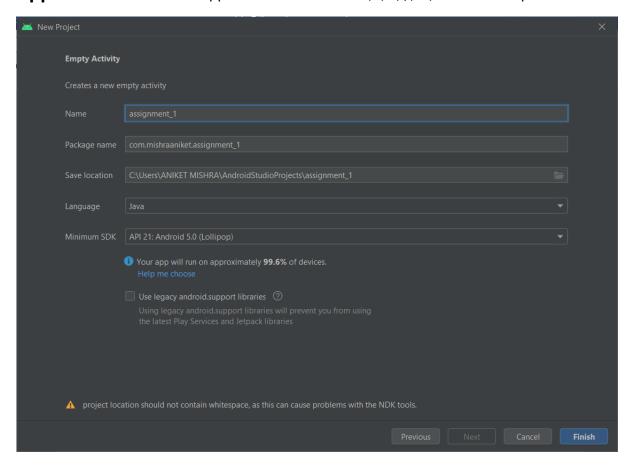
Application: An android application to showcase +, -, *, /, %, ^ and clear operation.



Strings.xml:

```
Eit Edit View Navigate Code Befactor Build Run Iools VCS Window Help assignment_1 - strings.xml [assignment_1 app] src | main | res | values | strings.xml | wild. | strings.xml | wild. | strings.xml | wild. | wild.
```

XML code:

```
<?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"
  tools:context=".MainActivity">
  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/name"
    android:id="@+id/name"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintTop toTopOf="parent"
    app:layout_constraintBottom_toTopOf="@+id/number1"
    />
  <EditText
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:hint="@string/number_one"
    android:id="@+id/number1"
    app:layout constraintStart toStartOf="parent"
    app:layout constraintTop toBottomOf="@+id/name"
    app:layout_constraintBottom_toTopOf="@+id/number2"
    app:layout constraintEnd toEndOf="parent"
    android:layout_marginTop="20dp"
    />
  <EditText
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    app:layout_constraintTop_toBottomOf="@+id/number1"
    android:hint="@string/number_two"
    android:id="@+id/number2"
    app:layout constraintEnd toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    android:layout marginTop="39dp"
    />
  <Button
    android:layout width="120dp"
    android:layout_height="wrap_content"
```

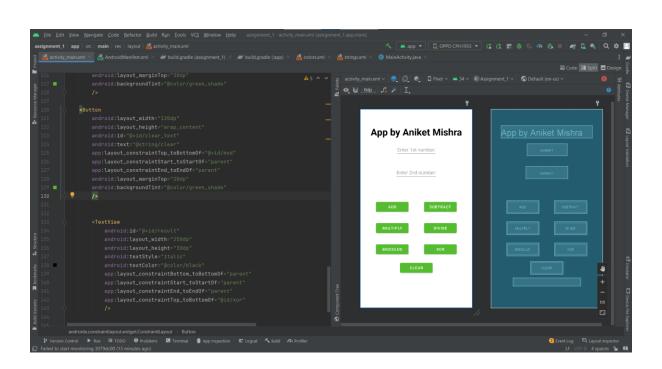
```
android:id="@+id/add"
  android:text="@string/add"
  app:layout constraintTop toBottomOf="@+id/number2"
  app:layout_constraintStart_toStartOf="parent"
  app:layout constraintEnd toStartOf="@+id/subtract"
  android:layout marginTop="80dp"
  android:backgroundTint="@color/green_shade"
  />
<Button
  android:layout_width="120dp"
  android:layout height="wrap content"
  android:text="@string/subtract"
  android:id="@+id/subtract"
  app:layout constraintTop toBottomOf="@+id/number2"
  app:layout_constraintStart_toEndOf="@+id/add"
  app:layout_constraintEnd_toEndOf="parent"
  android:layout marginTop="80dp"
  android:backgroundTint="@color/green_shade"
  />
<Button
  android:layout width="120dp"
  android:layout height="wrap content"
  android:id="@+id/multiply"
  android:text="@string/multiply"
  app:layout constraintTop toBottomOf="@+id/add"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintEnd_toStartOf="@+id/divide"
  android:backgroundTint="@color/green shade"
  />
<Button
  android:layout_width="120dp"
  android:layout height="wrap content"
  android:text="@string/divide"
  android:id="@+id/divide"
  app:layout_constraintTop_toBottomOf="@+id/subtract"
  app:layout constraintStart toEndOf="@+id/multiply"
  app:layout_constraintEnd_toEndOf="parent"
  android:backgroundTint="@color/green_shade"
  />
<Button
  android:layout width="120dp"
  android:layout_height="wrap_content"
  android:id="@+id/mod"
  android:text="@string/mod"
```

/>

```
app:layout_constraintTop_toBottomOf="@+id/multiply"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintEnd_toStartOf="@+id/xor"
  android:backgroundTint="@color/green_shade"
  />
<Button
  android:layout_width="120dp"
  android:layout_height="wrap_content"
  android:text="@string/xor"
  android:id="@+id/xor"
  app:layout_constraintTop_toBottomOf="@+id/divide"
  app:layout_constraintStart_toEndOf="@+id/mod"
  app:layout_constraintEnd_toEndOf="parent"
  android:backgroundTint="@color/green_shade"
  />
  <TextView
    android:id="@+id/result"
    android:layout_width="250dp"
    android:layout_height="54dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
```

app:layout_constraintTop_toBottomOf="@id/xor"

</androidx.constraintlayout.widget.ConstraintLayout>



MainActivity.java:

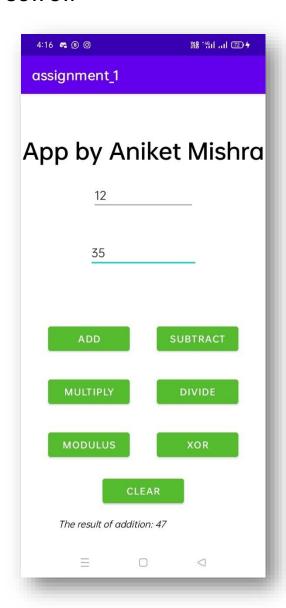
```
package com.mishraaniket.assignment_1;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
  EditText num1, num2;
  Button add, subtract, multiply, divide, xor, mod, clear;
  TextView result;
  int firstNumber, secondNumber;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    num1=(EditText)findViewById(R.id.number1);
    num2=(EditText)findViewById(R.id.number2);
    add=(Button) findViewById(R.id.add);
    multiply=(Button)findViewById(R.id.multiply);
    subtract=(Button) findViewById(R.id.subtract);
    divide=(Button) findViewById(R.id.divide);
    xor=(Button) findViewById(R.id.xor);
    mod=(Button) findViewById(R.id.mod);
    clear=(Button) findViewById(R.id.clear_text);
    result=(TextView) findViewById(R.id.result);
    try{
      add.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
             firstNumber = Integer.parseInt(num1.getText().toString());
             secondNumber = Integer.parseInt(num2.getText().toString());
          }catch (Exception e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
          }
          try{
             result.setText("The result of addition: "+(firstNumber+secondNumber));
```

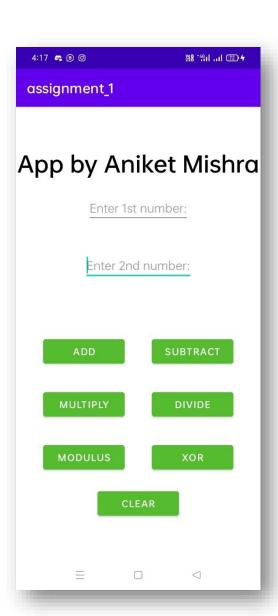
```
}catch (Exception e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
           }
        }
      });
      subtract.setOnClickListener(new View.OnClickListener() {
         @Override
        public void onClick(View view) {
           try{
             firstNumber = Integer.parseInt(num1.getText().toString());
             secondNumber = Integer.parseInt(num2.getText().toString());
           }catch (Exception e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
           }
           try{
             result.setText("The result of subtraction: "+(firstNumber-secondNumber));
           }catch (Exception e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
           }
        }
      });
      multiply.setOnClickListener(new View.OnClickListener() {
         @Override
        public void onClick(View view) {
           try{
             firstNumber = Integer.parseInt(num1.getText().toString());
             secondNumber = Integer.parseInt(num2.getText().toString());
           }catch (Exception e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
           }
           try{
             result.setText("The result of multiplication: "+(firstNumber*secondNumber));
           }catch (Exception e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
           }
        }
      });
```

```
divide.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
             firstNumber = Integer.parseInt(num1.getText().toString());
             secondNumber = Integer.parseInt(num2.getText().toString());
          }catch (Exception e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
          }
          try{
             result.setText("The result of division: "+(firstNumber/secondNumber));
          catch (NullPointerException e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
          catch (ArithmeticException e){
             Toast.makeText(MainActivity.this, "Divisor cannot be zero",
Toast.LENGTH_SHORT).show();
          }
          catch (Exception e){
             Toast.makeText(MainActivity.this, e.toString(), Toast.LENGTH_SHORT).show();
          }
        }
      });
      mod.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
             firstNumber = Integer.parseInt(num1.getText().toString());
             secondNumber = Integer.parseInt(num2.getText().toString());
          }catch (Exception e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
          }
             result.setText("The result of modulus: "+(firstNumber%secondNumber));
          catch (NullPointerException e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
          }
```

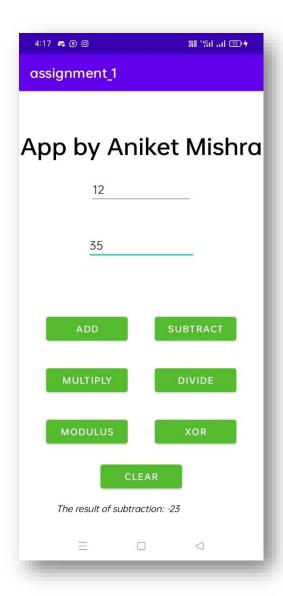
```
catch (ArithmeticException e){
             Toast.makeText(MainActivity.this, "Divisor cannot be zero",
Toast.LENGTH_SHORT).show();
           }
           catch (Exception e){
             Toast.makeText(MainActivity.this, e.toString(), Toast.LENGTH_SHORT).show();
           }
        }
      });
      xor.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View view) {
           try{
             firstNumber = Integer.parseInt(num1.getText().toString());
             secondNumber = Integer.parseInt(num2.getText().toString());
           }catch (Exception e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
           }
           try{
             result.setText("The result of XOR operation: "+(firstNumber^secondNumber));
           }catch (Exception e){
             Toast.makeText(MainActivity.this, "Please enter a valid number",
Toast.LENGTH_SHORT).show();
           }
        }
      });
      clear.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View view) {
           result.setText("");
           num1.setText("");
           num2.setText("");
        }
      });
    }catch(Exception e){
      Toast.makeText(MainActivity.this, e.toString(), Toast.LENGTH SHORT).show();
    }
  }
}
```

OUTPUT:





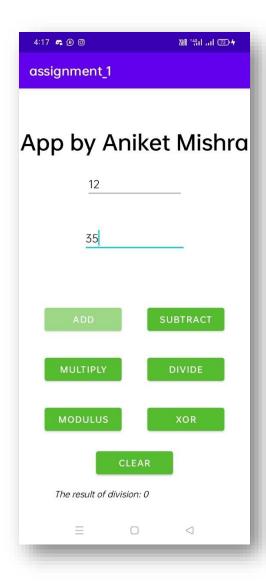
Addition Clear

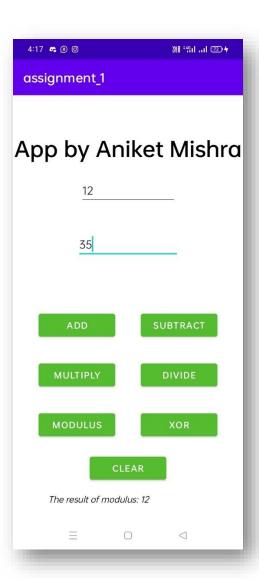




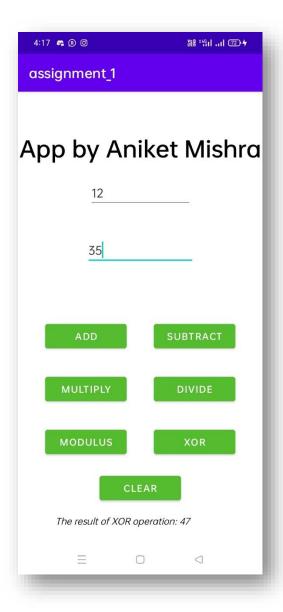
Subtraction

Multiplication





Division Modulus





^ operation

Edge case: Not a valid number

4:30 & ® © ©	ໝ [ુ] 위대 ad 2 3/4
App by A	niket Mishra
0	-
ADD	SUBTRACT
MULTIPLY	DIVIDE
MODULUS	XOR
Divisor cannot be zero The result of division: 0	
≡	

Edge case: Division by 0.