DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment – 3.4

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1. **Aim**:

   Create an Android application for user registration that stores the user details in a database table.

2. **System Requirements:**
   - Microsoft Windows 7/8/10 (32-bit or 64-bit)
   - 4 GB RAM minimum, 8 GB RAM recommended (plus 1 GB for the Android Emulator)
   - 2 GB of available disk space minimum, 4 GB recommended (500 MB for IDE plus 1.5 GB for Android SDK and emulator system image)
   - 1280 x 800 minimum screen resolution
   - Java JDK5 or later version
   - Java Runtime Environment (JRE) 6 Android Studio

3. **Code:**

   1. **MainActivity.java**

```
package com.example.experiment10;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    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);

        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);
        addCourseBtn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String courseName = courseNameEdt.getText().toString();
                String courseTracks = courseTracksEdt.getText().toString();
                String courseDuration = 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_LONG).show();
                    return;
                }
                // course to sqlite data and pass all our values to it.
                dbHandler.addNewCourse(courseName, courseDuration,
courseDescription, courseTracks);
                Toast.makeText(MainActivity.this, "Course has been added.",
Toast.LENGTH_LONG).show();
                courseNameEdt.setText("");
                courseDurationEdt.setText("");
                courseTracksEdt.setText("");
                courseDescriptionEdt.setText("");
            }
        });
    }
}
```

2. DBHandler.java

```
package com.example.experiment10;

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.
    private static final String DB_NAME = "coursedb";
    private static final int DB_VERSION = 1;
    private static final String TABLE_NAME = "mycourses";
    private static final String ID_COL = "id";
    private static final String NAME_COL = "name";
    private static final String DURATION_COL = "duration";
    private static final String DESCRIPTION_COL = "description";
    private static final String TRACKS_COL = "tracks";
    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) {
        String query = "CREATE TABLE " + TABLE_NAME + " ("
                + ID_COL + " INTEGER PRIMARY KEY AUTOINCREMENT, "
                + NAME_COL + " TEXT,"
                + DURATION_COL + " TEXT,"
                + DESCRIPTION_COL + " TEXT,"
```

```
                + TRACKS_COL + " TEXT)";
        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) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues values = new ContentValues();
        values.put(NAME_COL, courseName);
        values.put(DURATION_COL, courseDuration);
        values.put(DESCRIPTION_COL, courseDescription);
        values.put(TRACKS_COL, courseTracks);
        db.insert(TABLE_NAME, null, values);
        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);
    }
}
```

3. 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"
    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>
```

4. OUTPUT: