Q1. Java Android program to demonstrate progressBar

<?xml version=”1.0” encoding=”utf-8”?>

<RelativeLayout 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:padding=”16dp”

Tools:context=”.MainActivity”>

<ProgressBar

Android:id=”@+id/progressBar”

Style=”?android:attr/progressBarStyleHorizontal”

Android:layout\_width=”match\_parent”

Android:layout\_height=”wrap\_content”

Android:layout\_centerVertical=”true”

Android:indeterminate=”false”

Android:max=”100”

Android:progress=”0” />

<Button

Android:id=”@+id/startButton”

Android:layout\_width=”wrap\_content”

Android:layout\_height=”wrap\_content”

Android:layout\_below=”@id/progressBar”

Android:layout\_centerHorizontal=”true”

Android:layout\_marginTop=”16dp”

Android:text=”Start” />

</RelativeLayout>

**Main.java**

Import android.os.Bundle;

Import android.os.Handler;

Import android.os.Looper;

Import android.view.View;

Import android.widget.Button;

Import android.widget.ProgressBar;

Import androidx.appcompat.app.AppCompatActivity;

Public class MainActivity extends AppCompatActivity {

Private ProgressBar progressBar;

Private Button startButton;

Private int progressStatus = 0;

Private Handler handler = new Handler(Looper.getMainLooper());

@Override

Protected void onCreate(Bundle savedInstanceState) {

Super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

progressBar = findViewById(R.id.progressBar);

startButton = findViewById(R.id.startButton);

startButton.setOnClickListener(new View.OnClickListener() {

@Override

Public void onClick(View v) {

progressStatus = 0;

new Thread(new Runnable() {

public void run() {

while (progressStatus < 100) {

progressStatus += 1;

// Update the progress bar and display the current value

Handler.post(new Runnable() {

Public void run() {

progressBar.setProgress(progressStatus);

}

});

Try {

// Sleep for 100 milliseconds to show the progress slowly.

Thread.sleep(100);

} catch (InterruptedException e) {

e.printStackTrace();

}

}

}

}).start();

}

});

}

}

Q2. Create table Employee (E\_id, name, address, ph\_no). Create Application for performing the following operation on the table. (Using SQLite database). I] Insert record of 5 new Employees .

Ii] Show all the details of Employee.

<?xml version=”1.0” encoding=”utf-8”?>

<RelativeLayout

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”

Tools:context=”.MainActivity”>

<EditText

Android:id=”@+id/editTextEid”

Android:layout\_width=”match\_parent”

Android:layout\_height=”wrap\_content”

Android:layout\_margin=”16dp”

Android:hint=”Employee ID”

Android:inputType=”number” />

<EditText

Android:id=”@+id/editTextName”

Android:layout\_width=”match\_parent”

Android:layout\_height=”wrap\_content”

Android:layout\_below=”@id/editTextEid”

Android:layout\_margin=”16dp”

Android:hint=”Name” />

<EditText

Android:id=”@+id/editTextAddress”

Android:layout\_width=”match\_parent”

Android:layout\_height=”wrap\_content”

Android:layout\_below=”@id/editTextName”

Android:layout\_margin=”16dp”

Android:hint=”Address” />

<EditText

Android:id=”@+id/editTextPhoneNumber”

Android:layout\_width=”match\_parent”

Android:layout\_height=”wrap\_content”

Android:layout\_below=”@id/editTextAddress”

Android:layout\_margin=”16dp”

Android:hint=”Phone Number”

Android:inputType=”phone” />

<Button

Android:id=”@+id/buttonAddEmployee”

Android:layout\_width=”wrap\_content”

Android:layout\_height=”wrap\_content”

Android:layout\_below=”@id/editTextPhoneNumber”

Android:layout\_centerHorizontal=”true”

Android:layout\_marginTop=”16dp”

Android:text=”Add Employee”

Android:onClick=”addEmployee” />

<Button

Android:id=”@+id/buttonShowEmployees”

Android:layout\_width=”wrap\_content”

Android:layout\_height=”wrap\_content”

Android:layout\_below=”@id/buttonAddEmployee”

Android:layout\_centerHorizontal=”true”

Android:layout\_marginTop=”16dp”

Android:text=”Show Employees”

Android:onClick=”showEmployees” />

</RelativeLayout>

**Main.java**

Package com.example.myapplication;

Import android.database.Cursor;

Import android.os.Bundle;

Import android.view.View;

Import android.widget.EditText;

Import android.widget.Toast;

Import androidx.appcompat.app.AppCompatActivity;

Public class MainActivity extends AppCompatActivity {

private EditText editTextEid, editTextName, editTextAddress,

editTextPhoneNumber;

private DatabaseHelper dbHelper;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

editTextEid = findViewById(R.id.editTextEid);

editTextName = findViewById(R.id.editTextName);

editTextAddress = findViewById(R.id.editTextAddress);

editTextPhoneNumber =

findViewById(R.id.editTextPhoneNumber);

dbHelper = new DatabaseHelper(this);

}

Public void addEmployee(View view) {

String name = editTextName.getText().toString().trim();

String address = editTextAddress.getText().toString().trim();

String phoneNumber =

editTextPhoneNumber.getText().toString().trim();

if (name.isEmpty() || address.isEmpty() ||

phoneNumber.isEmpty()) {

Toast.makeText(this, “Please fill all fields”,

Toast.LENGTH\_SHORT).show();

Return;

}

Long id = dbHelper.addEmployee(name, address,

phoneNumber);

if (id != -1) {

Toast.makeText(this, “Employee added with ID: “ + id,

Toast.LENGTH\_SHORT).show();

// Clear input fields after adding employee

editTextName.setText(“”);

editTextAddress.setText(“”);

editTextPhoneNumber.setText(“”);

} else {

Toast.makeText(this, “Failed to add employee”,

Toast.LENGTH\_SHORT).show();

}

}

Public void showEmployees(View view) {

Cursor cursor = dbHelper.getAllEmployees();

If (cursor.getCount() == 0) {

Toast.makeText(this, “No employees found”,

Toast.LENGTH\_SHORT).show();

Return;

}

StringBuilder stringBuilder = new StringBuilder();

While (cursor.moveToNext()) {

stringBuilder.append(“ID:

“).append(cursor.getInt(0)).append(“, “);

stringBuilder.append(“Name:

“).append(cursor.getString(1)).append(“, “);

stringBuilder.append(“Address:

“).append(cursor.getString(2)).append(“, “);

stringBuilder.append(“Phone:

“).append(cursor.getString(3)).append(“\n\n”);

}

Toast.makeText(this, stringBuilder.toString(),

Toast.LENGTH\_LONG).show();

}

}

**Databasehelper.java**

Package com.example.myapplication;

Import android.content.ContentValues;

Import android.content.Context;

Import android.database.Cursor;

Import android.database.sqlite.SQLiteDatabase;

Import android.database.sqlite.SQLiteOpenHelper;

Public class DatabaseHelper extends SQLiteOpenHelper {

Private static final String DATABASE\_NAME = “employee\_db”;

Private static final int DATABASE\_VERSION = 1;

// Table name and column names

Private static final String TABLE\_EMPLOYEE = “Employee”;

Private static final String COLUMN\_ID = “E\_id”;

Private static final String COLUMN\_NAME = “name”;

Private static final String COLUMN\_ADDRESS = “address”;

Private static final String COLUMN\_PHONE = “ph\_no”;

Public DatabaseHelper(Context context) {

Super(context, DATABASE\_NAME, null,

DATABASE\_VERSION);

}

@Override

Public void onCreate(SQLiteDatabase db) {

// Create table query

String createTableQuery = “CREATE TABLE “ +

TABLE\_EMPLOYEE + “ (“ +

COLUMN\_ID + “ INTEGER PRIMARY KEY

AUTOINCREMENT,” +

COLUMN\_NAME + “ TEXT,” +

COLUMN\_ADDRESS + “ TEXT,” +

COLUMN\_PHONE + “ TEXT)”;

Db.execSQL(createTableQuery);

}

@Override

Public void onUpgrade(SQLiteDatabase db, int oldVersion, int

newVersion) {

// Drop older table if it exists

Db.execSQL(“DROP TABLE IF EXISTS “ +

TABLE\_EMPLOYEE);

// Create tables again

onCreate(db);

}

// Method to insert a new employee record

Public long addEmployee(String name, String address, String

phoneNumber) {

SQLiteDatabase db = this.getWritableDatabase();

ContentValues values = new ContentValues();

Values.put(COLUMN\_NAME, name);

Values.put(COLUMN\_ADDRESS, address);

Values.put(COLUMN\_PHONE, phoneNumber);

// Inserting Row

Long id = db.insert(TABLE\_EMPLOYEE, null, values);

// Closing database connection

Db.close();

Return id;

}

// Method to retrieve all employee records

Public Cursor getAllEmployees() {

String selectQuery = “SELECT \* FROM “ +

TABLE\_EMPLOYEE;

SQLiteDatabase db = this.getWritableDatabase();

Return db.rawQuery(selectQuery, null);

}

}