Q1.Create a Application which shows Life Cycle of Activity.

<?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”>

<TextView

Android:id=”@+id/textViewLifecycle”

Android:layout\_width=”wrap\_content”

Android:layout\_height=”wrap\_content”

Android:layout\_centerInParent=”true”

Android:textSize=”18sp”

Android:text=”Activity Life Cycle”

Android:textColor=”@android:color/black” />

</RelativeLayout>

**Main.java**

Package com.example.myapplication;

Import android.os.Bundle;

Import android.util.Log;

Import android.widget.Toast;

Import androidx.appcompat.app.AppCompatActivity;

Public class MainActivity extends AppCompatActivity {

Private static final String TAG = “MainActivity”;

@Override

Protected void onCreate(Bundle savedInstanceState) {

Super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

Log.d(TAG, “onCreate: “);

showToast(“onCreate”);

}

@Override

Protected void onStart() {

Super.onStart();

Log.d(TAG, “onStart: “);

showToast(“onStart”);

}

@Override

Protected void onResume() {

Super.onResume();

Log.d(TAG, “onResume: “);

showToast(“onResume”);

}

@Override

Protected void onPause() {

Super.onPause();

Log.d(TAG, “onPause: “);

showToast(“onPause”);

}

@Override

Protected void onStop() {

Super.onStop();

Log.d(TAG, “onStop: “);

showToast(“onStop”);

}

@Override

Protected void onDestroy() {

Super.onDestroy();

Log.d(TAG, “onDestroy: “);

showToast(“onDestroy”);

}

@Override

Protected void onRestart() {

Super.onRestart();

Log.d(TAG, “onRestart: “);

showToast(“onRestart”);

}

Private void showToast(String message) {

Toast.makeText(this, message,

Toast.LENGTH\_SHORT).show();

}

}

Q2. Create table Customer (id, name, address, ph\_no). Create

Application for performing the following operation on the table.

(Using SQLite database).

I] Insert new customer details (At least 5 records).

Ii] Show all the customer details.

<?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/editTextId”

Android:layout\_width=”match\_parent”

Android:layout\_height=”wrap\_content”

Android:layout\_margin=”16dp”

Android:hint=”ID” />

<EditText

Android:id=”@+id/editTextName”

Android:layout\_width=”match\_parent”

Android:layout\_height=”wrap\_content”

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

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” />

<TextView

Android:id=”@+id/textViewCustomerDetails”

Android:layout\_width=”match\_parent”

Android:layout\_height=”wrap\_content”

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

Android:layout\_marginTop=”16dp”

Android:padding=”16dp”

Android:text=””

Android:textSize=”16sp” />

<Button

Android:id=”@+id/buttonInsert”

Android:layout\_width=”wrap\_content”

Android:layout\_height=”wrap\_content”

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

Android:layout\_marginTop=”16dp”

Android:layout\_centerHorizontal=”true”

Android:text=”Insert”

Android:onClick=”insertCustomer” />

<Button

Android:id=”@+id/buttonShowAll”

Android:layout\_width=”wrap\_content”

Android:layout\_height=”wrap\_content”

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

Android:layout\_marginTop=”16dp”

Android:layout\_centerHorizontal=”true”

Android:text=”Show All”

Android:onClick=”showAllCustomers” />

</RelativeLayout>

**Main.java**

Package com.example.myapplication;

Import android.content.ContentValues**;**

Import android.database.Cursor;

Import android.database.sqlite.SQLiteDatabase;

Import android.os.Bundle;

Import android.view.View;

Import android.widget.EditText;

Import android.widget.TextView;

Import android.widget.Toast;

Import androidx.appcompat.app.AppCompatActivity;

Public class MainActivity extends AppCompatActivity {

Private EditText editTextId, editTextName, editTextAddress,

editTextPhoneNumber;

private TextView textViewCustomerDetails;

private DatabaseHelper dbHelper;

@Override

Protected void onCreate(Bundle savedInstanceState) {

Super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

editTextId = findViewById(R.id.editTextId);

editTextName = findViewById(R.id.editTextName);

editTextAddress = findViewById(R.id.editTextAddress);

editTextPhoneNumber =

findViewById(R.id.editTextPhoneNumber);

textViewCustomerDetails =

findViewById(R.id.textViewCustomerDetails);

dbHelper = new DatabaseHelper(this);

}

Public void insertCustomer(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;

}

SQLiteDatabase db = dbHelper.getWritableDatabase();

ContentValues values = new ContentValues();

Values.put(DatabaseHelper.COLUMN\_NAME, name);

Values.put(DatabaseHelper.COLUMN\_ADDRESS, address);

Values.put(DatabaseHelper.COLUMN\_PHONE\_NUMBER,

phoneNumber);

long newRowId =

db.insert(DatabaseHelper.TABLE\_CUSTOMER, null, values);

if (newRowId == -1) {

Toast.makeText(this, “Error inserting customer”,

Toast.LENGTH\_SHORT).show();

} else {

Toast.makeText(this, “Customer inserted with ID: “ +

newRowId, Toast.LENGTH\_SHORT).show();

}

}

Public void showAllCustomers(View view) {

SQLiteDatabase db = dbHelper.getReadableDatabase();

String[] projection = {

DatabaseHelper.COLUMN\_ID,

DatabaseHelper.COLUMN\_NAME,

DatabaseHelper.COLUMN\_ADDRESS,

DatabaseHelper.COLUMN\_PHONE\_NUMBER

};

Cursor cursor = db.query(

DatabaseHelper.TABLE\_CUSTOMER,

Projection,

Null,

Null,

Null,

Null,

Null

);

StringBuilder customerDetails = new StringBuilder();

While (cursor.moveToNext()) {

Long id =

Cursor.getLong(cursor.getColumnIndexOrThrow(DatabaseHelper.

COLUMN\_ID));

String name =

Cursor.getString(cursor.getColumnIndexOrThrow(DatabaseHelper

.COLUMN\_NAME));

String address =

Cursor.getString(cursor.getColumnIndexOrThrow(DatabaseHelper

.COLUMN\_ADDRESS));

String phoneNumber =

Cursor.getString(cursor.getColumnIndexOrThrow(DatabaseHelper

.COLUMN\_PHONE\_NUMBER));

customerDetails.append(“ID: “).append(id).append(“,

Name: “).append(name)

.append(“, Address: “).append(address).append(“,

Phone Number: “).append(phoneNumber)

.append(“\n”);

}

Cursor.close();

textViewCustomerDetails.setText(customerDetails.toString());

}

}

**Databasehelper .Java**

Package com.example.myapplication;

Import android.content.Context;

Import android.database.sqlite.SQLiteDatabase;

Import android.database.sqlite.SQLiteOpenHelper;

Public class DatabaseHelper extends SQLiteOpenHelper {

Private static final String DATABASE\_NAME = “customer.db”;

Private static final int DATABASE\_VERSION = 1;

// Table name and column names

Public static final String TABLE\_CUSTOMER = “customer”;

Public static final String COLUMN\_ID = “id”;

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

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

Public static final String COLUMN\_PHONE\_NUMBER =

“ph\_no”;

// Create table query

Private static final String SQL\_CREATE\_CUSTOMER\_TABLE =

“CREATE TABLE “ + TABLE\_CUSTOMER + “ (“ +

COLUMN\_ID + “ INTEGER PRIMARY KEY

AUTOINCREMENT,” +

COLUMN\_NAME + “ TEXT,” +

COLUMN\_ADDRESS + “ TEXT,” +

COLUMN\_PHONE\_NUMBER + “ TEXT)”;

Public DatabaseHelper(Context context) {

Super(context, DATABASE\_NAME, null,

DATABASE\_VERSION);

}

@Override

Public void onCreate(SQLiteDatabase db) {

Db.execSQL(SQL\_CREATE\_CUSTOMER\_TABLE);

}

@Override

Public void onUpgrade(SQLiteDatabase db, int oldVersion, int

newVersion) {

db.execSQL(“DROP TABLE IF EXISTS “ +

TABLE\_CUSTOMER);

onCreate(db);

}

}