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5-30

0 + 4.5 + 4
5 + 5 + 10 = 20

- a) what is difference betn constructor and method.
- b) How can handle exception in java (try, catch, finally)
- c) HCF of the given number.
- d) write a program to check vowels and consonant.

1) Find the output of the following program?

```
public class IncrementDecrementQuiz {  
    public static void main (String [] args) {  
        int i = 0;  
        i = i++ - --i + ++i - i--;  
        System.out.println(i);  
    }  
}
```

5) The output of above code is

$0 = 0++ - --0 + ++0 - 0--$

$0 = 1 - 0 + 1 - 0$

$0 = 0 + 0 - 0$; $0 = 1 - 0 + 1 - 0 = 2$

\therefore There for $i = 2$

Q) Difference between Constructor and Method.

Constructor

- Constructor is a special feature of object-oriented programming.
- Constructor is invoked automatically at the time of object creation.
- Constructor is of same name as class name.
- Default Constructor, parametrised Constructor, and Copy Constructor are the types of Constructor.

Method

- Method is Block of code in that include some functions, and objects.
- It can perform operations of functions and objects.
- Method have different name.
- Static & non-static are the types of methods.

(25)

Q) How can we handle Exception in Java.

- through try, catch and finally we can handle Exception in Java.

ex

```
public class Exception {
    public static void main (String[] args)
    {
        int x = 5, y = 0;
        try {
            int z = x/y;
        }
        catch (Exception e)
        {
            e.printStackTrace(e);
        }
    }
}
```

} } return n1)

- (d) Write a program to check given character is vowel or consonant.

→

```
public class VowelConsonant {  
    public static void main (String args [])  
    {  
        Scanner sc = new Scanner (System.in);  
        char ch[] = sc.next();  
        System.out.println("Enter character");  
        for (int i = 0; i < ch.length; i++)  
        System.out.println("Enter a character");  
        char ch[] = new char[1];  
        if (ch =  
        for (int i = 0; i < ch.length; i++)  
        {  
            if (ch[i] == 'a' || ch[i] == 'e'  
                || ch[i] == 'i' || ch[i] == 'o'  
                || ch[i] == 'u' || ch[i] == 'A'  
                || ch[i] == 'E' || ch[i] == 'I'  
                || ch[i] == 'O' || ch[i] == 'U')  
            {  
                System.out.println("Vowel");  
            }  
            else  
            {  
                System.out.println("Consonant");  
            }  
        }  
    }  
}
```


2) Output of the following code.

```
public class Calculator
{
    int num = 100;
    public static void main (String[] args) {
        public void calc (int num)
        {
            this.num = num * 10;
        }
        public void printNum ()
        {
            System.out.println (num);
        }
        public static void main (String[] args) {
            Calculator obj = new Calculator ();
            obj.calc (2);
            obj.printNum ();
        }
    }
}
```

⇒ output of the above program is 2000

The because of firstly compiler check main function and goes to class object.

In class object, object calls the ~~create fun~~ fun ~~calc~~ calc() in that $num \times 10$, so $num = 100$ the calculation will happen and the answer will be print in the function printNum() function.

The calculation of this program is

100 \times 10 = 1000 and the we pass value

2 so 1000 \times 2 = 2000 the answer is

2000

```

Ex → public class Exception {
    public static void main (String[] args)
    {
        int x = 5; y = 0;
        try {
            int z = x/y;
        } catch (Exception e) {
            e.printStackTrace(e);
        } finally {
            System.out.println ("finally always execute");
        }
        System.out.println ("rest of the code");
    }
}

```

Q) Help Find HCF of the given Numbers.

```

→ import java.util.Scanner;
public class HCF {
    public static void main (String[] args)
    {
        Scanner sc = new Scanner (System.in);
        System.out.println ("Enter 1st number");
        int n1 = sc.nextInt();
        System.out.println ("Enter 2nd number");
        int n2 = sc.nextInt();

        int temp = 0;
        while (n2 != 0)
        {
            temp = n2;
            n2 = n1 % n2;
            temp = n1;
        }
    }
}

```

Handwritten calculation on the right side of the page:

$$\begin{array}{r}
 5, 10 \\
 10 \div 5 = 2 \\
 10 \div 10 = 1 \\
 10 \div 10 = 1 \\
 \hline
 5, 10
 \end{array}$$