Name	**:**	**V Vikram**	**Class**	**:**	CSE ‘C’
Reg. No.	**:**	**18 5001 194**	**Date**	**:**	01/09/2021
Subject	**:**	**UCS1711---Mobile Application Development Lab**			

QUESTION :

Ex. No. 5 Android Application Development using Database

CODE :

LAYOUT FILES

activity_main.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:app="http://schemas.android.com/apk/res-auto"
   xmlns:tools="http://schemas.android.com/tools"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   android:background = "@drawable/gradient_drawable"
   tools:context=".MainActivity">

   <Button
       android:id="@+id/btn_insert"
       android:layout_width="148dp"
       android:layout_height="54dp"
       android:layout_marginStart="128dp"
       android:layout_marginLeft="128dp"
       android:layout_marginTop="112dp"
       android:backgroundTint="@color/btn"
       android:text="INSERT"
       android:textColor="@color/black"
       android:textSize="20dp"
       android:textStyle="bold"
       app:layout_constraintStart_toStartOf="parent"
       app:layout_constraintTop_toBottomOf="@+id/textView" />

   <Button
```

```
        android:id="@+id/btn_update"
        android:layout_width="148dp"
        android:layout_height="52dp"
        android:layout_marginStart="128dp"
        android:layout_marginLeft="128dp"
        android:layout_marginTop="192dp"
        android:backgroundTint="@color/btn"
        android:text="UPDATE"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView" />

    <Button
        android:id="@+id/btn_delete"
        android:layout_width="152dp"
        android:layout_height="55dp"
        android:layout_marginStart="136dp"
        android:layout_marginLeft="136dp"
        android:layout_marginTop="264dp"
        android:backgroundTint="@color/btn"
        android:text="DELETE"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView" />

    <Button
        android:id="@+id/btn_retrieve"
        android:layout_width="158dp"
        android:layout_height="55dp"
        android:layout_marginStart="136dp"
        android:layout_marginLeft="136dp"
        android:layout_marginTop="348dp"
        android:backgroundTint="@color/btn"
        android:text="RETRIEVE"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="392dp"
        android:layout_height="149dp"
        android:gravity="center_horizontal"
        android:text="EMPLOYEE MANAGEMENT SYSTEM"
        android:textAlignment="center"
        android:textAppearance="@style/TextAppearance.AppCompat.Large"
        android:textColor="@color/black"
        android:textSize="40dp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
```

```
        app:layout_constraintHorizontal_bias="0.473"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.072" />

    <Button
        android:id="@+id/btn_create"
        android:layout_width="152dp"
        android:layout_height="53dp"
        android:layout_marginStart="128dp"
        android:layout_marginLeft="128dp"
        android:layout_marginTop="44dp"
        android:backgroundTint="@color/btn"
        android:text="CREATE"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_insert.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    app:layout_constraintTop_toTopOf="parent"
    android:background = "@drawable/gradient_drawable"
    tools:context=".MainActivity">

    <RadioButton
        android:id="@+id/radioButtonOther"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="4dp"
        android:layout_marginLeft="4dp"
        android:layout_marginTop="216dp"
        android:text="Other"

        app:layout_constraintStart_toEndOf="@+id/radioButtonFemale"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
```

```
        android:id="@+id/textView10"
        android:layout_width="87dp"
        android:layout_height="45dp"
        android:layout_marginStart="40dp"
        android:layout_marginLeft="40dp"
        android:layout_marginTop="360dp"
        android:text="Salary"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView7"
        android:layout_width="110dp"
        android:layout_height="50dp"
        android:layout_marginStart="40dp"
        android:layout_marginLeft="40dp"
        android:layout_marginTop="288dp"
        android:text="Department"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView6"
        android:layout_width="87dp"
        android:layout_height="45dp"
        android:layout_marginStart="40dp"
        android:layout_marginLeft="40dp"
        android:layout_marginTop="220dp"
        android:text="Gender"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView3"
        android:layout_width="108dp"
        android:layout_height="49dp"
        android:layout_marginStart="36dp"
        android:layout_marginLeft="36dp"
        android:layout_marginTop="144dp"
        android:text="Employee Name"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <androidx.appcompat.widget.Toolbar
```

```
        android:id="@+id/toolbar"
        android:layout_width="match_parent"
        android:layout_height="?attr/actionBarSize"
        android:background="?attr/colorPrimary"
        app:layout_anchor="@+id/toolbar"
        app:layout_anchorGravity="center"
        tools:layout_editor_absoluteX="0dp"
        tools:layout_editor_absoluteY="0dp"
        tools:ignore="MissingConstraints,NotSibling" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="112dp"
        android:layout_height="46dp"
        android:layout_marginStart="36dp"
        android:layout_marginLeft="36dp"
        android:layout_marginTop="80dp"
        android:text="Employee Code"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/empcode_upd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="24dp"
        android:layout_marginLeft="24dp"
        android:layout_marginTop="25dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintStart_toEndOf="@+id/textView"
        app:layout_constraintTop_toBottomOf="@+id/toolbar" />

    <TextView
        android:id="@+id/textView4"
        android:layout_width="410dp"
        android:layout_height="54dp"
        android:fontFamily="sans-serif-condensed-medium"
        android:gravity="center"
        android:text="Insert Page"
        android:textAppearance="@style/TextAppearance.AppCompat.Body1"
        android:textSize="20sp"
        app:autoSizeTextType="uniform"
        tools:layout_editor_absoluteX="0dp"
        tools:layout_editor_absoluteY="1dp"
        tools:ignore="MissingConstraints" />

    <Spinner
        android:id="@+id/spinner"
        android:layout_width="208dp"
        android:layout_height="31dp"
        android:layout_marginStart="24dp"
        android:layout_marginLeft="24dp"
```

```
        android:layout_marginTop="288dp"
        android:entries="@array/department"
        app:layout_constraintStart_toEndOf="@+id/textView7"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/empsalary_upd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="56dp"
        android:layout_marginLeft="56dp"
        android:layout_marginTop="352dp"
        android:ems="10"
        android:inputType="time"
        app:layout_constraintStart_toEndOf="@+id/textView10"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button_search"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="144dp"
        android:layout_marginLeft="144dp"
        android:layout_marginTop="464dp"
        android:onClick="submitFields"
        android:text="Insert"
        android:background="@color/btn"
        android:backgroundTint="@color/btn"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:ignore="OnClick" />

    <EditText
        android:id="@+id/empname_upd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="28dp"
        android:layout_marginLeft="28dp"
        android:layout_marginTop="148dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintStart_toEndOf="@+id/textView3"
        app:layout_constraintTop_toTopOf="parent" />

    <RadioButton
        android:id="@+id/radioButtonMale"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="20dp"
        android:layout_marginLeft="20dp"
        android:layout_marginTop="216dp"
        android:text="Male"
        app:layout_constraintStart_toEndOf="@+id/textView6"
```

```
        app:layout_constraintTop_toTopOf="@+id/toolbar" />

    <RadioButton
        android:id="@+id/radioButtonFemale"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="216dp"
        android:text="Female"
        app:layout_constraintStart_toEndOf="@+id/radioButtonMale"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_update.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    app:layout_constraintTop_toTopOf="parent"
    android:background = "@drawable/gradient_drawable"

    tools:context=".MainActivity">

    <RadioButton
        android:id="@+id/radioButtonOther"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="4dp"
        android:layout_marginLeft="4dp"
        android:layout_marginTop="216dp"
        android:text="Other"
        app:layout_constraintStart_toEndOf="@+id/radioButtonFemale"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView10"
        android:layout_width="87dp"
        android:layout_height="45dp"
        android:layout_marginStart="40dp"
        android:layout_marginLeft="40dp"
        android:layout_marginTop="360dp"
        android:text="Salary"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
```

```
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView7"
        android:layout_width="123dp"
        android:layout_height="48dp"
        android:layout_marginStart="40dp"
        android:layout_marginLeft="40dp"
        android:layout_marginTop="288dp"
        android:text="Department"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView6"
        android:layout_width="87dp"
        android:layout_height="45dp"
        android:layout_marginStart="40dp"
        android:layout_marginLeft="40dp"
        android:layout_marginTop="220dp"
        android:text="Gender"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView3"
        android:layout_width="116dp"
        android:layout_height="47dp"
        android:layout_marginStart="36dp"
        android:layout_marginLeft="36dp"
        android:layout_marginTop="144dp"
        android:text="Employee Name"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <androidx.appcompat.widget.Toolbar
        android:id="@+id/toolbar"
        android:layout_width="match_parent"
        android:layout_height="?attr/actionBarSize"
        android:background="?attr/colorPrimary"
        app:layout_anchor="@+id/toolbar"
        app:layout_anchorGravity="center"
        tools:layout_editor_absoluteX="0dp"
        tools:layout_editor_absoluteY="0dp"
        tools:ignore="MissingConstraints,NotSibling" />
```

```
    <TextView
        android:id="@+id/textView"
        android:layout_width="108dp"
        android:layout_height="53dp"
        android:layout_marginStart="36dp"
        android:layout_marginLeft="36dp"
        android:layout_marginTop="80dp"
        android:text="Employee Code"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/empcode_upd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="48dp"
        android:layout_marginLeft="48dp"
        android:layout_marginTop="24dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintStart_toEndOf="@+id/textView"
        app:layout_constraintTop_toBottomOf="@+id/toolbar" />

    <TextView
        android:id="@+id/textView4"
        android:layout_width="410dp"
        android:layout_height="54dp"
        android:fontFamily="sans-serif-condensed-medium"
        android:gravity="center"
        android:text="Update Page"
        android:textAppearance="@style/TextAppearance.AppCompat.Body1"
        android:textSize="20sp"
        app:autoSizeTextType="uniform"
        tools:layout_editor_absoluteX="0dp"
        tools:layout_editor_absoluteY="1dp"
        tools:ignore="MissingConstraints" />

    <Spinner
        android:id="@+id/spinner"
        android:layout_width="208dp"
        android:layout_height="31dp"
        android:layout_marginStart="28dp"
        android:layout_marginLeft="28dp"
        android:layout_marginTop="288dp"
        android:entries="@array/department"
        app:layout_constraintStart_toEndOf="@+id/textView7"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/empsalary_upd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="64dp"
```

```
        android:layout_marginLeft="64dp"
        android:layout_marginTop="352dp"
        android:ems="10"
        android:inputType="time"
        app:layout_constraintStart_toEndOf="@+id/textView10"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button_search"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="144dp"
        android:layout_marginLeft="144dp"
        android:layout_marginTop="464dp"
        android:onClick="submitFields"
        android:text="Update"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:ignore="OnClick" />

    <EditText
        android:id="@+id/empname_upd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="40dp"
        android:layout_marginLeft="40dp"
        android:layout_marginTop="144dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintStart_toEndOf="@+id/textView3"
        app:layout_constraintTop_toTopOf="parent" />

    <RadioButton
        android:id="@+id/radioButtonMale"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="20dp"
        android:layout_marginLeft="20dp"
        android:layout_marginTop="216dp"
        android:text="Male"
        app:layout_constraintStart_toEndOf="@+id/textView6"
        app:layout_constraintTop_toTopOf="@+id/toolbar" />

    <RadioButton
        android:id="@+id/radioButtonFemale"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="216dp"
        android:text="Female"
        app:layout_constraintStart_toEndOf="@+id/radioButtonMale"
        app:layout_constraintTop_toTopOf="parent" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_delete.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    app:layout_constraintTop_toTopOf="parent"
    android:background = "@drawable/gradient_drawable"
    tools:context=".MainActivity">

    <androidx.appcompat.widget.Toolbar
        android:id="@+id/toolbar"
        android:layout_width="match_parent"
        android:layout_height="?attr/actionBarSize"
        android:background="?attr/colorPrimary"
        app:layout_anchor="@+id/toolbar"
        app:layout_anchorGravity="center"
        tools:layout_editor_absoluteX="0dp"
        tools:layout_editor_absoluteY="0dp"
        tools:ignore="MissingConstraints,NotSibling" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="125dp"
        android:layout_height="55dp"
        android:layout_marginStart="36dp"
        android:layout_marginLeft="36dp"
        android:layout_marginTop="80dp"
        android:text="Employee Code"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/empcode_upd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="24dp"
        android:layout_marginLeft="24dp"
        android:layout_marginTop="25dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintStart_toEndOf="@+id/textView"
```

```
        app:layout_constraintTop_toBottomOf="@+id/toolbar" />

    <TextView
        android:id="@+id/textView4"
        android:layout_width="410dp"
        android:layout_height="54dp"
        android:fontFamily="sans-serif-condensed-medium"
        android:gravity="center"
        android:text="Delete Page"
        android:textAppearance="@style/TextAppearance.AppCompat.Body1"
        android:textSize="20sp"
        app:autoSizeTextType="uniform"
        tools:layout_editor_absoluteX="0dp"
        tools:layout_editor_absoluteY="1dp"
        tools:ignore="MissingConstraints" />

    <Button
        android:id="@+id/button_search"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="128dp"
        android:layout_marginLeft="128dp"
        android:layout_marginTop="184dp"
        android:text="Delete"
        android:backgroundTint="@color/btn"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_retrieve.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    app:layout_constraintTop_toTopOf="parent"
    android:background = "@drawable/gradient_drawable"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/salary_display"
        android:layout_width="193dp"
        android:layout_height="46dp"
        android:layout_marginStart="188dp"
        android:layout_marginLeft="188dp"
        android:layout_marginTop="504dp"
```

```
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/dept_display"
        android:layout_width="193dp"
        android:layout_height="46dp"
        android:layout_marginStart="180dp"
        android:layout_marginLeft="180dp"
        android:layout_marginTop="448dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/gender_display"
        android:layout_width="193dp"
        android:layout_height="46dp"
        android:layout_marginStart="180dp"
        android:layout_marginLeft="180dp"
        android:layout_marginTop="396dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/empname_display"
        android:layout_width="180dp"
        android:layout_height="39dp"
        android:layout_marginStart="180dp"
        android:layout_marginLeft="180dp"
        android:layout_marginTop="344dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView10"
        android:layout_width="127dp"
        android:layout_height="46dp"
        android:layout_marginStart="44dp"
        android:layout_marginLeft="44dp"
        android:layout_marginTop="520dp"
        android:text="Salary"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView7"
        android:layout_width="121dp"
        android:layout_height="46dp"
        android:layout_marginStart="44dp"
        android:layout_marginLeft="44dp"
        android:layout_marginTop="464dp"
        android:text="Department"
        android:textColor="@color/black"
```

```
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView6"
        android:layout_width="125dp"
        android:layout_height="50dp"
        android:layout_marginStart="44dp"
        android:layout_marginLeft="44dp"
        android:layout_marginTop="404dp"
        android:text="Gender"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView3"
        android:layout_width="121dp"
        android:layout_height="62dp"
        android:layout_marginStart="44dp"
        android:layout_marginLeft="44dp"
        android:layout_marginTop="340dp"
        android:text="Employee Name"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <androidx.appcompat.widget.Toolbar
        android:id="@+id/toolbar"
        android:layout_width="match_parent"
        android:layout_height="?attr/actionBarSize"
        android:background="?attr/colorPrimary"
        app:layout_anchor="@+id/toolbar"
        app:layout_anchorGravity="center"
        tools:layout_editor_absoluteX="0dp"
        tools:layout_editor_absoluteY="0dp"
        tools:ignore="MissingConstraints,NotSibling" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="120dp"
        android:layout_height="59dp"
        android:layout_marginStart="36dp"
        android:layout_marginLeft="36dp"
        android:layout_marginTop="80dp"
        android:text="Employee Code"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
```

```
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/empcode_upd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="24dp"
        android:layout_marginLeft="24dp"
        android:layout_marginTop="25dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintStart_toEndOf="@+id/textView"
        app:layout_constraintTop_toBottomOf="@+id/toolbar" />

    <TextView
        android:id="@+id/textView4"
        android:layout_width="410dp"
        android:layout_height="54dp"
        android:fontFamily="sans-serif-condensed-medium"
        android:gravity="center"
        android:text="Retrieve Page"
        android:textAppearance="@style/TextAppearance.AppCompat.Body1"
        android:textSize="20sp"
        app:autoSizeTextType="uniform"
        tools:layout_editor_absoluteX="0dp"
        tools:layout_editor_absoluteY="1dp"
        tools:ignore="MissingConstraints" />

    <Button
        android:id="@+id/button_search"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="128dp"
        android:layout_marginLeft="128dp"
        android:layout_marginTop="184dp"
        android:text="Search"
        android:backgroundTint="@color/btn"
        android:textColor="@color/black"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

CLASS FILES

DBHelper.java :

```
package com.example.v3;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import android.widget.Toast;

public class DBHelper extends SQLiteOpenHelper {

   private static final String DB_NAME = "employee_db";

   private static final int DB_VERSION = 1;

   private static final String TABLE_NAME = "employee";

   private static final String EMP_CODE = "code";

   private static final String EMP_NAME = "name";

   private static final String GENDER = "gender";

   private static final String DEPARTMENT = "department";

   private static final String SALARY = "salary";

   public DBHelper(Context context) {
       super(context, DB_NAME, null, DB_VERSION);
   }

   @Override
   public void onCreate(SQLiteDatabase db) {
       // on below line we are creating
       // an sqlite query and we are
       // setting our column names
       // along with their data types.
       String query = "CREATE TABLE IF NOT EXISTS " + TABLE_NAME + " ("
               + EMP_CODE + " TEXT PRIMARY KEY, "
               + EMP_NAME + " TEXT,"
               + GENDER + " TEXT,"
               + DEPARTMENT + " TEXT,"
               + SALARY + " TEXT)";

       // at last we are calling a exec sql
       // method to execute above sql query
       db.execSQL(query);
   }
```

```
   public void insertEmployee(String code, String name, String gender,
String dept, String salary) {

       SQLiteDatabase db = this.getWritableDatabase();

       ContentValues values = new ContentValues();

       values.put(EMP_CODE, code);
       values.put(EMP_NAME, name);
       values.put(GENDER, gender);
       values.put(DEPARTMENT, dept);
       values.put(SALARY, salary);

       db.insertOrThrow(TABLE_NAME, null, values);

//        db.close();
   }

   public void updateEmployee(String code, String name, String gender,
String dept, String salary){
       SQLiteDatabase db = this.getWritableDatabase();

       ContentValues values = new ContentValues();

       values.put(EMP_NAME, name);
       values.put(GENDER, gender);
       values.put(DEPARTMENT, dept);
       values.put(SALARY, salary);

       db.update(TABLE_NAME, values, "code = ?", new String[]{code});

//        db.close();
   }

   public void deleteEmployee(String code){
       SQLiteDatabase db = this.getWritableDatabase();

       db.delete(TABLE_NAME, "code = ?", new String[]{code});

//        db.close();
   }

   public String[] retrieveEmployee(String code){
       SQLiteDatabase db = this.getReadableDatabase();
       String[] vals = new String[4];
//        Cursor cursor = db.query( TABLE_NAME , new String [] { EMP_NAME ,
GENDER , DEPARTMENT , SALARY } , "code = ?" , new String [] {code} ,
//        null , null , null );
       Cursor cursor = db.rawQuery("SELECT * FROM "+TABLE_NAME+" WHERE code
= '"+code+"';",null);

       if(cursor.moveToNext()){
//            Toast.makeText(DBHelper.class, cursor.toString(),
Toast.LENGTH_LONG).show();
           vals[0] = cursor.getString(1);
```

```
            vals[1] = cursor.getString(2);
            vals[2] = cursor.getString(3);
            vals[3] = cursor.getString(4);
            return vals;
        }
        else{
            return null;
        }

//         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);
    }
}
```

DeleteActivity.java :

```
package com.example.v3;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;
import android.content.Intent;
import android.database.sqlite.SQLiteException;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class DeleteActivity extends AppCompatActivity {

    EditText code;
    Button delete;
    private DBHelper dbHelper;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_delete);

        Intent intent = getIntent();
```

```
        code = findViewById(R.id.empcode_upd);
        delete = findViewById(R.id.button_search);

        delete.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String empcode = code.getText().toString();

                if (empcode.length() == 0) {
                    code.requestFocus();
                    code.setError("FIELD CANNOT BE EMPTY");
                } else if (!empcode.matches("[a-zA-Z0-9 ]+")) {
                    code.requestFocus();
                    code.setError("ENTER ONLY ALPHANUMERICAL CHARACTER");
                }

                dbHelper = new DBHelper(DeleteActivity.this);
                try{
                    dbHelper.deleteEmployee(empcode);

                    AlertDialog.Builder builder1 = new
AlertDialog.Builder(DeleteActivity.this);
                    builder1.setMessage("Record deleted successfully!!");
                    builder1.setCancelable(true);

                    builder1.setPositiveButton(
                            "GG",
                            new DialogInterface.OnClickListener() {
                                public void onClick(DialogInterface dialog,
int id) {
                                    dialog.cancel();
                                }
                            });
                    AlertDialog alert11 = builder1.create();
                    alert11.show();
                    code.setText("");
                }
                catch(SQLiteException e){
                    Toast.makeText(DeleteActivity.this,e.toString(),
Toast.LENGTH_LONG).show();
                }
            }
        });
    }
}
```

InsertActivity.java :

```
package com.example.v3;

import androidx.appcompat.app.AlertDialog;
```

```java
import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;
import android.content.Intent;
import android.database.sqlite.SQLiteException;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.Spinner;
import android.widget.Toast;

public class InsertActivity extends AppCompatActivity {

   EditText code, name, salary;
   RadioButton male, female, other;
   Spinner spin;
   Button insert;
   private DBHelper dbHelper;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_insert);

       Intent intent = getIntent();

       code = findViewById(R.id.empcode_upd);
       name = findViewById(R.id.empname_upd);
       salary = findViewById(R.id.empsalary_upd);
       male = findViewById(R.id.radioButtonMale);
       female = findViewById(R.id.radioButtonFemale);
       other = findViewById(R.id.radioButtonOther);
       spin = findViewById(R.id.spinner);
       insert = findViewById(R.id.button_search);

       male.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               female.setChecked(false);
               other.setChecked(false);
           }
       });
       female.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               male.setChecked(false);
               other.setChecked(false);
           }
       });
       other.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               male.setChecked(false);
               female.setChecked(false);
```

```
            }
        });

        insert.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String empcode = code.getText().toString();
                String empname = name.getText().toString();
                String gender;
                if (male.isChecked()) {
                    gender = male.getText().toString();
                } else if (female.isChecked()) {
                    gender = female.getText().toString();
                } else {
                    gender = other.getText().toString();
                }
                String dept = spin.getSelectedItem().toString();
                String sal = salary.getText().toString();

                if (empname.length() == 0) {
                    name.requestFocus();
                    name.setError("FIELD CANNOT BE EMPTY");
                } else if (!empname.matches("[a-zA-Z ]+")) {
                    name.requestFocus();
                    name.setError("ENTER ONLY ALPHABETICAL CHARACTER");
                } else if (empcode.length() == 0) {
                    code.requestFocus();
                    code.setError("FIELD CANNOT BE EMPTY");
                } else if (!empcode.matches("[a-zA-Z0-9 ]+")) {
                    code.requestFocus();
                    code.setError("ENTER ONLY ALPHANUMERICAL CHARACTER");
                } else if (sal.length() == 0) {
                    code.requestFocus();
                    code.setError("FIELD CANNOT BE EMPTY");
                } else if (!sal.matches("[0-9. ]+")) {
                    code.requestFocus();
                    code.setError("ENTER ONLY ALPHANUMERICAL CHARACTER");
                } else {
                    dbHelper = new DBHelper(InsertActivity.this);
                    try {
                        dbHelper.insertEmployee(empcode, empname, gender,
dept, sal);

                        AlertDialog.Builder builder1 = new
AlertDialog.Builder(InsertActivity.this);
                        builder1.setMessage("Record inserted
successfully!!");
                        builder1.setCancelable(true);

                        builder1.setPositiveButton(
                                "GG",
                                new DialogInterface.OnClickListener() {
                                    public void onClick(DialogInterface
dialog, int id) {
                                        dialog.cancel();
                                    }
```

```
                                });
                        AlertDialog alert11 = builder1.create();
                        alert11.show();

                        code.setText("");
                        name.setText("");

male.setChecked(false);female.setChecked(false);other.setChecked(false);
                        spin.setSelection(0);
                        salary.setText("");
                    }
                    catch(SQLiteException e){
                        Toast.makeText(InsertActivity.this,e.toString(),
Toast.LENGTH_LONG).show();
                    }

                }
            }
        });
    }
}
```

MainActivity.java :

```
package com.example.v3;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;
import android.content.Intent;
import android.os.Bundle;

import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    private DBHelper dbHandler;
    private Button btn_create, btn_insert, btn_update, btn_delete,
btn_retrieve;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        btn_create = findViewById(R.id.btn_create);
        btn_insert = findViewById(R.id.btn_insert);
        btn_update = findViewById(R.id.btn_update);
        btn_delete = findViewById(R.id.btn_delete);
```

```
        btn_retrieve = findViewById(R.id.btn_retrieve);

        btn_create.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                dbHandler = new DBHelper(MainActivity.this);

                AlertDialog.Builder builder1 = new
AlertDialog.Builder(MainActivity.this);
                builder1.setMessage("Table Employees created
successfully!!");
                builder1.setCancelable(true);

                builder1.setPositiveButton(
                        "GG",
                        new DialogInterface.OnClickListener() {
                            public void onClick(DialogInterface dialog, int
id) {
                                dialog.cancel();
                            }
                        });
                AlertDialog alert11 = builder1.create();
                alert11.show();
            }
        });

        btn_insert.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(MainActivity.this,
InsertActivity.class);
                startActivity(intent);
            }
        });

        btn_update.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(MainActivity.this,
UpdateActivity.class);
                startActivity(intent);
            }
        });

        btn_delete.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(MainActivity.this,
DeleteActivity.class);
                startActivity(intent);
            }
        });

        btn_retrieve.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
```

```
                Intent intent = new Intent(MainActivity.this,
RetrieveActivity.class);
                startActivity(intent);
            }
        });

    }
}
```

RetrieveActivity.java :

```
package com.example.v3;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteException;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class RetrieveActivity extends AppCompatActivity {

    EditText code;
    TextView name, gender, dept, salary;
    Button search;
    private DBHelper dbHelper;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_retrieve);

        Intent intent = getIntent();

        code = findViewById(R.id.empcode_upd);
        search = findViewById(R.id.button_search);

        name = findViewById(R.id.empname_display);
        gender = findViewById(R.id.gender_display);
        dept = findViewById(R.id.dept_display);
        salary = findViewById(R.id.salary_display);

        search.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String empcode = code.getText().toString();
```

```
                if (empcode.length() == 0) {
                    code.requestFocus();
                    code.setError("FIELD CANNOT BE EMPTY");
                } else if (!empcode.matches("[a-zA-Z0-9 ]+")) {
                    code.requestFocus();
                    code.setError("ENTER ONLY ALPHANUMERICAL CHARACTER");
                }

                dbHelper = new DBHelper(RetrieveActivity.this);

                String[] vals = dbHelper.retrieveEmployee(empcode);
//                  Cursor c = dbHelper.retrieveEmployee(empcode);
//                  if(c.moveToNext()){
//                      name.setText(c.getString(0));
//                  }
                if(vals == null) {
                    Toast.makeText(RetrieveActivity.this, "Nothing returned",
Toast.LENGTH_LONG).show();
                    return;
                }
                else {
                    String empname = vals[0];
                    String sex = vals[1];
                    String department = vals[2];
                    String sal = vals[3];

                    name.setText(empname);
                    gender.setText(sex);
                    dept.setText(department);
                    salary.setText(sal);

                    code.setText("");
                }
            }
        });

    }
}
```

UpdateActivity.java :

```
package com.example.v3;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;
import android.content.Intent;
import android.database.sqlite.SQLiteException;
import android.os.Bundle;
import android.view.View;
```

```
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.Spinner;
import android.widget.Toast;

public class UpdateActivity extends AppCompatActivity {

   EditText code, name, salary;
   RadioButton male, female, other;
   Spinner spin;
   Button insert;
   private DBHelper dbHelper;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_update);

       Intent intent = getIntent();

       code = findViewById(R.id.empcode_upd);
       name = findViewById(R.id.empname_upd);
       salary = findViewById(R.id.empsalary_upd);
       male = findViewById(R.id.radioButtonMale);
       female = findViewById(R.id.radioButtonFemale);
       other = findViewById(R.id.radioButtonOther);
       spin = findViewById(R.id.spinner);
       insert = findViewById(R.id.button_search);

       male.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               female.setChecked(false);
               other.setChecked(false);
           }
       });
       female.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               male.setChecked(false);
               other.setChecked(false);
           }
       });
       other.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               male.setChecked(false);
               female.setChecked(false);
           }
       });

       insert.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View v) {
               String empcode = code.getText().toString();
```

```
                String empname = name.getText().toString();
                String gender;
                if (male.isChecked()) {
                    gender = male.getText().toString();
                } else if (female.isChecked()) {
                    gender = female.getText().toString();
                } else {
                    gender = other.getText().toString();
                }
                String dept = spin.getSelectedItem().toString();
                String sal = salary.getText().toString();

                if (empname.length() == 0) {
                    name.requestFocus();
                    name.setError("FIELD CANNOT BE EMPTY");
                } else if (!empname.matches("[a-zA-Z ]+")) {
                    name.requestFocus();
                    name.setError("ENTER ONLY ALPHABETICAL CHARACTER");
                } else if (empcode.length() == 0) {
                    code.requestFocus();
                    code.setError("FIELD CANNOT BE EMPTY");
                } else if (!empcode.matches("[a-zA-Z0-9 ]+")) {
                    code.requestFocus();
                    code.setError("ENTER ONLY ALPHANUMERICAL CHARACTER");
                } else if (sal.length() == 0) {
                    code.requestFocus();
                    code.setError("FIELD CANNOT BE EMPTY");
                } else if (!sal.matches("[0-9. ]+")) {
                    code.requestFocus();
                    code.setError("ENTER ONLY ALPHANUMERICAL CHARACTER");
                } else {
                    try{
                        dbHelper = new DBHelper(UpdateActivity.this);
                        dbHelper.updateEmployee(empcode, empname, gender,
dept, sal);

                        AlertDialog.Builder builder1 = new
AlertDialog.Builder(UpdateActivity.this);
                        builder1.setMessage("Record updated successfully!!");
                        builder1.setCancelable(true);

                        builder1.setPositiveButton(
                                "GG",
                                new DialogInterface.OnClickListener() {
                                    public void onClick(DialogInterface
dialog, int id) {
                                        dialog.cancel();
                                    }
                                });
                        AlertDialog alert11 = builder1.create();
                        alert11.show();

                        code.setText("");
                        name.setText("");

male.setChecked(false);female.setChecked(false);other.setChecked(false);
```

```
                        spin.setSelection(0);
                        salary.setText("");
                    }
                    catch(SQLiteException e){
                        Toast.makeText(UpdateActivity.this,e.toString(),
Toast.LENGTH_LONG).show();
                    }

                }
            }
        });
    }
}
```

VALUES FILES

colors.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_200">#FFBB86FC</color>
    <color name="purple_500">#FF6200EE</color>
    <color name="purple_700">#FF3700B3</color>
    <color name="teal_200">#FF03DAC5</color>
    <color name="teal_700">#FF018786</color>
    <color name="black">#FF000000</color>
    <color name="white">#FFFFFFFF</color>
    <color name="btn">#32CD30</color>

</resources>
```

strings.xml :

```
<resources>
    <string name="app_name">Database</string>
    <string-array name="department">
        <item></item>
        <item>CSE</item>
        <item>IT</item>
        <item>ECE</item>
        <item>EEE</item>
```

```
        <item>MECH</item>
        <item>CHEM</item>
        <item>BME</item>
        <item>CIVIL</item>
    </string-array>
</resources>
```

gradient_drawable.xml :

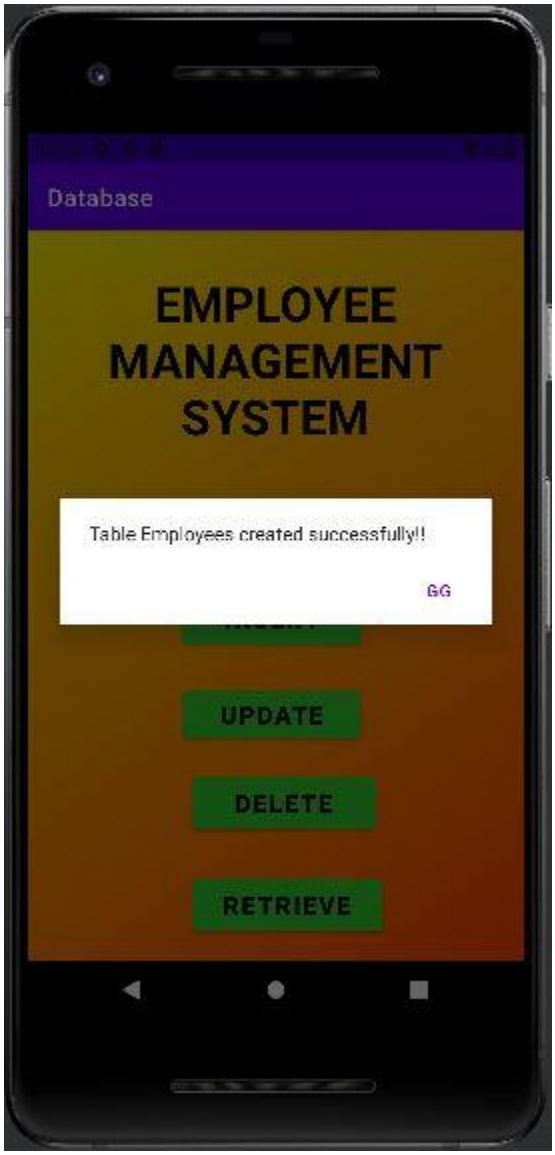
```
<?xml version="1.0" encoding="utf-8"?>
<shape
    android:shape = "rectangle"
    xmlns:android = "http://schemas.android.com/apk/res/android" >

    <gradient
        android:startColor = "#FF4500"
        android:endColor = "#ffef00"
        android:angle="-225"
        />
</shape>
```

Output Snapshots:

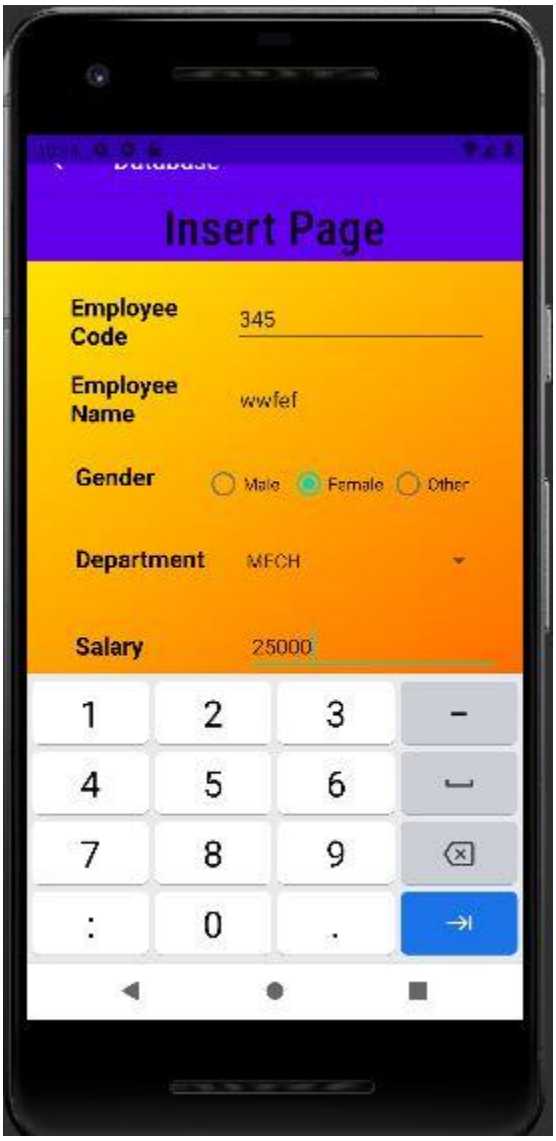
1.Home page

2.DB creation

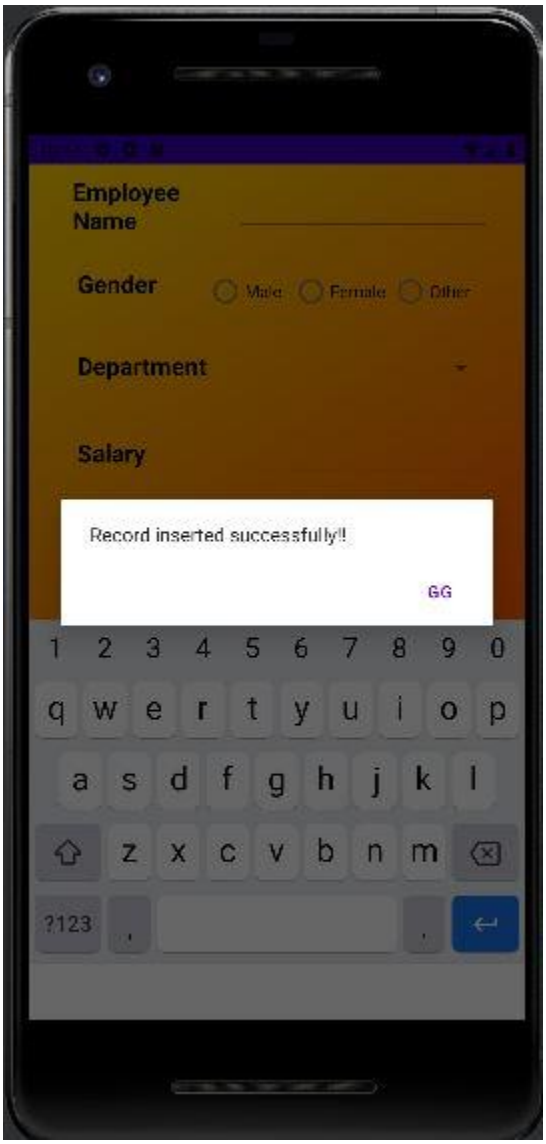


3.Insert record page

4.Insert record example

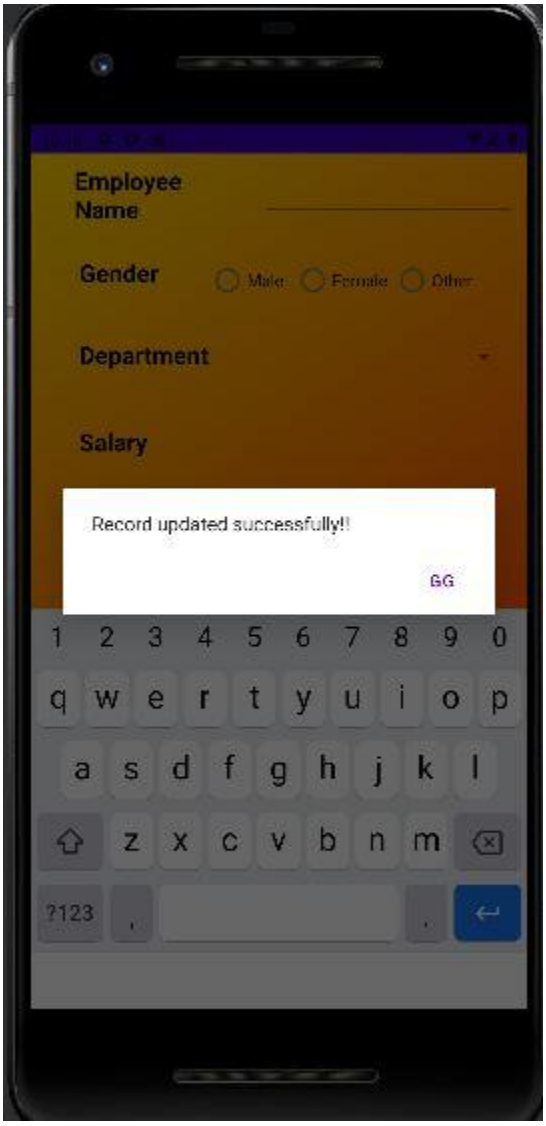


5.Insertion Successful

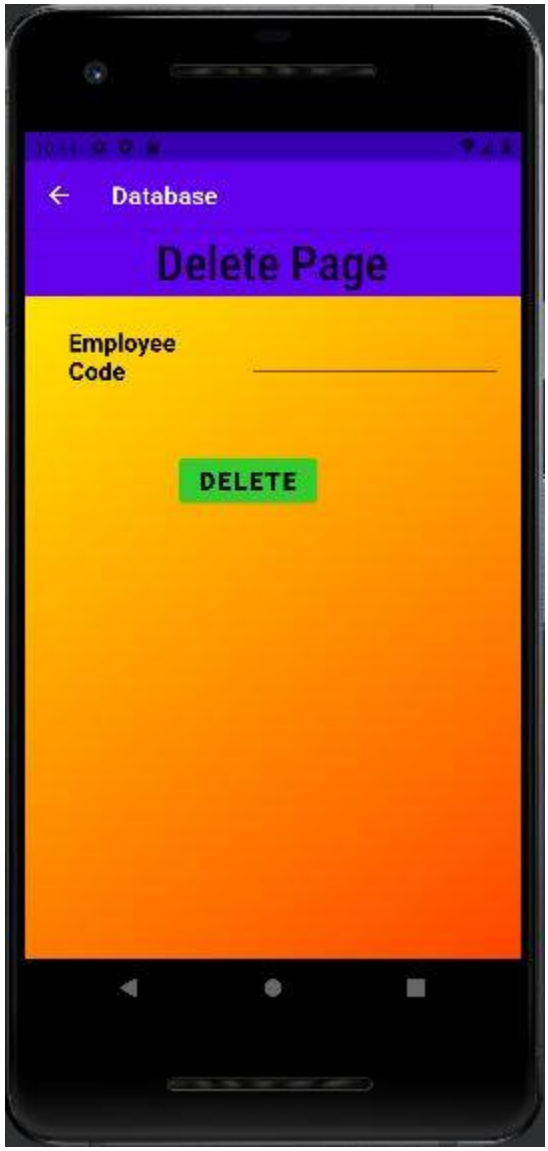


6.Update Page

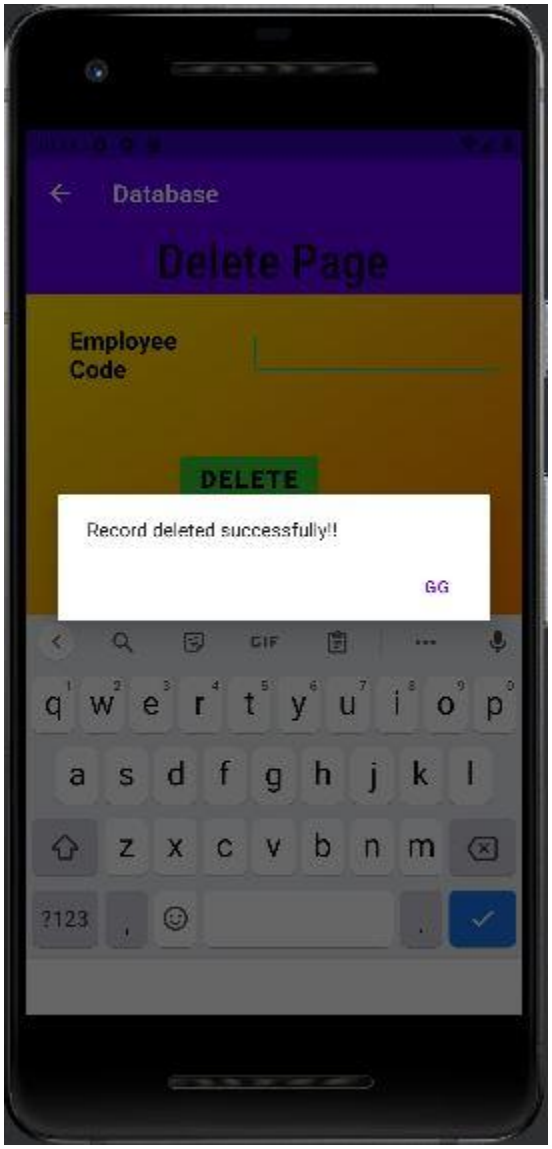
7.Update Successful



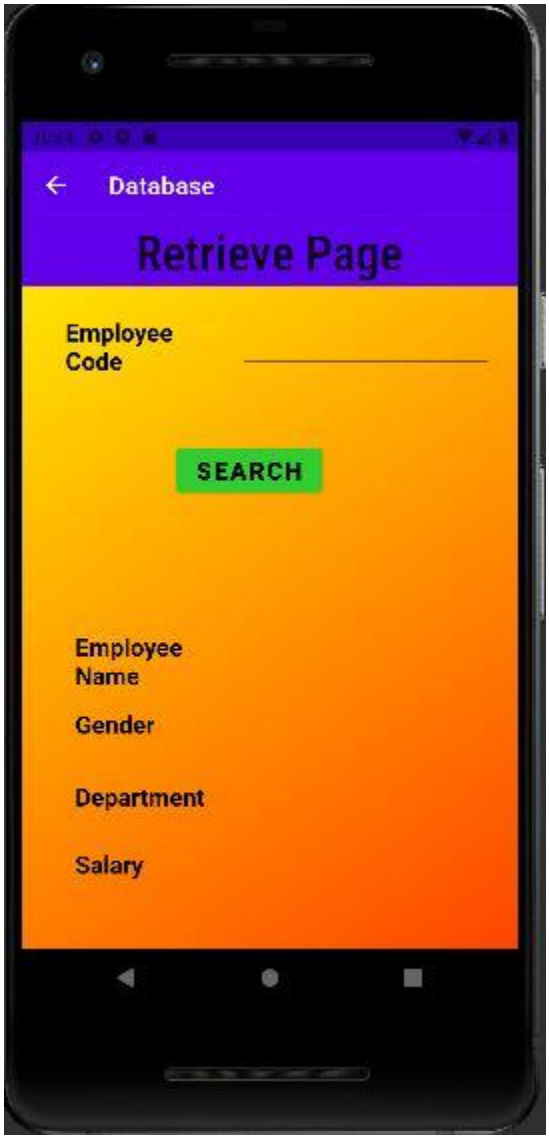
8.Delete Page



9.Delete Successful



10.Retrieve


Database
Retrieve Page
Employee Code
SEARCH
Employee Name
Gender
Department
Salary