Q1. Construct an Android application to accept two numbers in two EditText, with four buttons as ADD, SUB, DIV and MULT and display Result using Toast Control.

```
<?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”>

    <EditText
        Android:id=”@+id/num1EditText”
        Android:layout_width=”match_parent”
        Android:layout_height=”wrap_content”
        Android:hint=”Enter Number 1”
        Android:inputType=”numberDecimal” />

    <EditText
        Android:id=”@+id/num2EditText”
        Android:layout_width=”match_parent”
        Android:layout_height=”wrap_content”
        Android:layout_below=”@id/num1EditText”
        Android:layout_marginTop=”16dp”
        Android:hint=”Enter Number 2”
        Android:inputType=”numberDecimal” />

    <Button
```

```
    Android:id=”@+id/addButton”
    Android:layout_width=”wrap_content”
    Android:layout_height=”wrap_content”
    Android:layout_below=”@id/num2EditText”
    Android:layout_marginTop=”16dp”
    Android:text=”ADD” />

<Button
    Android:id=”@+id/subButton”
    Android:layout_width=”wrap_content”
    Android:layout_height=”wrap_content”
    Android:layout_below=”@id/addButton”
    Android:layout_marginTop=”16dp”
    Android:text=”SUB” />

<Button
    Android:id=”@+id/multButton”
    Android:layout_width=”wrap_content”
    Android:layout_height=”wrap_content”
    Android:layout_below=”@id/subButton”
    Android:layout_marginTop=”16dp”
    Android:text=”MULT” />

<Button
    Android:id=”@+id/divButton”
    Android:layout_width=”wrap_content”
    Android:layout_height=”wrap_content”
```

```
        Android:layout_below=”@id/multButton”
        Android:layout_marginTop=”16dp”
        Android:text=”DIV” />

</RelativeLayout>
```

Main.java

```
Import android.os.Bundle;
Import android.view.View;
Import android.widget.Button;
Import android.widget.EditText;
Import android.widget.Toast;

Import androidx.appcompat.app.AppCompatActivity;

Public class MainActivity extends AppCompatActivity {

    Private EditText num1EditText, num2EditText;
    Private Button addButton, subButton, multButton, divButton;

    @Override
    Protected void onCreate(Bundle savedInstanceState) {
        Super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        num1EditText = findViewById(R.id.num1EditText);
        num2EditText = findViewById(R.id.num2EditText);
```

```
addButton = findViewById(R.id.addButton);
subButton = findViewById(R.id.subButton);
multButton = findViewById(R.id.multButton);
divButton = findViewById(R.id.divButton);

addButton.setOnClickListener(new View.OnClickListener() {
    @Override
    Public void onClick(View v) {
        performOperation(“+”);
    }
});

subButton.setOnClickListener(new View.OnClickListener() {
    @Override
    Public void onClick(View v) {
        performOperation(“-“);
    }
});

multButton.setOnClickListener(new View.OnClickListener() {
    @Override
    Public void onClick(View v) {
        performOperation(“*”);
    }
});

divButton.setOnClickListener(new View.OnClickListener() {
```

```
        @Override
        Public void onClick(View v) {
            performOperation(“/”);
        }
    });
}

Private void performOperation(String operation) {
    String num1Str = num1EditText.getText().toString();
    String num2Str = num2EditText.getText().toString();

    If (num1Str.isEmpty() || num2Str.isEmpty()) {
        showToast(“Please enter both numbers”);
        return;
    }

    Double num1 = Double.parseDouble(num1Str);
    Double num2 = Double.parseDouble(num2Str);

    Double result = 0;

    Switch (operation) {
        Case “+”:
            Result = num1 + num2;
            Break;
        Case “-“:
            Result = num1 – num2;
```

```
            Break;
        Case “*”:
            Result = num1 * num2;
            Break;
        Case “/”:
            If (num2 != 0) {
                Result = num1 / num2;
            } else {
                showToast(“Cannot divide by zero”);
                return;
            }
            Break;
    }

    showToast(“Result: “ + result);
  }

  Private void showToast(String message) {
    Toast.makeText(this, message, Toast.LENGTH_SHORT).show();
  }
}
```

Q2. Construct a bank app to display different menu like withdraw, deposit etc.

```
<?xml version=”1.0” encoding=”utf-8”?>
<LinearLayout 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:orientation=”vertical”
Android:padding=”16dp”
Tools:context=”.MainActivity”>

<TextView
    Android:id=”@+id/accountNumberTextView”
    Android:layout_width=”wrap_content”
    Android:layout_height=”wrap_content”
    Android:text=”Account Number: “
    Android:textSize=”18sp”
    Android:textStyle=”bold” />

<TextView
    Android:id=”@+id/accountTypeTextView”
    Android:layout_width=”wrap_content”
    Android:layout_height=”wrap_content”
    Android:text=”Account Type: “
    Android:textSize=”18sp”
    Android:textStyle=”bold” />

<TextView
    Android:id=”@+id/balanceTextView”
    Android:layout_width=”wrap_content”
    Android:layout_height=”wrap_content”
    Android:text=”Balance: “
    Android:textSize=”18sp”
```

```
        Android:textStyle=”bold” />

    <Button
        Android:id=”@+id/withdrawButton”
        Android:layout_width=”match_parent”
        Android:layout_height=”wrap_content”
        Android:text=”Withdraw” />

    <Button
        Android:id=”@+id/depositButton”
        Android:layout_width=”match_parent”
        Android:layout_height=”wrap_content”
        Android:text=”Deposit” />

</LinearLayout>
```

Main.java

```
Import android.os.Bundle;
Import android.view.View;
Import android.widget.Button;
Import android.widget.TextView;

Import androidx.appcompat.app.AppCompatActivity;

Public class MainActivity extends AppCompatActivity {

    Private TextView accountNumberTextView, accountTypeTextView, balanceTextView;
    Private Button withdrawButton, depositButton;
```

```
Private int accountNumber = 123456789;
Private String accountType = “Savings”;
Private double balance = 1000.0;

@Override
Protected void onCreate(Bundle savedInstanceState) {
    Super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    accountNumberTextView = findViewById(R.id.accountNumberTextView);
    accountTypeTextView = findViewById(R.id.accountTypeTextView);
    balanceTextView = findViewById(R.id.balanceTextView);
    withdrawButton = findViewById(R.id.withdrawButton);
    depositButton = findViewById(R.id.depositButton);

    accountNumberTextView.setText(“Account Number: “ + accountNumber);
    accountTypeTextView.setText(“Account Type: “ + accountType);
    balanceTextView.setText(“Balance: $” + balance);

    withdrawButton.setOnClickListener(new View.OnClickListener() {
        @Override
        Public void onClick(View v) {
            // Implement withdraw logic here
            // For simplicity, let’s assume a fixed withdrawal amount
            Double withdrawalAmount = 100.0;
            If (balance >= withdrawalAmount) {
```

```
                Balance -= withdrawalAmount;
                updateBalance();
            }
        }
    });

    depositButton.setOnClickListener(new View.OnClickListener() {
        @Override
        Public void onClick(View v) {
            // Implement deposit logic here
            // For simplicity, let's assume a fixed deposit amount
            Double depositAmount = 200.0;
            Balance += depositAmount;
            updateBalance();
        }
    });
}

Private void updateBalance() {
    balanceTextView.setText("Balance: $" + balance);
}
}
```