

Assignment

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1. Write a Java program that uses a method to calculate the area of a rectangle and compare them using Relational Operator Steps:

- Create a class Rectangle.
- The Rectangle class should have two attributes length and width of type int.
- Create a constructor that accepts length and width as parameters.
- Area should be calculated as length*width.
- Instantiate two Rectangle classes with random values.
- Compare the areas of the two rectangles using the Relational Operator.
- If the first one is bigger than the second one, print "Rectangle1 > Rectangle2".
- If the first one is smaller print "Rectangle1 < Rectangle2".
- Otherwise print "They are equal".

Program

```
package javapractice;
public class Rectangle {
    int length, width, area; //data member
    Rectangle(int l, int w) //constructor
    {
        length=l;
        width=w;
    }
    void findarea()
    {
        area=length*width;
    }

    public static void main(String[] args) {
        Rectangle r1, r2;
        r1= new Rectangle(8,4);
        r2= new Rectangle(4,3);
        r1.findarea();
        r2.findarea();
        String message;
        message = (r1.area>r2.area) ? "Rectnagle1 > Rectangle2" :
        (r1.area<r2.area) ? "Rectnagle1 < Rectangle2" : "They are equal";
        System.out.println(message);
    }
}
```

}

Output:

```
Rectnagle1 > Rectangle2
```

2. Write a Java program that allows the user to create a bank account and perform transactions such as deposit, withdrawal, and balance inquiry. Using a conditional operator (ternary operator), display the message whether minimum balance is maintained or not. Steps:

- Create a class BankAccount
- Add three member variables: String accountHolderName , int accountNumber and int balance;
- Add a constructors using all three members
- Add getters and setters.
- Add method deposit (int), withdraw(int)
- Implement the methods by increasing or decreasing the balance
- In the main method create a bank account
- Withdraw money from this account and/or deposit into this account
- Get the balance
- Create a string variable “status” inside the main method
- Assign values to status as “Minimum Balance Maintained” if balance is above or equal to 5000. Otherwise values of status will be “Minimum Balance not Maintained”. Use conditional operator (ternary operator) to assign the values of the status.
- Display the status

Program:

```
package javapractice;

public class BankAccount {
    String accountHolderName;
    int accountNumber;
    int balance;
    //constructor
    public BankAccount(String accountHolderName, int accountNumber, int balance) {
        super();
        this.accountHolderName = accountHolderName;
        this.accountNumber = accountNumber;
        this.balance = balance;
    }
    //getter and setter method
    public String getAccountHolderName() {
        return accountHolderName;
    }
    public void setAccountHolderName(String accountHolderName) {
        this.accountHolderName = accountHolderName;
    }
    public int getAccountNumber() {
        return accountNumber;
    }
    public void setAccountNumber(int accountNumber) {
        this.accountNumber = accountNumber;
    }
    public int getBalance() {
        return balance;
    }
    public void setBalance(int balance) {
        this.balance = balance;
    }
    //methods
    public String deposit(int deposit)
    {
        balance=balance+deposit;
        return (balance>=5000 ? "Minimum balance is maintained" : "Minimum balance is not maintained");
    }

    public String withdraw(int withdraw)
    {
        if(withdraw<=balance)
```

```

balance=balance-withdraw;
else
System.out.println("low balnce!!!");
return (balance>=5000 ? "Minimum balance is maintained" : "Minimum
balance is not mainitained");
}
public static void main(String[] args)
{
BankAccount bank = new BankAccount("Manjula",123456, 10000);
System.out.println("a/c no "+ bank.getAccountNumber());
System.out.println("a/c holder name "+ bank.getAccountHolderName());
System.out.println("a/c balace "+ bank.balance);
String msg= bank.deposit(1000);
System.out.println(msg);
System.out.println("Balance after depost " + bank.getBalance());
msg=bank.withdraw(7000);
System.out.println(msg);
System.out.println("Balance after withdraw " + bank.getBalance());
}
}

```

Output:

```

C:\Users\pavan> java BankAccount.java
a/c no 123456
a/c holder name Mamatha
a/c balace 10000
Minimum balance is maintained
Balance after depost 11000
Minimum balance is not mainitained
Balance after withdraw 4000

```