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Triangle.java

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```java
class Triangle {
    private double a, b, c;
    public Triangle(double a, double b, double c) {
        this.a = a;
        this.b = b;
        this.c = c;
    }
    public boolean isRight() {
        return (a*a + b*b == c*c) ||
               (a*a + c*c == b*b) ||
               (b*b + c*c == a*a);
    }
    public boolean isScalene() {
        return a != b && b != c && a != c;
    }
    public boolean isIsosceles() {
        return (a == b || b == c || a == c) && !isEquilateral();
    }
    public boolean isEquilateral() {
        return a == b && b == c;
    }
    public static void main(String[] args) {
        Triangle t = new Triangle(3, 4, 5);
        System.out.println("Right Triangle: " + t.isRight());
        System.out.println("Scalene: " + t.isScalene());
        System.out.println("Isosceles: " + t.isIsosceles());
        System.out.println("Equilateral: " + t.isEquilateral());
    }
}

```

Output

Clear

```
Right Triangle: true
Scalene: true
Isosceles: false
Equilateral: false

=== Code Execution Successful ===
```

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Main.java

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```java
        } else {
            balance = 0;
        }
    }
    public Account() {
        balance = 0;
    }
    public void deposit(double amount) {
        if (amount > 0) {
            balance += amount;
            System.out.println("Deposited: $" + amount);
        }
    }
    public void withdraw(double amount) {
        if (amount <= balance) {
            balance -= amount;
            System.out.println("Withdrawn: $" + amount);
        } else {
            balance -= 5;
            System.out.println("Insufficient balance! $5 penalty charged.");
        }
    }
    public double getBalance() {
        return balance;
    }
    public void addInterest(double rate) {
        double interest = balance * rate / 100;
        balance += interest;
        System.out.println("Interest added: $" + interest);
    }
}
public class Main {
    public static void main(String[] args) {
        Account acc = new Account(100);
        acc.deposit(50);
        acc.withdraw(30);
        acc.withdraw(150);
        acc.addInterest(5);
        System.out.println("Current Balance: $" + acc.getBalance());
    }
}
```

Output

Clear

```
Deposited: $50.0
Withdrawn: $30.0
Insufficient balance! $5 penalty charged.
Interest added: $5.75
Current Balance: $120.75

=== Code Execution Successful ===
```

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Assignment: 1

Name S Madhuri
Regno 192465036
Course CSA0914-
Programming in Java
For Web applications

1. Implement a class Account. An account has
   - a balance
   - functions to add
   - and withdraw money.
   - And a function to inquire the current balance

```
class Account {
    double balance;
    Account(double b){
        balance=b;
  }
  Account(){
      balance=0;
 }
void deposit(dable amount){
       balance+=amount;
}
void withdraw(double amount){
    if(amount<=balance){
        balance-=amount;
}
else{
   balance=balance-=5;
```

20/20

```
}
void checkTriangle(){
    if(a==b && b==c){
    System.out.println("Equilateral Triangle");
}else if(a==b || b==c || a==c){
      System.out.println("Isosceles Triangle");
}
else{
    System.out.println("Scalene Triangle");
}
if((a*a+b*b==c*c) ||
    (a*a+c*c==b*b) ||
    (b*b+c*c==a*b)){
  System.out.println("It is also a Right Triangle");
}}}
class TestTriangle{
  public static void main(String[] args){
      Triangle t=new Triangle(3,4,5);
        t.checkTriangle();
}}
```

```
System.out.println("Penalty Charged 5");
}}
void checkBalance(){
  System.out.println("Balance " +balance);
}} class Main{
public static void main(String[] args){
    Account a = new account(120);
     a.deposit(50);
     a.Withdraw(30);
     a.Withdraw(180);
     a.CheckBalance();
}}
```

8 Write a class called Triangle that can be used for represent a triangle. It should include the following methods that return boolean values indicating if the particular property holds:

- isRight
- isScalence
- isIsosceles
- isEquilateral

```
class triangle {
   double a,b,c;
  Triangle(double x, double y, double z){
    a=x;
    b=y;
    c=z;
```