

Lab 2 – ToDo Android application

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Introduction

App created is a ToDo app where you can add, update and delete tasks. When the app opens, you have the option to create a task by clicking on the action bar plus button, report a problem by using implicit intent or contact for more info using Contact Us button using a Dialog Fragment. When you add a new task, you can name the task and add date and time for the task. The task will be created and visible with the checkbox. Once the task is done, you can click the check box to scratch the task. Clicking the task gives you the option to modify and delete the task.

Screenshots

Sqlite SQLiteOpenHelper class

```
public class DatabaseHelper extends SQLiteOpenHelper {

    private static final String database = "task";
    private static final String table = "task_list";
    private SQLiteDatabase sqliteDatabase;

    DatabaseHelper(Context context) {
        super(context, database, factory: null, version: 1);
        sqliteDatabase = this.getWritableDatabase();
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("CREATE TABLE " + table + " (Id Integer PRIMARY KEY AUTOINCREMENT, taskCheck NUMBER, Tittle");
    }

    void insertIntoDatabase(String tittle, String time, String date) {
        @SuppressWarnings("Recycle") Cursor allRows = sqliteDatabase.rawQuery("SELECT * FROM " + table, select
        ContentValues values = new ContentValues();
        values.put("taskCheck", "");
```

Insert and Delete

```

void insertIntoDatabase(String tittle, String time, String date) {
    @SuppressWarnings("Recycle") Cursor allRows = sqliteDatabase.rawQuery( sql: "SELECT * FROM " + table, select
    ContentValues values = new ContentValues();
    values.put("taskCheck", "");
    values.put("Tittle", tittle);
    values.put("Time", time);
    values.put("Date", date);
    values.put("Position", (allRows.getCount() + 1));
    sqliteDatabase.insert(table, nullColumnHack: null, values);
}

void deleteRow(int rowId) {
    sqliteDatabase.delete(table, whereClause: "Position="+ (rowId + 1), whereArgs: null);
    @SuppressWarnings("Recycle") Cursor allRows = sqliteDatabase.rawQuery( sql: "SELECT * FROM " + table, select
    for(int i = rowId; i <= allRows.getCount(); i++){
        ContentValues values = new ContentValues();
        values.put("Position", i);
        sqliteDatabase.update(table, values, whereClause: "Position="+ (i + 1), whereArgs: null);
    }
}

```

Insert new task XML Design

Task

Time

Date

ENTER

Insert new task XML Code

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    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="300dp"
    android:layout_height="270dp">

    <LinearLayout
        android:id="@+id/linearLayout"
        android:layout_width="0dp"
        android:layout_height="0dp"
        android:gravity="center_horizontal"
        android:orientation="vertical"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">
```

Actionbar

```
import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.FragmentTransaction;

import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Calendar;
import java.util.Locale;
import java.util.Map;

public class MainActivity extends AppCompatActivity {

    private Dialog insertIntoDatabaseDialog;
    private DatabaseHelper databaseHelper;
    private EditText timePick;
    private EditText datePick;
    Button implicit btn;
```

TextView

```
<TextView
    android:id="@+id/textView"
    android:layout_width="0dp"
    android:layout_height="48dp"
    android:layout_weight="1"
    android:gravity="bottom|right"
    android:text="Click on the + sign to add your first task"
    android:textSize="16sp"
    app:layout_constraintEnd_toStartOf="@+id/imageView"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

Date Picker Dialog

```
final Calendar myCalendar = Calendar.getInstance();
datePick = insertIntoDatabaseDialog.findViewById(R.id.calendar);
DatePickerDialog.OnDateSetListener date = (view, year, monthOfYear, dayOfMonth) -> {
    String myFormat = "MM.dd.yyyy";
    SimpleDateFormat sdf = new SimpleDateFormat(myFormat, Locale.ENGLISH);
    myCalendar.set(Calendar.YEAR, year);
    myCalendar.set(Calendar.MONTH, monthOfYear);
    myCalendar.set(Calendar.DAY_OF_MONTH, dayOfMonth);
    datePick.setText(sdf.format(myCalendar.getTime()));
};
```

Button and Implicit Intent

```
implicit_btn.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {

        Intent intent = new Intent(Intent.ACTION_VIEW);
        intent.setData(Uri.parse("https://www.google.com"));
        startActivity(intent);
    }
});
```

Dialog Fragment

```
public class MyDialogFragment extends DialogFragment {

    @NonNull
    @Override
    public Dialog onCreateDialog(@Nullable Bundle savedInstanceState) {

        if (getArguments() != null) {
            if (getArguments().getBoolean( key: "notAlertDialog")) {
                return super.onCreateDialog(savedInstanceState);
            }
        }
        AlertDialog.Builder builder = new AlertDialog.Builder(getActivity());
        builder.setTitle("Contact");
        builder.setMessage("Email: tejas.desai@sjsu.edu");

        builder.setPositiveButton( text: "Ok", new DialogInterface.OnClickListener() {
            @Override
            public void onClick(DialogInterface dialog, int which) {
                dismiss();
            }
        });
    }
}
```

Toast Notification

```
Toast.makeText(getApplicationContext(), text: "Successfully Added", Toast.LENGTH_SHORT).show();
```

Descriptions

ActionBar – Have implemented the add a new task only button.

Implicit Intent – Using implicit intent to report a problem, target website would be a helpdesk type website, currently implemented only going to google.com

Fragment – Have implemented a DialogFragment.

Multiple activities – In the new task add button, when entering new info and gets inserted into db, the newly created entry can be seen in the Task list activity.

Dialog – Have used date picker dialog to choose date and time.

Toast – When an activity is inserted, toast notification is displayed that it has successfully added.

TextView – When the app starts have an text displayed that says you can start by adding a new task.

Buttons – Used to report a problem (along with Implicit Intent)

