

1]

Week -8

abstract class Shape {

double dim1, dim2;

Shape(double a, double b) {

dim1 = a;

dim2 = b;

}

abstract double printArea();

}

class Rectangle extends Shape {

Rectangle(double a, double b) {

super(a, b);

}

double printArea() {

~~System.out.println~~

return dim1 * dim2;

}

}

class Triangle extends Shape {

Triangle(double a, double b) {

super(a, b);

}

double printArea() {

return dim1 * dim2 / 2;

}

}

class Circle extends Shape {

Circle(double a, double b) {

super(a, b);

```

double printArea() {
    return dim1 * dim2 * dim2;
}
}

class ShapeMain {
    public static void main(String args[]) {
        Rectangle r = new Rectangle(10, 20);
        Triangle t = new Triangle(5, 4);
        Circle c = new Circle(3.142, 2);
        Shape shaperef;
        shaperef = r;
        System.out.println("Area of rectangle: " + shaperef.printArea());
        shaperef = t;
        System.out.println("Area of triangle: " + shaperef.printArea());
        shaperef = c;
        System.out.println("Area of circle: " + shaperef.printArea());
    }
}

```

```

2] import java.util.Scanner;
abstract class Account {
    String cName, accType;
    long accNo;
    double bal;
    final double minBal = 1000.0;
    Account (String cName, long accNo, double bal,
             String accType) {
        this.accNo = accNo;
        this.cName = cName;
        this.bal = bal;
        this.accType = accType;
    }
}

```

```

    abstract void addBal (double amt);
    abstract void dispBal ();
    abstract void withBal (double amt);
}

```

```

class Curr_acct extends Account {
    curr_acct (String cName, long accNo, double bal) {
        super (cName, accNo, bal, "Current");
        System.out.println ("name: " + cName + "\t accno: " + accNo
                             + "\t bal: " + bal + "\t type: " + accType);
    }
    void addBal (double amt) {
        this.bal += amt;
    }
}

```



```

void dispBal() {
    System.out.println("Your Balance is: " + this.Bal);
}

void withBal(double amt) {
    this.bal -= amt;
    checkBal();
}

void checkBal() {
    if (this.bal < minBal) {
        this.bal += this.bal * 0.2;
    }
}

class Sav_acct extends Account {
    Sav_acct (String cName, long accNo, double bal) {
        super (cName, accNo, bal, "Savings");
        System.out.println("name: " + cName + "\t accno: "
            + accNo + "\t bal: " + bal +
            "\t type: " + acctype);
    }

    void addBal(double amt) {
        this.bal += amt;
        addIntr();
    }

    void addBal addIntr() {
        this.bal += this.bal * 0.07;
    }
}

```

```

void dispBal() {
    System.out.println("Your Balance is : " + this.bal);
}

void withBal(double amt) {
    this.bal -= amt;
}
}

```

```

class AccountMain {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        Double amt;
        int flag = 0;
        while (flag == 0) {
            System.out.println("\n 1: Current acc.
            2: Savings acc.");

            int ch = sc.nextInt();
            switch (ch) {
                case 1:
                    curr_acct c = new Curr_acct("Jacob", 1234567, 50000);
                    System.out.println("\n Current_acct\n");
                    int flag1 = 0;
                    while (flag1 == 0) {
                        System.out.println("1: Add amt & 2: Display Balance
                        3: withdraw");

                        int ch1 = sc.nextInt();
                        switch (ch1) {
                            case 1:

```

```

case 1: System.out.println("Enter amt to be added");
        amt = sc.nextDouble();
        c.addBal(amt);
        break;
case 2: c.dispBal();
        break;
case 3: System.out.println("Enter amt to be
        withdrawn");
        amt = sc.nextDouble();
        c.withBal(amt);
        break;
default:
        flag1 = 1;
}
}
break;

```

```

case 2:
        System.out.println("\n Savings - acct\n");
        Sav - acct s = new Sav - acct ("Sean", 34567891, 4000);
        int flag2 = 0;
        while (flag2 == 0) {
                System.out.println("1: Add Bal\n 2: display Bal\n 3: Withdraw");
                int ch2 = sc.nextInt();
                switch (ch2) {
                        case 1: System.out.println("Enter amt to be added:");
                                amt = sc.nextDouble();
                                s.addBal(amt);
                                break;

```

```
case 2:
    s.display();
    break;
```

```
case 3:
```

```
System.out.println("Enter amt to be withdrawn:");
amt = sc.nextDouble();
s.withBal(amt);
break;
```

```
default:
    flag = 1;
}
```

```
}
break;
```

```
default:
    flag = 1;
```

```
}
}
}
}
```

```
Command Prompt
Microsoft Windows [Version 10.0.18363.1139]
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C:\Users\Manoj H A>cd documents

C:\Users\Manoj H A\Documents>javac Shape.java

C:\Users\Manoj H A\Documents>java ShapeMain
Area of Rectangle:200.0
Area of Triangle:10.0
Area of Circle:12.568

C:\Users\Manoj H A\Documents>
```



```
Command Prompt - java AccountMain
res of Circle:12.568

:\Users\Manoj H A\Documents>javac Account.java
:\Users\Manoj H A\Documents>java AccountMain
:Current acc.
:Savings acc.

ame: Jacob      accno: 12345678 bal: 50000.0   type: Current
current_acct

:Addamount
:displayBalance
:withdraw

nter amt to be added:
000
:Addamount
:displayBalance
:withdraw

nter amt to be withdrawn:
500
:Addamount
:displayBalance
:withdraw

our balance is: 52500.0
:Addamount
:displayBalance
:withdraw

nter amt to be withdrawn:
2000
:Addamount
:displayBalance
:withdraw

our balance is: 400.0
:Addamount
:displayBalance
:withdraw
```

```

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C:\Users\Manoj H A>cd documents

C:\Users\Manoj H A\Documents>javac Account.java

C:\Users\Manoj H A\Documents>java AccountMain
1:Current acc.
2:Savings acc.
?
Savings_acct
name: Sean      accno: JAS67891 bal: 4000.0      type: Savings
1:AddBal
2:displayBal
3:withdraw
?
enter amt to be added:
4000
1:AddBal
2:displayBal
3:withdraw
?
enter amt to be withdrawn:
100
1:AddBal
2:displayBal
3:withdraw
?
Your balance is: 5500.0
1:AddBal
2:displayBal
3:withdraw
?
enter amt to be withdrawn:
5000
1:AddBal
2:displayBal
3:withdraw
?
Your balance is: 500.0
1:AddBal
2:displayBal
3:withdraw
?

```