JAVA PROGRAMS:

1.Java program to perform basic Calculator operations.

2Banking Transaction Program in Java.

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Java program to perform basic Calculator operations

```
package JAVA;

import java.util.Scanner;

public class Calculator {

public static void main(String[] args) {

Scanner reader = new Scanner(System.in);

System.out.print("Enter two numbers: ");

double first = reader.nextDouble();

double second = reader.nextDouble();

System.out.print("Enter an operator (+, -, *, /): ");

char operator = reader.next().charAt(0);

double result;

switch(operator)

{

case '+':

result = first + second;

break;

case '-':

result = first - second;

break;

case '*':

result = first * second;

break;

case '/':

result = first / second;

break;

default:

System.out.printf("Error! operator is not correct");

return;
```

```
}
System.out.printf("%.1f %c %.1f = %.1f", first, operator, second, result);
}
}
```

Banking Transaction Program in Java

```
import java.util.Scanner;

public class BankAccount {
    private double balance;
    private String accountNumber;

    public BankAccount(String accountNumber, double initialBalance) {
        this.accountNumber = accountNumber;
        this.balance = initialBalance;
    }

    public synchronized void deposit(double amount) {
        if (amount > 0) {
            balance += amount;
            System.out.println("Deposited: $" + amount);
            System.out.println("New Balance: $" + balance);
        } else {
            System.out.println("Deposit amount must be positive.");
        }
    }

    public synchronized void withdraw(double amount) {
```

```
    if (amount > 0 && amount <= balance) {
        balance -= amount;
        System.out.println("Withdrew: $" + amount);
        System.out.println("New Balance: $" + balance);
    } else {
        System.out.println("Insufficient funds or invalid withdrawal amount.");
    }
}

public void checkBalance() {
    System.out.println("Current Balance: $" + balance);
}

public String getAccountNumber() {
    return accountNumber;
}

public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    System.out.println("Enter Account Number: ");
    String accountNumber = scanner.nextLine();

    BankAccount account = new BankAccount(accountNumber, 1000.0); // Initial balance is $1000

    while (true) {
        System.out.println("\nWelcome to the Bank! Choose an option:");
        System.out.println("1. Deposit");
        System.out.println("2. Withdraw");
        System.out.println("3. Check Balance");
        System.out.println("4. Exit");
```

```
            int choice = scanner.nextInt();
            switch (choice) {
                case 1:
                    System.out.println("Enter deposit amount: ");
                    double depositAmount = scanner.nextDouble();
                    account.deposit(depositAmount);
                    break;
                case 2:
                    System.out.println("Enter withdrawal amount: ");
                    double withdrawalAmount = scanner.nextDouble();
                    account.withdraw(withdrawalAmount);
                    break;
                case 3:
                    account.checkBalance();
                    break;
                case 4:
                    System.out.println("Thank you for banking with us!");
                    scanner.close();
                    System.exit(0);
                default:
                    System.out.println("Invalid option. Please try again.");
            }
        }
    }
}
```