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Q1) Write a class with FirstName, LastName & age field. Print Firstname, LastName & age using static block, static method & static variable respectively.

Using single class -

```java
import java.util.*;

public class Ques1b {
    3 usages
    static String first_name = "Shivam",last_name = "Kumar";
    3 usages
    static int age = 22;
    static{
        System.out.println("This is "+first_name+" "+last_name+". And my age is "+age+".");
    }
    1 usage
    private static void func(){
        System.out.println("This is "+first_name+" "+last_name+". And my age is "+age+".");
    }
    public static void main(String[] args) {
        func();
        System.out.println("This is "+first_name+" "+last_name+". And my age is "+age+".");
    }
}
```

Using Another class -

```java
import java.util.*;
2 usages
class person{
    4 usages
    static String first_name,last_name;
    4 usages
    static int age;
    1 usage
    public person(String f,String l,int a){
        this.first_name = f;
        this.last_name = l;
        this.age = a;
    }
    static{
        System.out.println("This is "+first_name+" "+last_name+". And my age is "+age+".");
    }
    1 usage
    static void func(){
        System.out.println("This is "+first_name+" "+last_name+". And my age is "+age+".");
    }
}
```

```java
public class Ques1 {
    public static void main(String[] args) {
        person p = new person( f: "Shivam", l: "kumar", a: 22);
        p.func();
        System.out.println("This is "+p.first_name+" "+p.last_name+". And my age is "+p.age+".");
    }
}
```

Q2) Write a program to read user input until user writes XDONE and then show the entered text by the user on commandline

```java
import java.util.*;

public class Ques2 {
    public static void main(String[] args) {
        String s="";
        while(true){
            String temp;
            Scanner sc = new Scanner(System.in);
            temp = sc.nextLine();
//            System.out.println(temp);
            String exit = "XDONE";
            if(temp.equals(exit))
                break;
            s+=temp+" ";
        }
        System.out.print(s);
    }
}
```

Q3) Write a java program to show following menu to the user:

*******Menu*******

1. Calculate Area of Circle

2. Calculate Circumference of a Circle

3. Exit.

```java
import java.util.*;

public class Ques3{
    public static void main(String[] args){
//        calculate cal = new calculate();
        Double r,a,cir;
        int c;
        Scanner sc = new Scanner(System.in);
        r = sc.nextDouble();
        while(true) {
            c = sc.nextInt();
            switch (c) {
                case 1:
                    a = area(r);
                    System.out.println("Area : " + a);
                    break;
                case 2:
                    cir = circumference(r);
                    System.out.println("Circumference : " + cir);
                    break;
                case 3:
                    System.exit( status: 0);
                default:
                    System.out.println("Invalid choice");
                    break;
            }
        }
    }
    1 usage
    static Double area(Double r){
        return 3.14*r*r;
    }
    1 usage
    static Double circumference(Double r){
        return 2*3.14*r;
    }
}
```

Choose an option (1-3):

Take radius as user input.

Hint: Use Switch statement to act on the menu. Also area and circumference methods should be static

Q4) Create a two dimensional array of integers and display:

- sum of all elements of each column
- sum of all elements of each row

```java
import java.util.*;

public class Ques4{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        int r,c;
        r = sc.nextInt();
        c = sc.nextInt();
        int arr[][] = new int[r][c];

        for(int i=0;i<r;i++){
            for(int j=0;j<c;j++){
                arr[i][j] = sc.nextInt();
            }
        }
        System.out.println("Sum of every row:-");
        for(int i=0;i<r;i++){
            int sumrow = 0;
            for(int j=0;j<c;j++){
                sumrow+=arr[i][j];
            }
            System.out.print(sumrow+" ");
        }
        System.out.println();
```

```java
        System.out.println("Sum of every column:-");
        for(int i=0;i<c;i++){
            int sumcol = 0;
            for(int j=0;j<r;j++){
                sumcol+=arr[j][i];
            }
            System.out.print(sumcol+" ");
        }

    }
}
```

Q5) Create a class named Employee with fields firstname,lastname,age and designation.

The class should:

- have all types of constructors to initialize the object
- class should also have setter methods to update a particular field
- Override its toString method to display a meaningful message using all these fields.

```java
import java.util.*;

7 usages
class Employee{
    6 usages
    String first_name,last_name,designation;
    6 usages
    int age;
    1 usage
    public Employee(){
        first_name = "Manvendra";
        last_name = "Pratap Singh";
        designation = "Software-Engineer-QE";
        age = 23;
    }
    1 usage
    public Employee(String f,String l,String d,int a){
        this.first_name = f;
        this.last_name = l;
        this.designation = d;
        this.age = a;
    }
    1 usage
```

```java
    public Employee(Employee emp){
        this.first_name = emp.first_name;
        this.last_name = emp.last_name;
        this.designation = emp.designation;
        this.age = emp.age;
    }
    void setName(String f,String l){
        this.first_name = f;
        this.last_name = l;
    }

    3 usages
    String getName(){
        return first_name+" "+last_name;
    }
    void setDesignation(String d){
        this.designation = d;
    }
    3 usages
    String getDesignation(){
        return designation;
    }
```

```
    void setAge(int a){
        this.age = a;
    }
    3 usages
    int getAge(){
        return age;
    }



}
public class Ques5{
    public static void main(String[] args){
        Employee e1 = new Employee();
        System.out.println("This is "+e1.getName()+".I am working as "+e1.getDesignation()+
                ". And my age is "+e1.getAge()+".");
        Employee e2 = new Employee( f: "Shivam", l: "Kumar", d: "Software-Engineer-AEM", a: 22);
        System.out.println("This is "+e2.getName()+".I am working as "+e2.getDesignation()+
                ". And my age is "+e2.getAge()+".");
        Employee e3 = new Employee(e2);
        System.out.println("This is "+e3.getName()+".I am working as "+e3.getDesignation()+
                ". And my age is "+e3.getAge()+".");
```

```
//        System.out.println(e.getName());
//        e.setName("Shubham","Kumar");
//        System.out.println(e.getName());
//        System.out.println(e.getDesignation());
//        e.setDesignation("SE");
//        System.out.println(e.getDesignation());
//        System.out.println(e.getAge());
//        e.setAge(23);
//        System.out.println(e.getName());

    }
}
```