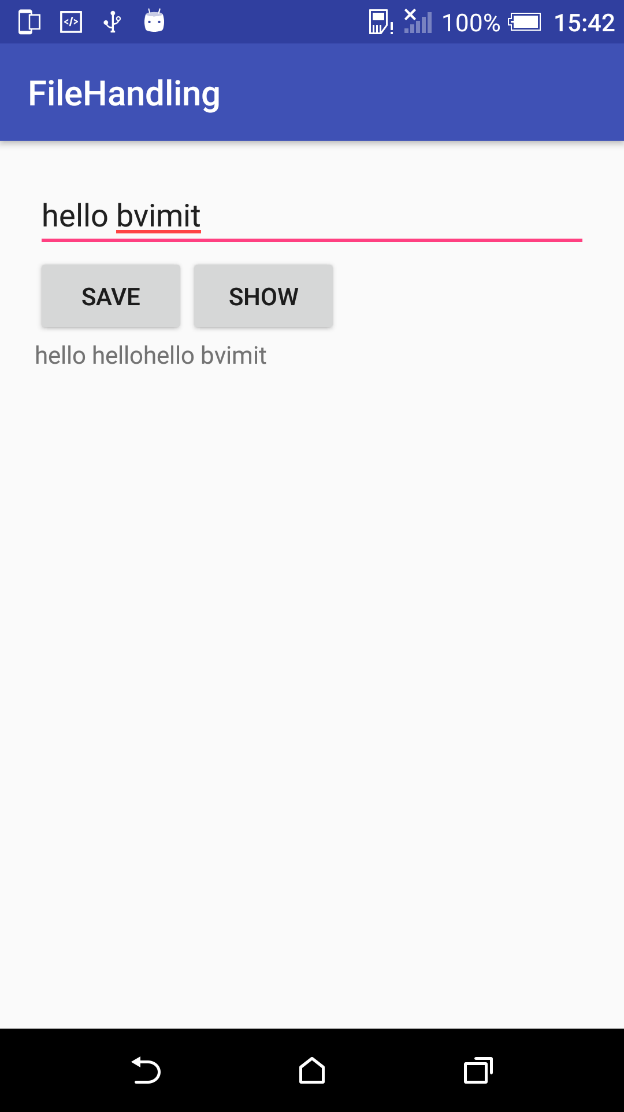
**Activity\_main.xml**

*<?***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"  
 android:padding="20dp"  
 android:gravity="center\_horizontal"  
 tools:context=".MainActivity"**>  
  
 <**EditText  
 android:id="@+id/fileContentEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter the text to be saved"**/>  
  
 <**Button  
 android:id="@+id/saveButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Save"  
 android:layout\_below="@id/fileContentEditText"**/>  
  
 <**Button  
 android:id="@+id/showContentButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Show"  
 android:layout\_below="@id/fileContentEditText"  
 android:layout\_toRightOf="@id/saveButton"**/>  
  
 <**TextView  
 android:id="@+id/fileContentsTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:visibility="gone"  
 android:gravity="left"  
 android:layout\_below="@id/showContentButton"**/>  
  
</**RelativeLayout**>

**MainActivity.java**

**package** handling.file.com.filehandling;  
  
**import** android.content.Context;  
**import** android.os.Bundle;  
**import** android.support.v7.app.AppCompatActivity;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
**import** java.io.BufferedReader;  
**import** java.io.BufferedWriter;  
**import** java.io.FileInputStream;  
**import** java.io.FileOutputStream;  
**import** java.io.IOException;  
**import** java.io.InputStreamReader;  
**import** java.io.OutputStreamWriter;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 **private** EditText **fileContentEditText**;  
 **private** Button **saveButton**;  
 **private** Button **showContentButton**;  
 **private** TextView **fileContentsTextView**;  
 **private final static** String ***FILE\_NAME*** = **"bvimit"**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
  
 fileContentEditText = findViewById(R.id.fileContentEditText);  
 saveButton = findViewById(R.id.saveButton);  
 showContentButton = findViewById(R.id.showContentButton);  
 fileContentsTextView = findViewById(R.id.fileContentsTextView);  
  
 saveButton.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 **try** {  
 saveContent();  
 Toast.makeText(MainActivity.**this**, **"User contents written to the file"**, Toast.LENGTH\_SHORT).show();  
 } **catch** (IOException e) {  
 e.printStackTrace();  
 }  
 }  
 });  
  
 showContentButton.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 **try** {  
 displayFileContent();  
 } **catch** (IOException e) {  
 e.printStackTrace();  
 }  
 }  
 });  
 }  
  
 **private void** displayFileContent() **throws** IOException {  
 FileInputStream fileInputStream = openFileInput(FILE\_NAME);  
 InputStreamReader inputStreamReader = **new** InputStreamReader(fileInputStream);  
 BufferedReader bufferedReader = **new** BufferedReader(inputStreamReader);  
 fileContentsTextView.setVisibility(View.VISIBLE);  
 fileContentsTextView.setText(bufferedReader.readLine());  
 bufferedReader.close();  
 inputStreamReader.close();  
 fileInputStream.close();  
 }  
  
 **private void** saveContent() **throws** IOException {  
 String userContent = fileContentEditText.getText().toString();  
 FileOutputStream fileOutputStream = openFileOutput(FILE\_NAME, Context.MODE\_APPEND | Context.MODE\_PRIVATE);  
 OutputStreamWriter outputStreamWriter = **new** OutputStreamWriter(fileOutputStream);  
 BufferedWriter bufferedWriter = **new** BufferedWriter(outputStreamWriter);  
 bufferedWriter.write(userContent);  
 bufferedWriter.close();  
 outputStreamWriter.close();  
 fileOutputStream.close();  
 }  
}

**Output:**

** **

**Practical 10 : Create an application which parses JSON present in given link and displays following**

**information for all employees.**

**Employees.json**

{  
 "employees": [  
 {  
 "name": "abc",  
 "age": 20,  
 "location": "Mumbai",  
 "companies": [  
 {  
 "name": "Accenture",  
 "location": "Mumbai"  
 },  
 {  
 "name": "Capgemini",  
 "location": "Pune"  
 }  
 ]  
 },  
 {  
 "name": "pqr",  
 "age": 34,  
 "location": "Pune",  
 "companies": [  
 {  
 "name": "Mindtree",  
 "location": "Mumbai"  
 },  
 {  
 "name": "Thoughtworks",  
 "location": "Pune"  
 }  
 ]  
 }  
 ]  
}

Activity\_main.xml

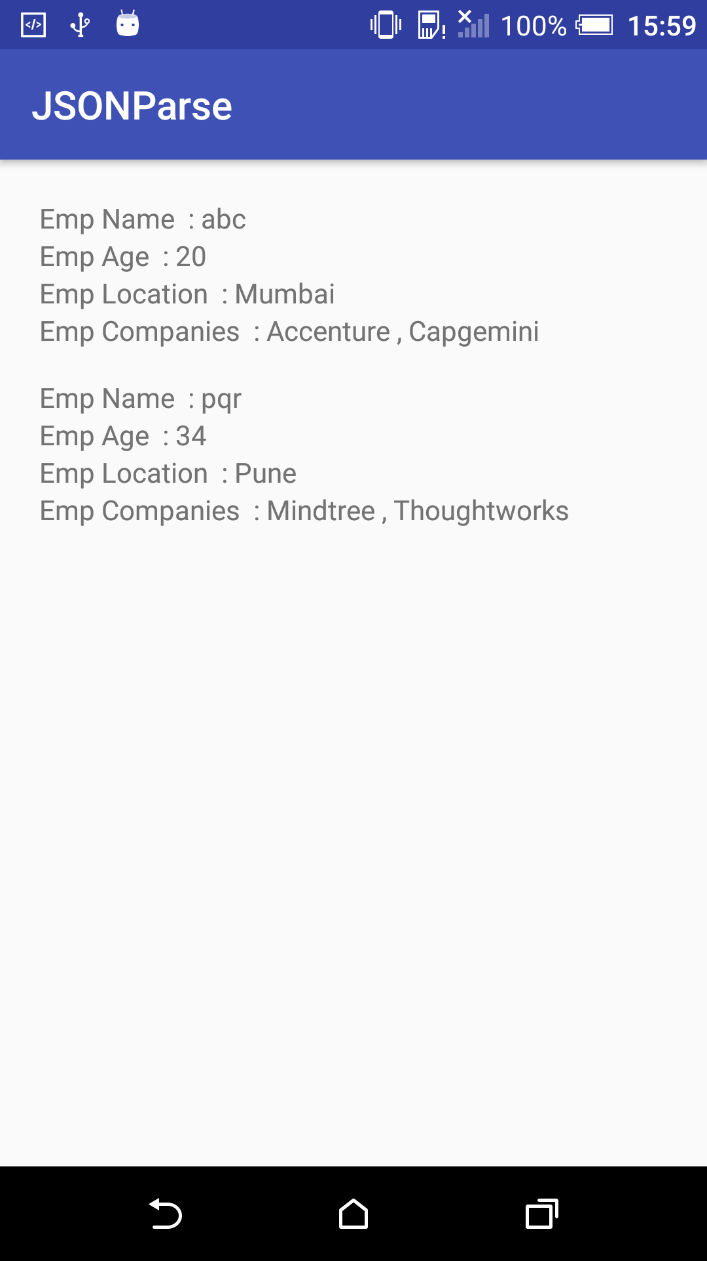
*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:padding="20dp"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/employeeName1TextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
 <TextView  
 android:id="@+id/employeeAge1TextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
 <TextView  
 android:id="@+id/employeeLocation1TextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
 <TextView  
 android:id="@+id/employeeCompanies1TextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
  
 <TextView  
 android:id="@+id/employeeName2TextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"

android:layout\_marginTop="15sp" />  
  
 <TextView  
 android:id="@+id/employeeAge2TextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
 <TextView  
 android:id="@+id/employeeLocation2TextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
 <TextView  
 android:id="@+id/employeeCompanies2TextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
</LinearLayout>

**MainActivity.java**

package parse.json.com.jsonparse;  
  
import android.os.Bundle;  
import android.support.v7.app.AppCompatActivity;  
import android.widget.TextView;  
  
import org.json.JSONArray;  
import org.json.JSONException;  
import org.json.JSONObject;  
  
import java.io.BufferedReader;  
import java.io.IOException;  
import java.io.InputStream;  
import java.io.InputStreamReader;  
  
public class MainActivity extends AppCompatActivity {  
  
 private TextView employeeName1TextView;  
 private TextView employeeCompanies1TextView;  
 private TextView employeeLocation1TextView;  
 private TextView employeeAge1TextView;  
  
 private TextView employeeName2TextView;  
 private TextView employeeCompanies2TextView;  
 private TextView employeeLocation2TextView;  
 private TextView employeeAge2TextView;  
  
  
 public String getFileContents() throws IOException {  
 InputStream stream = getAssets().open("employees.json");  
 InputStreamReader reader = new InputStreamReader(stream);  
 BufferedReader bufferedReader = new BufferedReader(reader);  
 StringBuilder stringBuilder = new StringBuilder();  
 String temp;  
 while ((temp = bufferedReader.readLine()) != null) {  
 stringBuilder.append(temp);  
 stringBuilder.append(System.*getProperty*("line.separator"));  
 }  
 return stringBuilder.toString();  
 }  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 employeeName1TextView = findViewById(R.id.*employeeName1TextView*);  
 employeeCompanies1TextView = findViewById(R.id.*employeeCompanies1TextView*);  
 employeeLocation1TextView = findViewById(R.id.*employeeLocation1TextView*);  
 employeeAge1TextView = findViewById(R.id.*employeeAge1TextView*);  
 employeeName2TextView = findViewById(R.id.*employeeName2TextView*);  
 employeeCompanies2TextView = findViewById(R.id.*employeeCompanies2TextView*);  
 employeeLocation2TextView = findViewById(R.id.*employeeLocation2TextView*);  
 employeeAge2TextView = findViewById(R.id.*employeeAge2TextView*);  
  
 try {  
 String jsonContent = getFileContents();  
 getContents(jsonContent);  
 } catch (IOException e) {  
 e.printStackTrace();  
 } catch (JSONException e1) {  
 e1.printStackTrace();  
 }  
 }  
  
 private void getContents(String jsonContent) throws JSONException {  
 JSONObject root = new JSONObject(jsonContent);  
 JSONArray employees = root.getJSONArray("employees");  
 if (employees != null && employees.length() > 0) {  
 *//For Fist employee* JSONObject emp1Details = employees.getJSONObject(0);  
 String emp1Name = emp1Details.getString("name");  
 employeeName1TextView.setText("Emp Name : " +emp1Name);  
 String emp1Age = emp1Details.getString("age");  
 employeeAge1TextView.setText("Emp Age : " +emp1Age);  
 String emp1Location = emp1Details.getString("location");  
 employeeLocation1TextView.setText("Emp Location : " +emp1Location);  
 JSONArray emp1CompanyArray = emp1Details.getJSONArray("companies");  
 *//For emp1 company details* JSONObject emp1CompanyDetals1 = emp1CompanyArray.getJSONObject(0);  
 String emp1CompanyName1 = emp1CompanyDetals1.getString("name");  
 JSONObject emp1CompanyDetals2 = emp1CompanyArray.getJSONObject(1);  
 String emp1CompanyName2 = emp1CompanyDetals2.getString("name");  
 employeeCompanies1TextView.setText("Emp Companies : " +emp1CompanyName1+ " , " +emp1CompanyName2);  
  
 *//For Second employee* JSONObject emp2Details = employees.getJSONObject(1);  
 String emp2Name = emp2Details.getString("name");  
 employeeName2TextView.setText("Emp Name : " +emp2Name);  
 String emp2Age = emp2Details.getString("age");  
 employeeAge2TextView.setText("Emp Age : " +emp2Age);  
 String emp2Location = emp2Details.getString("location");  
 employeeLocation2TextView.setText("Emp Location : " +emp2Location);  
 JSONArray emp2CompanyArray = emp2Details.getJSONArray("companies");  
 *//For emp2 company details* JSONObject emp2CompanyDetals1 = emp2CompanyArray.getJSONObject(0);  
 String emp2CompanyName1 = emp2CompanyDetals1.getString("name");  
 JSONObject emp2CompanyDetals2 = emp2CompanyArray.getJSONObject(1);  
 String emp2CompanyName2 = emp2CompanyDetals2.getString("name");  
 employeeCompanies2TextView.setText("Emp Companies : " +emp2CompanyName1+ " , " +emp2CompanyName2);  
 }  
  
 }  
}

**Output:**

****

**Program 11 : Create an android application which will fetch current weather information from**

**following API (Use AsyncTask to perform asynschrous operation)**

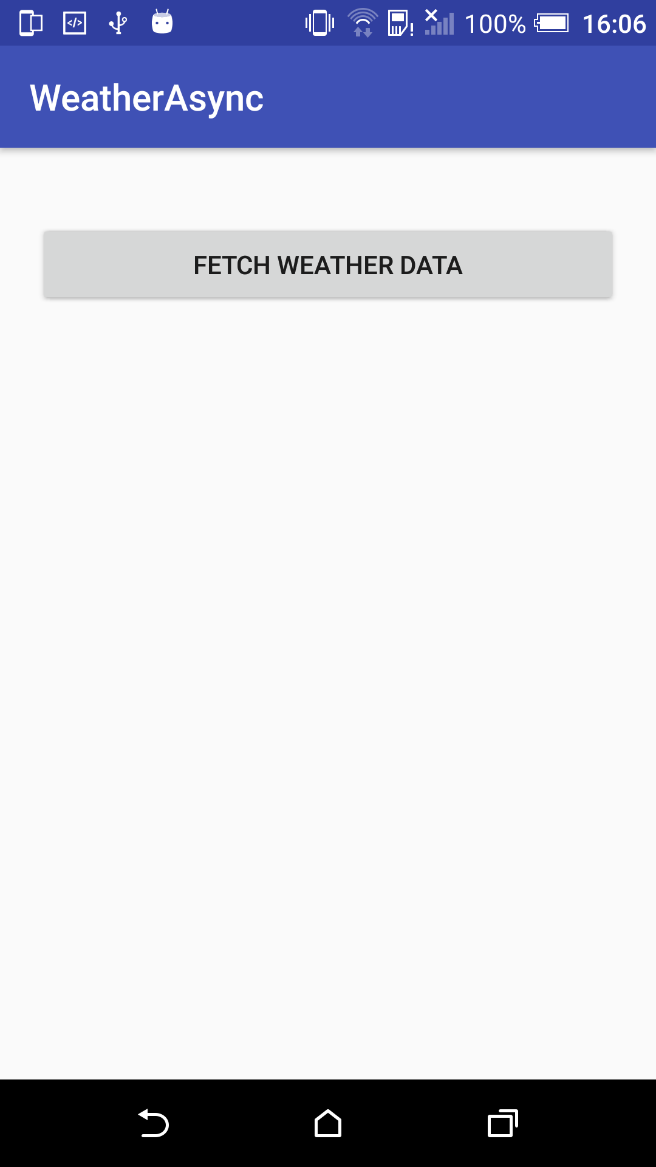
**Activity\_main.xml**

*<?*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"  
 android:padding="20dp"  
 tools:context=".MainActivity">  
  
 <ProgressBar  
 android:id="@+id/progressBar"  
 android:layout\_marginTop="20dp"  
 android:visibility="gone"  
 style="@android:style/Widget.Material.Light.ProgressBar.Horizontal"  
 android:progress="0"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 tools:targetApi="lollipop" />  
  
 <Button  
 android:id="@+id/fetchWeatherDataButton"  
 android:layout\_marginTop="20dp"  
 android:layout\_width="match\_parent"  
 android:layout\_gravity="center\_horizontal"  
 android:layout\_height="wrap\_content"  
 android:text="Fetch Weather Data"  
 android:layout\_below="@id/progressBar"/>  
  
 <TextView  
 android:id="@+id/cityNameTextView"  
 android:layout\_width="150dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/fetchWeatherDataButton"  
 android:layout\_marginTop="15dp"  
 android:textColor="@color/colorBlack"  
 android:textSize="15sp"/>  
  
 <TextView  
 android:id="@+id/weatherTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/cityNameTextView"  
 android:layout\_marginTop="15dp"  
 android:textColor="@color/colorBlack"  
 android:textSize="15sp"/>  
  
 <TextView  
 android:id="@+id/weatherDescriptionTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/weatherTextView"  
 android:layout\_marginTop="15dp"  
 android:textColor="@color/colorBlack"  
 android:textSize="15sp"/>  
  
 <TextView  
 android:id="@+id/temperatureTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/weatherDescriptionTextView"  
 android:layout\_marginTop="15dp"  
 android:textColor="@color/colorBlack"  
 android:textSize="15sp"/>  
  
 <TextView  
 android:id="@+id/pressureTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/temperatureTextView"  
 android:layout\_marginTop="15dp"  
 android:textColor="@color/colorBlack"  
 android:textSize="15sp"/>  
  
 <TextView  
 android:id="@+id/humidityTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/pressureTextView"  
 android:layout\_marginTop="15dp"  
 android:textColor="@color/colorBlack"  
 android:textSize="15sp"/>  
  
 <TextView  
 android:id="@+id/visibilityTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/humidityTextView"  
 android:layout\_marginTop="15dp"  
 android:textColor="@color/colorBlack"  
 android:textSize="15sp"/>  
  
 <TextView  
 android:id="@+id/windSpeedTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/visibilityTextView"  
 android:layout\_marginTop="15dp"  
 android:textColor="@color/colorBlack"  
 android:textSize="15sp"/>  
  
  
</RelativeLayout>

**MainActivity.java**

package async.weather.com.weatherasync;  
  
import android.os.AsyncTask;  
import android.os.Bundle;  
import android.support.v7.app.AppCompatActivity;  
import android.view.View;  
import android.widget.Button;  
import android.widget.ProgressBar;  
import android.widget.TextView;  
  
import org.json.JSONArray;  
import org.json.JSONException;  
import org.json.JSONObject;  
  
import java.io.BufferedReader;  
import java.io.IOException;  
import java.io.InputStream;  
import java.io.InputStreamReader;  
import java.net.HttpURLConnection;  
import java.net.URL;  
  
public class MainActivity extends AppCompatActivity {  
  
 private ProgressBar progressBar;  
 private Button fetchWeatherDataButton;  
 private TextView cityNameTextView;  
 private TextView weatherTextView;  
 private TextView weatherDescriptionTextView;  
 private TextView temperatureTextView;  
 private TextView pressureTextView;  
 private TextView humidityTextView;  
 private TextView visibilityTextView;  
 private TextView windSpeedTextView;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 progressBar = findViewById(R.id.*progressBar*);  
 fetchWeatherDataButton = findViewById(R.id.*fetchWeatherDataButton*);  
 cityNameTextView = findViewById(R.id.*cityNameTextView*);  
 weatherTextView = findViewById(R.id.*weatherTextView*);  
 weatherDescriptionTextView = findViewById(R.id.*weatherDescriptionTextView*);  
 temperatureTextView = findViewById(R.id.*temperatureTextView*);  
 pressureTextView = findViewById(R.id.*pressureTextView*);  
 humidityTextView = findViewById(R.id.*humidityTextView*);  
 visibilityTextView = findViewById(R.id.*visibilityTextView*);  
 windSpeedTextView = findViewById(R.id.*windSpeedTextView*);  
  
 fetchWeatherDataButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 fetchWeatherResponse();  
 }  
 });  
 }  
  
 private void fetchWeatherResponse() {  
 FetctWeatherDataTask fetch = new FetctWeatherDataTask();  
 fetch.execute("http://www.json-generator.com/api/json/get/bHWddvthgy?intent=2");  
 }  
  
 private class FetctWeatherDataTask extends AsyncTask<String, Void, String>{  
  
 @Override  
 protected void onPreExecute() {  
 super.onPreExecute();  
 progressBar.setVisibility(View.*VISIBLE*);  
 }  
  
 @Override  
 protected String doInBackground(String... strings) {  
 String url = strings[0];  
 try {  
 URL server\_url = new URL(url);  
 HttpURLConnection connection = (HttpURLConnection)server\_url.openConnection();  
 connection.connect();  
 int responseCode = connection.getResponseCode();  
 if(responseCode == HttpURLConnection.*HTTP\_OK*){  
 InputStream inputStream = connection.getInputStream();  
 InputStreamReader inputStreamReader = new InputStreamReader(inputStream);  
 BufferedReader bufferedReader = new BufferedReader(inputStreamReader);  
 StringBuilder stringBuilder = new StringBuilder();  
 String temp;  
 while((temp = bufferedReader.readLine()) != null){  
 stringBuilder.append(temp);  
 stringBuilder.append(System.*getProperty*("line.separator"));  
 }  
 return stringBuilder.toString();  
 }else{  
 return null;  
 }  
 } catch (IOException e) {  
 e.printStackTrace();  
 return null;  
 }  
 }  
  
 @Override  
 protected void onPostExecute(String s) {  
 super.onPostExecute(s);  
 progressBar.setVisibility(View.*VISIBLE*);  
 try {  
 parseWeatherContent(s);  
 } catch (JSONException e) {  
 e.printStackTrace();  
 }  
 }  
 }  
  
 private void parseWeatherContent(String s) throws JSONException {  
 JSONObject root = new JSONObject(s);  
 String cityName = root.getString("name");  
 cityNameTextView.setText("City : "+cityName);  
  
 JSONArray weather = root.getJSONArray("weather");  
 if(weather != null && weather.length() > 0){  
 JSONObject weatherObj1 = weather.getJSONObject(0);  
 String mainWeather = weatherObj1.getString("main");  
 weatherTextView.setText("Weather : " +mainWeather);  
 String weatherDesc = weatherObj1.getString("description");  
 weatherDescriptionTextView.setText("Description : "+weatherDesc);  
 }  
 JSONObject weatherParams = root.getJSONObject("main");  
 String temperature = weatherParams.getString("temp");  
 temperatureTextView.setText("Temperature : "+temperature);  
 String pressure = weatherParams.getString("pressure");  
 temperatureTextView.setText("Pressure : " +pressure);  
 String humidity = weatherParams.getString("humidity");  
 humidityTextView.setText("Humidity : "+humidity);  
 String visibility = root.getString("visibility");  
 visibilityTextView.setText("Visibility : "+visibility);  
  
 JSONObject windParams = root.getJSONObject("wind");  
 String windSpeed = windParams.getString("speed");  
 windSpeedTextView.setText("Wind Speed : "+windSpeed);  
 }  
}

**Output:**

** **

**Practical 14 : Create a login application with Signup button. Very first time when user launches th application, allow user to click on signup button and let him enter username and desired password. Save these details into room table once register button is clicked. Next time when user launches application, sign up button will be disabled, and login button will be enabled. When user enter username and password and clicks sign in, query database table to verify credentials. If credentials are correct then show welcome page of display alert message informing wrong credentials.**

**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"  
 android:padding="20dp"  
 android:gravity="center"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/usernameEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter the username"/>  
  
 <EditText  
 android:id="@+id/passwordEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:inputType="textPassword"  
 android:hint="Enter the password"  
 android:layout\_below="@id/usernameEditText"  
 android:layout\_marginTop="15sp"/>  
  
 <Button  
 android:id="@+id/signupButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Sign Up"  
 android:gravity="center\_horizontal"  
 android:layout\_below="@id/passwordEditText"/>  
  
 <Button  
 android:id="@+id/loginButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Login"  
 android:gravity="center\_horizontal"  
 android:layout\_below="@id/signupButton"  
 android:enabled="false"/>  
  
</RelativeLayout>

Activity\_welcome.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 android:padding="20dp"  
 android:gravity="center"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent">  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Welcome"  
 android:textSize="28sp"  
 android:gravity="center\_horizontal"  
 android:textColor="#000"/>  
  
</RelativeLayout>

**Users.java**

package room.login.com.loginroom;  
import android.arch.persistence.room.Entity;  
import android.arch.persistence.room.PrimaryKey;

@Entity(tableName = "users")  
public class Users {  
  
 @PrimaryKey(autoGenerate = true)  
 private int \_id;  
 private String username;  
 private String password;  
  
 public int get\_id() {  
 return \_id;  
 }  
  
 public void set\_id(int \_id) {  
 this.\_id = \_id;  
 }  
  
 public String getUsername() {  
 return username;  
 }  
  
 public void setUsername(String username) {  
 this.username = username;  
 }  
  
 public String getPassword() {  
 return password;  
 }  
  
 public void setPassword(String password) {  
 this.password = password;  
 }  
}

**UserDao.java**

package room.login.com.loginroom;  
import android.arch.persistence.room.Dao;  
import android.arch.persistence.room.Insert;  
import android.arch.persistence.room.Query;  
  
@Dao  
public interface UsersDao {  
  
 @Query("Select \* from users where username = :username and password = :password")  
 boolean checkLogin(String username, String password);  
  
 @Insert  
 void insertUserDetails(Users... users);  
}

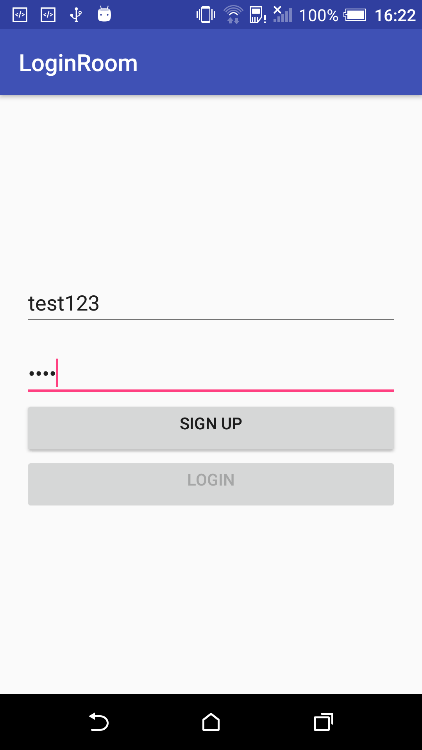
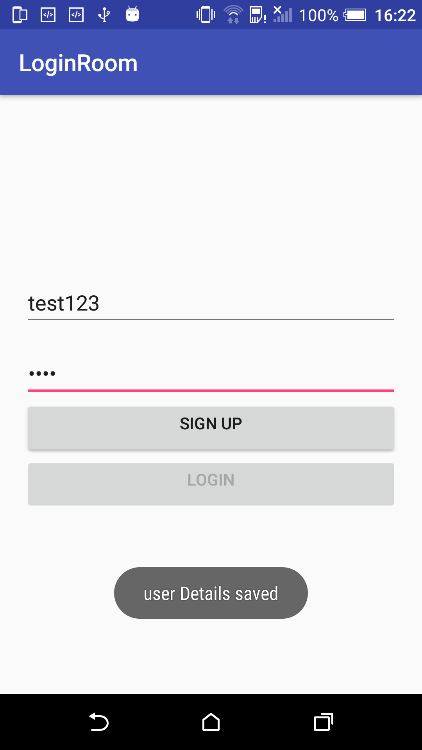
UserDatabase.java

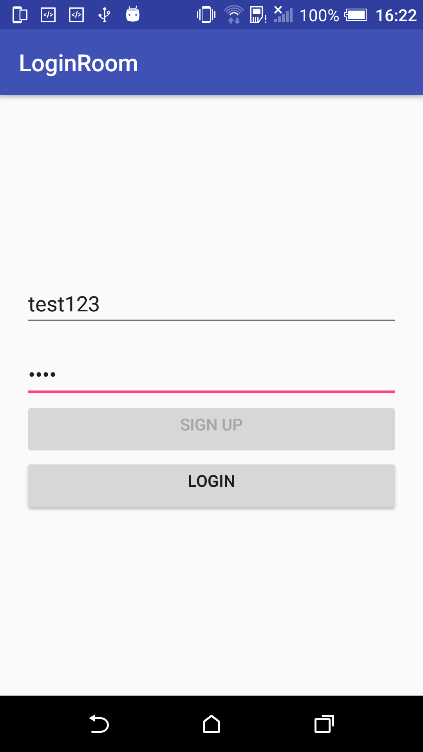
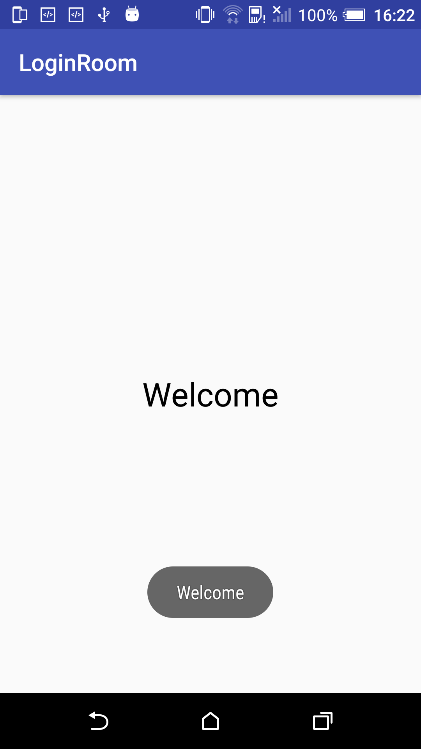
package room.login.com.loginroom;  
  
import android.arch.persistence.room.Database;  
import android.arch.persistence.room.RoomDatabase;  
  
@Database(entities = {Users.class}, version = 1)  
public abstract class UserDataBase extends RoomDatabase {  
 public abstract UsersDao usersDao();  
}

**MainActivity.java**

package room.login.com.loginroom;  
import android.arch.persistence.room.Room;  
import android.content.Context;  
import android.content.Intent;  
import android.content.SharedPreferences;  
import android.os.Bundle;  
import android.support.v7.app.AppCompatActivity;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
  
 private EditText usernameEditText;  
 private EditText passwordEditText;  
 private Button signupButton;  
 private Button loginButton;  
 private UserDataBase userDataBase;  
 private SharedPreferences sharedPreferences;  
 private final static String *PREF\_CREDENTIALS* = "Credentials";  
 private final static String *PREF\_KEY\_USERNAME* = "Username";  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 userDataBase = Room.*databaseBuilder*(this,UserDataBase.class,"Users\_db").allowMainThreadQueries().build();  
  
 usernameEditText = findViewById(R.id.*usernameEditText*);  
 passwordEditText = findViewById(R.id.*passwordEditText*);  
 signupButton = findViewById(R.id.*signupButton*);  
 loginButton = findViewById(R.id.*loginButton*);  
 sharedPreferences = getSharedPreferences(*PREF\_CREDENTIALS*, Context.*MODE\_PRIVATE*);  
 if(isAlreadySignedup()){  
 signupButton.setEnabled(false);  
 loginButton.setEnabled(true);  
 }  
 signupButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 Users users = new Users();  
 users.setUsername(usernameEditText.getText().toString());  
 users.setPassword(passwordEditText.getText().toString());  
 userDataBase.usersDao().insertUserDetails(users);  
 sharedPreferences.edit().putString(*PREF\_KEY\_USERNAME*,usernameEditText.getText().toString()).apply();  
 Toast.*makeText*(MainActivity.this,"user Details saved", Toast.*LENGTH\_LONG*).show();  
  
 }  
 });  
  
 loginButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String username = usernameEditText.getText().toString();  
 String password = passwordEditText.getText().toString();  
 boolean checkUserDetails = userDataBase.usersDao().checkLogin(username,password);  
 if(checkUserDetails){  
 Toast.*makeText*(MainActivity.this,"Welcome",Toast.*LENGTH\_LONG*).show();  
 Intent intent = new Intent(MainActivity.this,WelcomeActivity.class);  
 startActivity(intent);  
 }else{  
 Toast.*makeText*(MainActivity.this,"Please Check the credentials",Toast.*LENGTH\_LONG*).show();  
 }  
 }  
 });  
 }  
  
 public boolean isAlreadySignedup() {  
 return sharedPreferences.contains(*PREF\_KEY\_USERNAME*);  
 }  
}

**Output:**

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