Green University of Bangladesh
Department of Computer Science and Engineering(CSE)

Faculty of Sciences and Engineering
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LAB REPORT NO: 04
Course Title: Mobile Application Development Lab
Course Code: CSE 426 Section: DB

Lab Experiment Name: SQLite Database

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Submission Date : 29/12/2022
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[For Teachers use only: Don't Write Anything inside this box]

Lab Report Status

Marks: …… **Signature:.....**
Comments:..... **Date:.....**

1. TITLE OF THE LAB EXPERIMENT

SQLite Database

2. OBJECTIVES/AIM

- SQLite is a database which is an open source database. Android comes in with built in SQLite database implementation.
- This experiment is designed to implement SQLite Database operation components in the android development environment.

3. PROCEDURE / ANALYSIS / DESIGN

SQLite supports all the relational database features. Database Package The main package is android.database.sqlite that contains the classes to manage the databases. The method openOrCreateDatabase is used to create a database. In this method the name of the database and mode is used as parameters and it returns an instance of SQLite database which you have to receive in your own object. This method not only creates the database if it does not exist but also opens the db if it already exists. The method execSQL is defined in SQLiteDatabase class to create tables or insert data into tables. This method not only inserts data , but is also used to update or modify already existing data in the database using bind arguments. An object of the Cursor class is used to retrieve anything from the database. In this experiment, we will create a table in a database and perform operations to insert and view table items.

4. IMPLEMENTATION

4.1 MainActivity

```
public class MainActivity extends AppCompatActivity {
   EditText ename, ecollege;
   Button binsert, bexit, bdisplay;

   String nam, coll;
   SQLiteDatabase db;

        db = openOrCreateDatabase("Mydb", MODE_PRIVATE, null);
      db.execSQL("CREATE TABLE IF NOT EXISTS student(name VARCHAR,college
VARCHAR); ");

      binsert.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            nam = ename.getText().toString();
            coll = ecollege.getText().toString();
            db.execSQL("INSERT INTO student VALUES('" + nam + "','" + coll + "');");

            Toast.makeText(getApplicationContext(), "Row Inserted",
```

```
Toast.LENGTH_SHORT).show();
            }
        });
        bdisplay.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(getApplicationContext(), PreviewActivity.class);

                startActivity(intent);
                finish();
            }
        });
        bexit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                System.exit(0);
            }
        });
    }
}
```

4.2 PreviewActivity

```
public class PreviewActivity extends AppCompatActivity {
    TextView tname, tcollege;
    Button bprev, bnext, bback;

    SQLiteDatabase db;

        db = openOrCreateDatabase("Mydb", MODE_PRIVATE, null);

        final Cursor c = db.rawQuery("select * from student", null);
        c.moveToFirst();
        tname.setText(c.getString(c.getColumnIndex("name")));
        tcollege.setText(c.getString(c.getColumnIndex("college")));

        bback.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(getApplicationContext(), MainActivity.class);

                startActivity(intent);
                finish();
            }
```

```
    });

    bnext.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            try {
                c.moveToNext();
                tname.setText(c.getString(c.getColumnIndex("name")));
                tcollege.setText(c.getString(c.getColumnIndex("college")));
            } catch (Exception e) {
                Toast.makeText(getApplicationContext(), "Last Record", Toast

                        .LENGTH_LONG).show();
                e.printStackTrace();
            }
        }
    });
  }
}
```

4.3 activity_main XML

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="50dp"
    android:orientation="horizontal">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Name: "
        android:textSize="15sp" />

    <EditText
        android:id="@+id/ename"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
  </LinearLayout>

  <LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="25dp"
```

```
    android:orientation="horizontal">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="College: "
        android:textSize="15sp" />

    <EditText
        android:id="@+id/ecollege"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="25dp"
    android:gravity="center"
    android:orientation="horizontal">

    <Button
        android:id="@+id/binsert"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="10dp"
        android:text="Insert" />
</LinearLayout>
```

4.4 Activity_preview XML

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="50dp"
    android:orientation="horizontal">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Name: "
        android:textSize="15sp" />

    <TextView
        android:id="@+id/tname"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="15sp" />
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="25dp"
        android:orientation="horizontal">

        <TextView android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="College: "
        android:textSize="15sp" />

        <TextView
            android:id="@+id/tcollege"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textSize="15sp" />
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="25dp"
        android:gravity="center"
        android:orientation="horizontal">

        <Button
            android:id="@+id/bprev"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginEnd="100dp"
            android:text="Prev" />
    </LinearLayout>

    <Button
        android:id="@+id/bback"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="50dp"
        android:text="Home" />
</LinearLayout>
```

5. TEST RESULT / OUTPUT

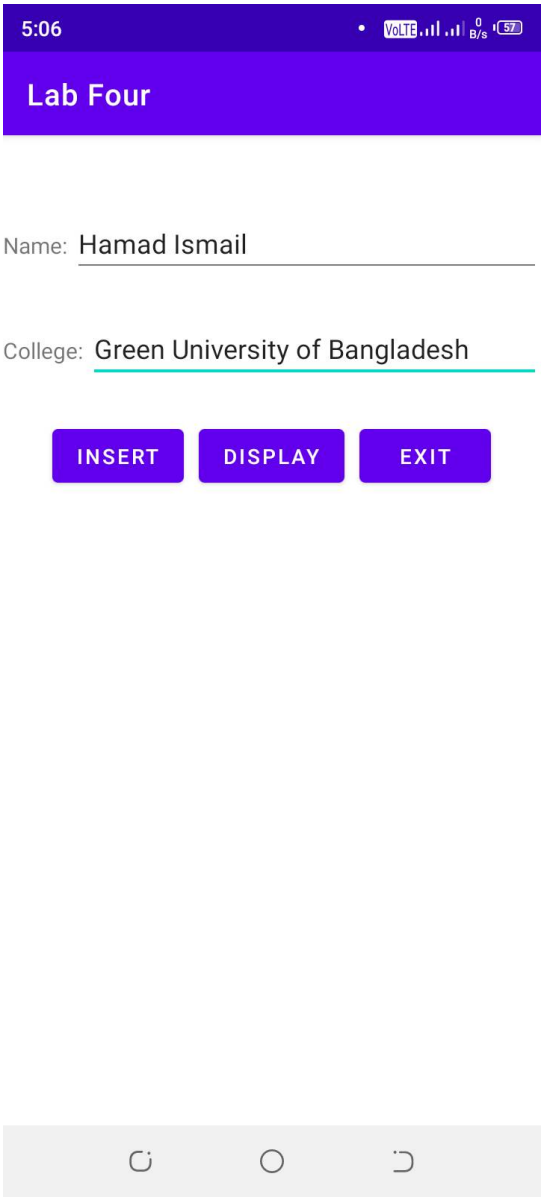

Figure-5.1: Take Input

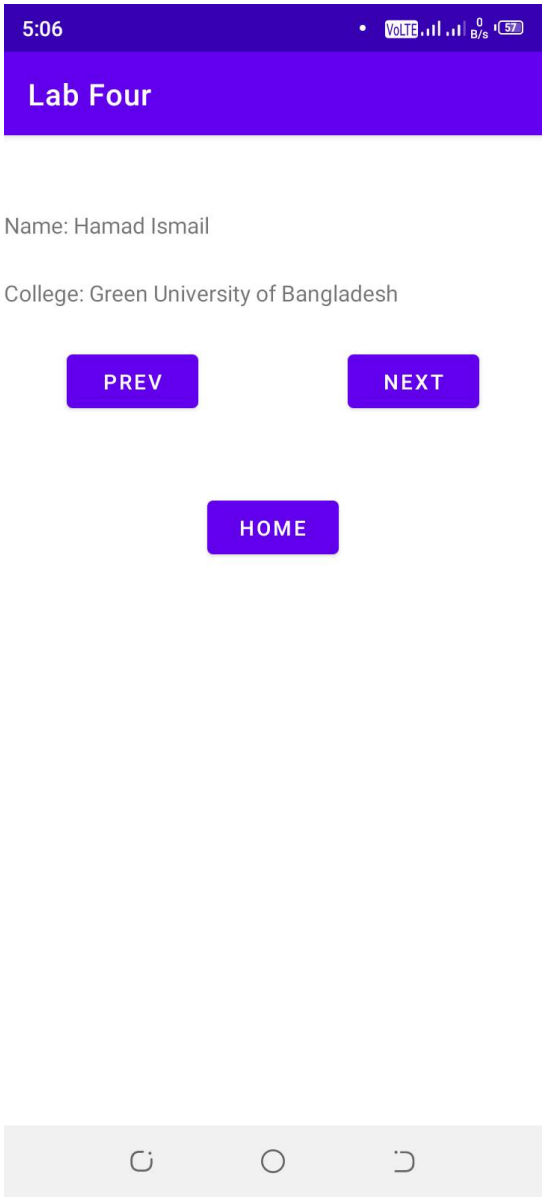

Figure-5.2: Store and display the data

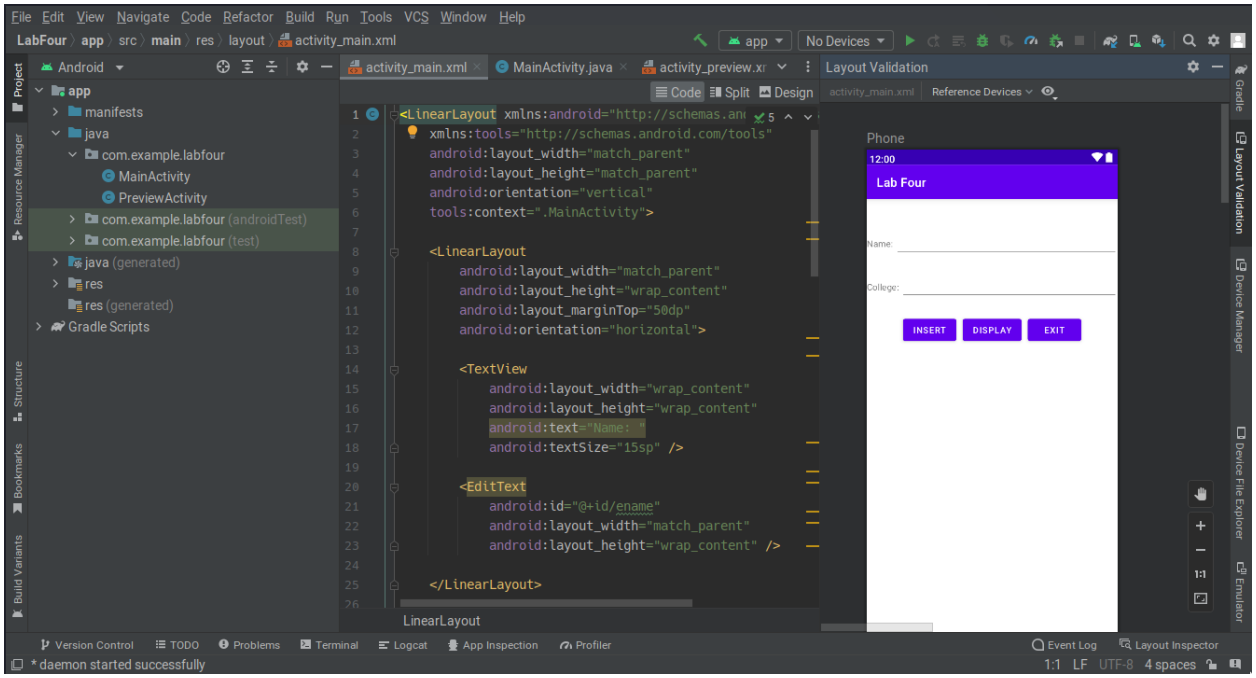

Figure-5.1: Output of the project

6. ANALYSIS AND DISCUSSION

From this experiment we learn about how intent, pending intent, broadcast intent work. This experiment is designed in a way to teach the students about implementing android Broadcast Components.