Prog1 - Notepad

File Edit Format View Help

```
import java.util.Scanner;

abstract class Shape{
    int b,h;
    Shape(int b, int h){
        this.b = b;
        this.h = h;
    }
    void printArea(){};
}

class Rectangle extends Shape{
    Rectangle(int b, int h){
        super(b,h);
    }

    void printArea() {
        System.out.println("Area of the rectangle is " + (b*h));
    };
}

class Triangle extends Shape{
    Triangle(int b, int h){
        super(b,h);
    }

    void printArea() {
        System.out.println("Area of the triangle is " + ((b*h)/2));
    };
}

class Circle extends Shape{
    Circle(int r){
        super(0,r);
    }

    void printArea() {
        System.out.println("Area of the circle is " + (Math.PI*h*h));
    };
}

public class Prog1{
    public static void main(String[] args) {
        Rectangle rect = new Rectangle(10, 5);
        Triangle tri = new Triangle(10, 5);
        Circle c = new Circle(10);
        rect.printArea();
        tri.printArea();
        c.printArea();
    }
}
```

Command Prompt

```
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C:\Users\91957>cd desktop

C:\Users\91957\Desktop>cd java lab

C:\Users\91957\Desktop\java lab>javac Prog1.java

C:\Users\91957\Desktop\java lab>java Prog1
Area of the rectangle is 50
Area of the triangle is 25
Area of the circle is 314.1592653589793

C:\Users\91957\Desktop\java lab>
```

Ln 51, Col 2 | 80% | Windows (CRLF) | UTF-8

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ENG 16:14 03-11-2020

*Prog1 - Notepad

File Edit Format View Help

```
import java.util.Scanner;

abstract class Account{
    String cName,accNum,accType;
    public static final String ANSI_RED = "\u001B[31m";
    public static final String ANSI_GREEN = "\u001B[32m";
    public static final String ANSI_RESET = "\u001B[0m";
    Scanner sc = new Scanner(System.in);

    Account(String name,String accNo,String accType){
        this.cName = name;
        this.accNum = accNo;
        this.accType = accType;
    }
    Account(){};
}

class CurrentAcc extends Account{
    private double balance = 5000,rate = 0.08;

    CurrentAcc(String name,String accNo,String accType){
        super(name,accNo,accType);
        System.out.println("Welcome " + cName);
    }

    void getBalance() {
        System.out.format("Your balance: %f\n",balance);
    }

    void deposit(double amount){
        char choice;
        System.out.println("Deposit. Account holder: " + cName + " Amount: " + amount);
        System.out.println("Approve Deposit?(Y/N): ");
        choice = sc.next().charAt(0);
        if(choice == 'Y' || choice == 'y'){
            balance+=amount;
            System.out.println(ANSI_GREEN + "Deposit approved. Updated balance: " + balance + ANSI_RESET);
        }else{
            System.out.println(ANSI_RED + "Deposit not approved" + ANSI_RESET);
        }
    }

    void withdraw(double amount){
        System.out.println(ANSI_RED + "This account cannot withdraw any funds" + ANSI_RESET);
    }

    void calcInterest() {};
    void checkMinAmount(){
        if(balance < 3000){
            balance-=500;
            System.out.println(ANSI_RED + "Balance under minimum amount to be maintained." + ANSI_RESET);
            System.out.println(ANSI_RED + "Penalty imposed. Updated balance: " + balance + ANSI_RESET);
        }
    }
```

Ln 210, Col 1 | 80% | Windows (CRLF) | UTF-8

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ENG 16:16 03-11-2020

*Prog1 - Notepad

File Edit Format View Help

```
class SavingsAcc extends Account{
    private double balance = 5000,rate = 0.06;

    SavingsAcc(String name,String accNo,String accType){
        super(name,accNo,accType);
        System.out.println("New Customer: " + cName);
    }

    void getBalance() {
        System.out.format("Your balance: %f\n",balance);
    }

    void deposit(double amount){
        char choice;
        System.out.println("Deposit. Account holder: " + cName + " Amount: " + amount);
        System.out.println("Approve Deposit?(Y/S): ");
        choice = sc.next().charAt(0);
        if(choice == 'Y' || choice == 'y'){
            balance+=amount;
            System.out.println(ANSI_GREEN + "Deposit approved. Updated balance: " + balance + ANSI_RESET);
            calcInterest();
            checkMinAmount();
        }else{
            System.out.println(ANSI_RED + "Deposit not approved" + ANSI_RESET);
        }
    }

    void calcInterest(){
        double CI;

        CI = balance * (Math.pow((1+rate/100),2));
        balance+=CI;
        System.out.println(ANSI_GREEN + "Interest added. Updated balace: " + balance + ANSI_RESET);
    }

    void withdraw(double amount){
        char choice;


        if(balance < amount){
            System.out.println(ANSI_RED + "Account balance is lower than amount to be withdrawn" + ANSI_RESET);
            return;
        }
        System.out.println("Approve " + cName + "'s request for withdrawal? (Y/N): ");
        choice = sc.next().charAt(0);
        if(choice == 'Y' || choice == 'y'){
            balance -=amount;
            System.out.println(ANSI_GREEN + "Withdrawal approved. Updated balance: " + balance + ANSI_RESET);
            calcInterest();
            checkMinAmount();
        }else{
            System.out.println(ANSI_RED + "Withdrawal not approved" + ANSI_RESET);
        }
```

Ln 210, Col 1 | 80% | Windows (CRLF) | UTF-8

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ENG 16:16 03-11-2020

Prog2 - Notepad

File Edit Format View Help

```
    if(acctype.charAt(0) == 'C'){
        CurrentAcc a = new CurrentAcc(name, accno, acctype);
        while(true){
            System.out.println("1. Deposit money\n2. Withdraw money\n3. Display money\n4. Exit");
            c = sc.nextInt();
            switch(c){
                case 1: {
                    System.out.println("Enter amount to be deposited: ");
                    temp = sc.nextDouble();
                    a.deposit(temp);
                    break;
                }
                case 2: {
                    System.out.println("Enter amount to be withdrawn: ");
                    temp = sc.nextDouble();
                    a.withdraw(temp);
                    break;
                }
                case 3: {
                    a.getbalance();
                    break;
                }
                case 4: {
                    System.exit(0);
                    break;
                }
                default: System.out.println("Enter the correct options");
            }

        }
    }else if(acctype.charAt(0) == 'S'){
        SavingsAcc a = new SavingsAcc(name, accno, acctype);
        while(true){
            System.out.println("1. Deposit money\n2. Withdraw money\n3. Display money\n4. Exit");
            c = sc.nextInt();
            switch(c){
                case 1: {
                    System.out.println("Enter amount to be deposited: ");
                    temp = sc.nextDouble();
                    a.deposit(temp);

                    break;
                }
                case 2: {
                    System.out.println("Enter amount to be withdrawn: ");
                    temp = sc.nextDouble();
                    a.withdraw(temp);

                    break;
                }
                case 3: {
                    a.getbalance();
                    break;
                }
                case 4: {
                    System.exit(0);
                    break;
                }
                default: System.out.println("Enter the correct options");
            }

        }
    }else{
        System.out.println("Enter valid type... Exiting");
    }
  }
}
```

Command Prompt

```
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C:\Users\91957>cd desktop

C:\Users\91957\Desktop>cd java lab

C:\Users\91957\Desktop\java lab>javac Prog2.java

C:\Users\91957\Desktop\java lab>java Prog2
Enter Name:
abc
Enter Account number:
18493bg
Enter Account Type:
ghi
Enter valid type... Exiting

C:\Users\91957\Desktop\java lab>
```

Ln 182, Col 13 | 60% | Windows (CRLF) | UTF-8

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ENG 16:21 01-11-2020