



Assignment no.02

“Code for Research Defense Application Form”

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Roll no.

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Course:

Mobile Application Development

Degree:

BC-CS-19 (section B)

University of Gujrat

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Main Activity:

```
package com.mango.ammad;

import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.content.Intent;
import android.os.Bundle;
import android.os.Parcelabele;
import android.widget.Toast;

import java.util.ArrayList;
import java.util.List;

public class MainActivity extends AppCompatActivity {

    MyAdapter myadapter;
    RecyclerView RV;
    static UserData userInfo=null;
    List data = new ArrayList<DataTableModel>();
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        userInfo=getIntent().getParcelableExtra("info");

        Toast.makeText(this, ""+userInfo.getId(), Toast.LENGTH_SHORT).show();

        //
        dbHelperClass dbHelperClass = new dbHelperClass(this);
        data = dbHelperClass.getDataModels(userInfo.getId());
        dbHelperClass.close();
        RV = findViewById(R.id.recycler);
        myadapter = new MyAdapter(data, this);
        RV.setLayoutManager(new LinearLayoutManager(this,
LinearLayoutManager.VERTICAL, false));
        RV.setAdapter(myadapter);

        findViewById(R.id.btnNew).setOnClickListener(v->{
            Intent intent = new Intent(this,itemEntry.class);
            intent.putExtra("info",(Parcelable) userInfo);
            startActivity(intent);
        });

        findViewById(R.id.txtLogOut).setOnClickListener(v -> {
            Intent intent = new Intent(this, LoginPage.class);
            startActivity(intent);
            UserModel.userData=null;
            finishAffinity();
        });
    }
}
```

login Pages:

```
package com.mango.ammad;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.os.Parcelabele;
import android.widget.EditText;

import com.google.android.material.floatingactionbutton.FloatingActionButton;

public class LoginPage extends AppCompatActivity {

    EditText user,pass;
    UserData userInfo=null;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_login_page);

        user= findViewById(R.id.editSignEmail);
        pass= findViewById(R.id.editSignPassword);
        dbHelperClass db= new dbHelperClass(this);

        findViewById(R.id.btnSignIN).setOnClickListener(v->{
            userInfo = db.CheckUser(user.getText().toString(),
pass.getText().toString());
            UserModel.userData=userInfo;
            if (userInfo!=null) {
                Intent intent = new Intent(this, MainActivity.class);
                intent.putExtra("info", (Parcelabele) userInfo);
                startActivity(intent);
                finishAffinity();
            }
        });

        findViewById(R.id.btnSignUp).setOnClickListener(v->{
            Intent intent = new Intent(this, RegisterAccount.class);
            startActivity(intent);
        });

    }
}
```

Register Account:

```
package com.mango.ammad;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class RegisterAccount extends AppCompatActivity {

    UserData userData=null;
    EditText []editTexts=new EditText[5];
    Button btn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_register_account);

        btn=findViewById(R.id.btnRegSignUp);

        editTexts[0]=findViewById(R.id.editSignEmail);
        editTexts[1]=findViewById(R.id.editRollNumber);
        editTexts[2]=findViewById(R.id.editEmail);
        editTexts[3]=findViewById(R.id.editPassword);
        editTexts[4]=findViewById(R.id.editSignPassword);

        dbHelperClass dbHelperClass = new dbHelperClass(this);

        btn.setOnClickListener(v->{
            String p1=editTexts[3].getText().toString();
            String p2=editTexts[4].getText().toString();

            if(checkIfViewEmpty(editTexts[0],editTexts[1],editTexts[2],editTexts[3],editTexts[4]))
                Toast.makeText(this, "Some Fields are Empty ",
                    Toast.LENGTH_SHORT).show();
            else if(!p1.equals(p2))
                Toast.makeText(this, "Make Sure Password = ConfirmPassword",
                    Toast.LENGTH_LONG).show();
            else{
                dbHelperClass.RegisterUser(new UserData(
                    editTexts[0].getText().toString(),
                    editTexts[1].getText().toString(),
                    editTexts[2].getText().toString(),
                    editTexts[3].getText().toString()
                ));

                Intent intent= new
                    Intent(getApplicationContext(),LoginPage.class);
                startActivity(intent);
                finishAffinity();
            }
        })
    }
}
```

```

        );
    }

    boolean checkIfViewEmpty(EditText ed1,EditText ed2,EditText ed3,EditText
ed4,EditText ed5){

        return
            ed1.getText().toString().isEmpty() &&
                ed2.getText().toString().isEmpty() &&
                ed3.getText().toString().isEmpty() &&
                ed4.getText().toString().isEmpty() &&
                ed5.getText().toString().isEmpty();
    }
}

```

User Data:

```

package com.mango.ammad;

import android.os.Parcel;
import android.os.Parcelable;

public class UserData implements Parcelable {
    private int id;
    private String name;
    private String rollNumber;
    private String email;
    private String password;

    public UserData() {
    }

    protected UserData(Parcel in) {
        id = in.readInt();
        name = in.readString();
        rollNumber = in.readString();
        email = in.readString();
        password = in.readString();
    }

    public static final Creator<UserData> CREATOR = new Creator<UserData>() {
        @Override
        public UserData createFromParcel(Parcel in) {
            return new UserData(in);
        }

        @Override
        public UserData[] newArray(int size) {
            return new UserData[size];
        }
    };

    public int getId() {
        return id;
    }
}

```

```
public void setId(int id) {
    this.id = id;
}

public String getName() {
    return name;
}

public void setName(String name) {
    this.name = name;
}

public String getRollNumber() {
    return rollNumber;
}

public void setRollNumber(String rollNumber) {
    this.rollNumber = rollNumber;
}

public String getEmail() {
    return email;
}

public void setEmail(String email) {
    this.email = email;
}

public String getPassword() {
    return password;
}

public void setPassword(String password) {
    this.password = password;
}

public UserData(String name, String rollNumber, String email, String password) {
    this.name = name;
    this.rollNumber = rollNumber;
    this.email = email;
    this.password = password;
}

public UserData(int id, String name, String rollNumber, String email, String
password) {
    this.id=id;
    this.name = name;
    this.rollNumber = rollNumber;
    this.email = email;
    this.password = password;
}

@Override
public int describeContents() {
    return 0;
}

@Override
public void writeToParcel(Parcel dest, int flags) {
    dest.writeInt(id);
    dest.writeString(name);
    dest.writeString(rollNumber);
}
```

```

        dest.writeString(email);
        dest.writeString(password);
    }
}

```

Items Entry:

```

package com.mango.ammad;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.os.Parcelabele;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.Toast;

import java.util.List;

public class itemEntry extends AppCompatActivity {

    EditText student,course;
    Button btn;
    static UserData userInfo;
    int pos=-1;
    DataModel data=null;
    DataModel dataEdit=null;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_item_entry);

        btn=findViewById(R.id.btnEntrySave);
        student=findViewById(R.id.editEntryName);
        course=findViewById(R.id.editEntryCourse);
        userInfo=getIntent().getParcelableExtra("info");
        pos= getIntent().getIntExtra("pos",-1);
        dataEdit=getIntent().getParcelableExtra("Edit");

        if (pos!=-1){
            student.setText(dataEdit.getName());
            course.setText(dataEdit.getCourse());
        }

        btn.setOnClickListener(v -> {
            Intent intent = new Intent(this,MainActivity.class);
            intent.putExtra("info",(Parcelabele) userInfo);
            if (checkFilled(student,course)){
                Toast.makeText(this, "Some Fields Are Missing Please fill Those",
                    Toast.LENGTH_SHORT).show();
                return;
            }
            String name = student.getText().toString();
            String cs = course.getText().toString();

            if (pos!=-1)
                data= new DataModel(dataEdit.getId(),dataEdit.getUserId(),name,cs);

```

```

        else
            data= new DataModel(name,cs);

        dbHelperClass dbHelperClass = new dbHelperClass(this);
        if (pos==--1)
            dbHelperClass.insertCourse(data,userInfo.getId());
        else
            dbHelperClass.updateCourse(data);

        startActivity(intent);
        finishAffinity();
    });

}

boolean checkFilled(EditText a1, EditText a2){
    if (a1.getText().length()==0)return true;
    if (a2.getText().length()==0)return true;
    return false;
}
}

```

Database Helper Class:

```

package com.mango.ammad;

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;

import java.util.ArrayList;
import java.util.List;

public class dbHelperClass extends SQLiteOpenHelper {

    public static final String DATABASE_NAME = "RegistartionDB";
    public static final int DATABASE_VERSION = 1;

    Context context;

    public dbHelperClass(@Nullable Context context) {
        super(context, DATABASE_NAME, null, DATABASE_VERSION);
        this.context = context;
    }

    @Override
    public void onCreate(SQLiteDatabase db) {

        db.execSQL(" CREATE TABLE " + UserModel.USER_TABLE
            + "("
            + UserModel.KEY_ID + " INTEGER PRIMARY KEY AUTOINCREMENT, "
            + UserModel.KEY_NAME + " TEXT, "
            + UserModel.KEY_ROLL_NUMBER + " TEXT,"
            + UserModel.KEY_EMAIL + " TEXT, "
            + UserModel.KEY_PASSWORD + " TEXT "

```



```

        + ")");

        db.execSQL(" CREATE TABLE "+ DataTableModel.DATA_MODEL_TABLE
        + "("
        + DataTableModel.KEY_ID+" INTEGER PRIMARY KEY AUTOINCREMENT, "
        + DataTableModel.KEY_FOREIGN_KEY+" INTEGER ,"
        + DataTableModel.KEY_Student+" TEXT ,"
        + DataTableModel.KEY_Course+" TEXT ,"
        + " FOREIGN KEY ("
        + DataTableModel.KEY_FOREIGN_KEY
        + ") REFERENCES "
        + UserModel.USER_TABLE
        + "("
        + UserModel.KEY_ID
        + ") "
        + ")");

    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        db.execSQL("DROP TABLE IF EXISTS " + UserModel.USER_TABLE);
        db.execSQL("DROP TABLE IF EXISTS " + DataTableModel.DATA_MODEL_TABLE);
        onCreate(db);
    }

    public void RegisterUser(UserData user) {
        SQLiteDatabase sqLiteDatabase = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put(UserModel.KEY_NAME, user.getName());
        contentValues.put(UserModel.KEY_EMAIL, user.getEmail());
        contentValues.put(UserModel.KEY_PASSWORD, user.getPassword());
        contentValues.put(UserModel.KEY_ROLL_NUMBER, user.getRollNumber());
        sqLiteDatabase.insert(UserModel.USER_TABLE, null, contentValues);
    }

    public UserData CheckUser(String user, String password) {
        SQLiteDatabase sqLiteDatabase = this.getWritableDatabase();
        Cursor cursor = sqLiteDatabase.rawQuery(" select * from " +
        UserModel.USER_TABLE
        + " where " + UserModel.KEY_EMAIL + " =? " + " and " +
        UserModel.KEY_PASSWORD + " =?", new String[]{user, password});

        if (cursor.getCount() > 0) {
            cursor.moveToNext();
            return new UserData(cursor.getInt(0),
            cursor.getString(1),
            cursor.getString(2),
            cursor.getString(3),
            cursor.getString(4)
            );
        }
        return null;
    }

    public void insertCourse(DataModel DM,int id){
        SQLiteDatabase sqLiteDatabase = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put(DataTableModel.KEY_FOREIGN_KEY,id);
        contentValues.put(DataTableModel.KEY_Student,DM.getName());
    }

```

```

        contentValues.put(DataTableModel.KEY_Course, DM.getCourse());
        SQLiteDatabase.insert(DataTableModel.DATA_MODEL_TABLE, null, contentValues);
    }

    public ArrayList<DataModel> getDataModels(int id){
        SQLiteDatabase db =this.getWritableDatabase();
        Cursor cursor= db.rawQuery(" select * from "+DataTableModel.DATA_MODEL_TABLE
+" where " +
        DataTableModel.KEY_FOREIGN_KEY +" =? ",new
String[]{String.valueOf(id)});

        ArrayList<DataModel> data = new ArrayList<>();

        while (cursor.moveToNext()){
            data.add(new DataModel(
                cursor.getInt(0),
                cursor.getInt(1),
                cursor.getString(2),
                cursor.getString(3)
            ));
        }

        return data;
    }

    void removeDataModel(int id){
        SQLiteDatabase db =this.getWritableDatabase();
        db.delete(DataTableModel.DATA_MODEL_TABLE,DataTableModel.KEY_ID+" =? ",new
String[]{String.valueOf(id)});
    }

    void updateCourse(DataModel DM){
        SQLiteDatabase db =this.getWritableDatabase();

        ContentValues cv = new ContentValues();
        cv.put(DataTableModel.KEY_Student, DM.getName());
        cv.put(DataTableModel.KEY_Course, DM.getCourse());

        db.update(DataTableModel.DATA_MODEL_TABLE,cv,DataTableModel.KEY_ID+" =? "
, new String[]{String.valueOf(DM.getId())});
    }
}

```

Data Model:

```

package com.mango.ammad;

import android.os.Parcel;
import android.os.Parcelable;

public class DataModel implements Parcelable {
    private int id;
    private int userId;
    private String Name;
    private String Course;

    protected DataModel(Parcel in) {
        id = in.readInt();
        userId = in.readInt();
        Name = in.readString();
    }
}

```

```

        Course = in.readString();
    }

    public static final Creator<DataModel> CREATOR = new Creator<DataModel>() {
        @Override
        public DataModel createFromParcel(Parcel in) {
            return new DataModel(in);
        }

        @Override
        public DataModel[] newArray(int size) {
            return new DataModel[size];
        }
    };

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public int getUserId() {
        return userId;
    }

    public void setUserId(int userId) {
        this.userId = userId;
    }

    public String getName() {
        return Name;
    }

    public void setName(String name) {
        Name = name;
    }

    public String getCourse() {
        return Course;
    }

    public void setCourse(String course) {
        Course = course;
    }

    public DataModel(int id, int userId, String name, String course) {
        this.id = id;
        this.userId = userId;
        Name = name;
        Course = course;
    }

    public DataModel(String name, String course) {
        Name = name;
        Course = course;
    }

    @Override
    public int describeContents() {
        return 0;
    }
}

```

```

@Override
public void writeToParcel(Parcel dest, int flags) {
    dest.writeInt(id);
    dest.writeInt(userId);
    dest.writeString(Name);
    dest.writeString(Course);
}
}

```

My Adapter:

```

package com.mango.ammad;

import android.app.Activity;
import android.content.Intent;
import android.os.Parcelable;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;
import android.widget.TextView;

import androidx.annotation.NonNull;
import androidx.cardview.widget.CardView;
import androidx.recyclerview.widget.RecyclerView;

import java.util.List;

public class MyAdapter extends RecyclerView.Adapter<MyAdapter.VHolder> {

    List<DataModel> Data;
    private Activity activity;

    public MyAdapter(List<DataModel> data, Activity activity) {
        Data = data;
        this.activity = activity;
    }

    public static class VHolder extends RecyclerView.ViewHolder {
        TextView Student;
        TextView Course;
        Button Delete;
        CardView Edit;
        public VHolder(@NonNull View itemView) {
            super(itemView);
            Student = itemView.findViewById(R.id.Student);
            Course = itemView.findViewById(R.id.Course);
            Delete = itemView.findViewById(R.id.btnDelete);
            Edit = itemView.findViewById(R.id.card);
        }
    }

    @NonNull
    @Override
    public VHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
        LayoutInflater inflater = LayoutInflater.from(parent.getContext());
        View view = inflater.inflate(R.layout.courseitem, parent, false);

        return new VHolder(view);
    }
}

```

```

@Override
public void onBindViewHolder(@NonNull VHolder holder, int position) {
    DataModel mydata = Data.get(position);
    holder.Student.setText(mydata.getName());
    holder.Course.setText(mydata.getCourse());
    holder.Delete.setOnClickListener(v -> {
        dbHelperClass dbHelperClass =new dbHelperClass(activity);
        dbHelperClass.removeDataModel(mydata.getId());
        dbHelperClass.close();
        Intent intent = new Intent(activity, MainActivity.class);
        intent.putExtra("info", (Parcelable) UserModel.userData);
        activity.startActivity(intent);
        activity.finishAffinity();
    });
    holder.Edit.setOnClickListener(v -> {

        Intent intent = new Intent(activity,itemEntry.class);
        intent.putExtra("Edit", mydata);
        intent.putExtra("pos",position);
        intent.putExtra("info", (Parcelable) UserModel.userData);
        activity.startActivity(intent);
    });
}

@Override
public int getItemCount() {
    return Data.size();
}
}

```

Data Table Model:

```

package com.mango.ammad;

public class DataTableModel {
    public static final String KEY_ID ="id";
    public static final String KEY_FOREIGN_KEY ="id_user";
    public static final String KEY_Student ="name";
    public static final String KEY_Course ="roll_number";
    public static final String DATA_MODEL_TABLE="DataTable";
}

```