

Practical No 26

X.1

- **Program**
- **XML File:**

```
<?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"

tools:context=".MainActivity">

<!--Edit text to enter course name-->

<EditText

android:id="@+id/idEdtCourseName"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:layout_margin="10dp"

android:hint="Enter course Name" />

<!--edit text to enter course duration-->

<EditText

android:id="@+id/idEdtCourseDuration"

android:layout_width="match_parent"

android:layout_height="wrap_content"

android:layout_margin="10dp"

android:hint="Enter Course Duration" />

<!--edit text to display course tracks-->

<EditText
```

```

        android:id="@+id/idEdtCourseTracks"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:hint="Enter Course Tracks" />
    <!--edit text for course description-->
    <EditText
        android:id="@+id/idEdtCourseDescription"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:hint="Enter Course Description" />
    <!--button for adding new course-->
    <Button
        android:id="@+id/idBtnAddCourse"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:text="Add Course"
        android:textAllCaps="false" />
</LinearLayout>

```

- **JAVA File:**

```

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 MainActivity extends AppCompatActivity {
// creating variables for our edittext, button and dbhandler
private EditText courseNameEdt, courseTracksEdt, courseDurationEdt,
courseDescriptionEdt;
private Button addCourseBtn;
private DBHandler dbHandler;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
// initializing all our variables.
courseNameEdt = findViewById(R.id.idEdtCourseName);
courseTracksEdt = findViewById(R.id.idEdtCourseTracks);
courseDurationEdt = findViewById(R.id.idEdtCourseDuration);
courseDescriptionEdt =
findViewById(R.id.idEdtCourseDescription);
addCourseBtn = findViewById(R.id.idBtnAddCourse);
// creating a new dbhandler class
// and passing our context to it.
dbHandler = new DBHandler(MainActivity.this);
// below line is to add on click listener for our add
course button.
addCourseBtn.setOnClickListener(new View.OnClickListener()
{
@Override
public void onClick(View v) {
// below line is to get data from all edit
text fields.
String courseName =
courseNameEdt.getText().toString();
String courseTracks =
courseTracksEdt.getText().toString();
String courseDuration =

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```

courseDurationEdt.getText().toString();
String courseDescription =
courseDescriptionEdt.getText().toString();
// validating if the text fields are empty
or not.
if (courseName.isEmpty() &&
courseTracks.isEmpty() && courseDuration.isEmpty() &&
courseDescription.isEmpty()) {
Toast.makeText(MainActivity.this,
"Please enter all the data..", Toast.LENGTH_SHORT).show();
return;
}
// on below line we are calling a method to
add new
// course to sqlite data and pass all our
values to it.
dbHandler.addNewCourse(courseName,
courseDuration, courseDescription, courseTracks);
// after adding the data we are displaying a
toast message.
Toast.makeText(MainActivity.this, "Course
has been added.", Toast.LENGTH_SHORT).show();
courseNameEdt.setText("");
courseDurationEdt.setText("");
courseTracksEdt.setText("");
courseDescriptionEdt.setText("");
}
});
}
}

```

- **JAVA File 2:**

```

import android.content.ContentValues;

```

```

import android.content.Context;

import android.database.sqlite.SQLiteDatabase;

import android.database.sqlite.SQLiteOpenHelper;

public class DBHandler extends SQLiteOpenHelper {

    // creating a constant variables for our database.

    // below variable is for our database name.

    private static final String DB_NAME = "coursedb";

    // below int is our database version

    private static final int DB_VERSION = 1;

    // below variable is for our table name.

    private static final String TABLE_NAME = "mycourses";

    // below variable is for our id column.

    private static final String ID_COL = "id";

    // below variable is for our course name column

    private static final String NAME_COL = "name";

    // below variable id for our course duration column.

    private static final String DURATION_COL = "duration";

    // below variable for our course description column.

    private static final String DESCRIPTION_COL = "description";

    // below variable is for our course tracks column.

    private static final String TRACKS_COL = "tracks";

    // creating a constructor for our database handler.

    public DBHandler(Context context) {

        super(context, DB_NAME, null, DB_VERSION);

    }

    // below method is for creating a database by running a sqlite
    query

```

```

@Override

public void onCreate(SQLiteDatabase db) {

    // on below line we are creating

    // an sqlite query and we are

    // setting our column names

    // along with their data types.

    String query = "CREATE TABLE " + TABLE_NAME + " ("

    + ID_COL + " INTEGER PRIMARY KEY

    AUTOINCREMENT, "

    + NAME_COL + " TEXT,"

    + DURATION_COL + " TEXT,"

    + DESCRIPTION_COL + " TEXT,"

    + TRACKS_COL + " TEXT)";

    // at last we are calling a exec sql

    // method to execute above sql query

    db.execSQL(query);

}

// this method is use to add new course to our sqlite database.

public void addNewCourse(String courseName, String courseDuration,

String courseDescription, String courseTracks) {

    // on below line we are creating a variable for

    // our sqlite database and calling writable method

    // as we are writing data in our database.

    SQLiteDatabase db = this.getWritableDatabase();

    // on below line we are creating a

    // variable for content values.

    ContentValues values = new ContentValues();

```

```

// on below line we are passing all values
// along with its key and value pair.
values.put(NAME_COL, courseName);
values.put(DURATION_COL, courseDuration);
values.put(DESCRIPTION_COL, courseDescription);
values.put(TRACKS_COL, courseTracks);

// after adding all values we are passing
// content values to our table.
db.insert(TABLE_NAME, null, values);

// at last we are closing our
// database after adding database.
db.close();
}

@Override

public void onUpgrade(SQLiteDatabase db, int oldVersion, int
newVersion) {

// this method is called to check if the table exists
already.

db.execSQL("DROP TABLE IF EXISTS " + TABLE_NAME);
onCreate(db);
}
}

```

- **Manifest File:**

```
<uses-permission android:name="android.permission.READ_EXTERNAL_STORAGE" />
```

- **Output:**

