

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 .

li] 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);
```

```
}
```

```
}
```