Good Evening Everyone :)

Starting at 9:05 pm

given three numbers a, b, and c.

```
public static void main () {

    int  Sum1 = 0,  Sum2 = 0,     Sum = 0;

    while    (a > 0) {
         Sum1 += a % 10;
           a /= 10;

    }
      SOP (Sum1);

      while (b > 0) {
      {
           Sum2 +  = b % 10;
             b/ = 10;

      }
       SOP   (Sum2);

       while (c > 0) {

             Sum3 + = c % 10;
              c/ = 10;

      }
        SOP (Sum 3);

}
```

Issues in above Code?

✓ Redundancy.
˅ Readability.
✓ Maintainability.

BLACKBOX.

Input x →
Arguement

```
while (x > 10) {
    Sum+ = x % 10;
        x/ = 10;
}
SOP (Sum);
```

sum of digit

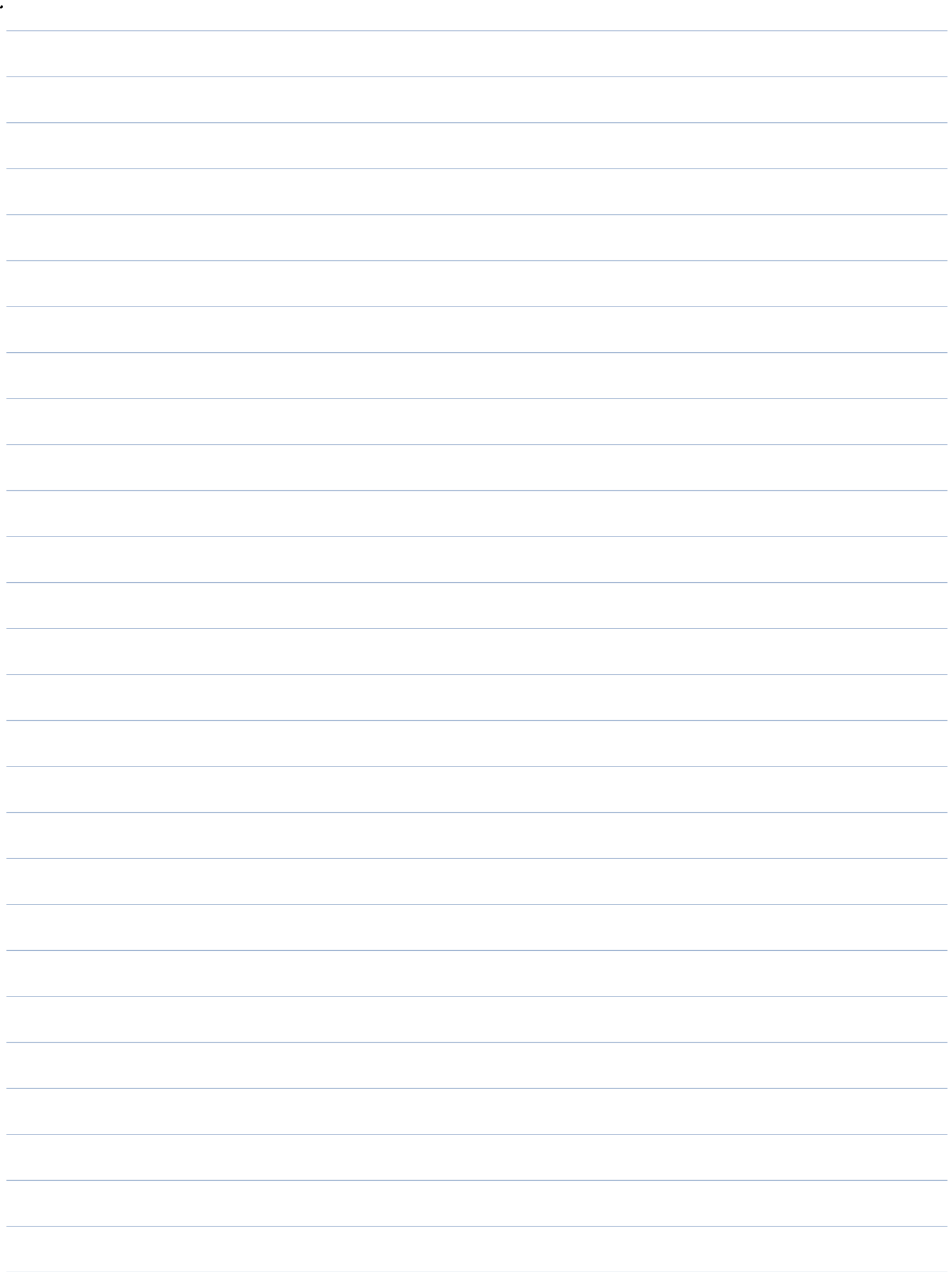O/P → Sum.
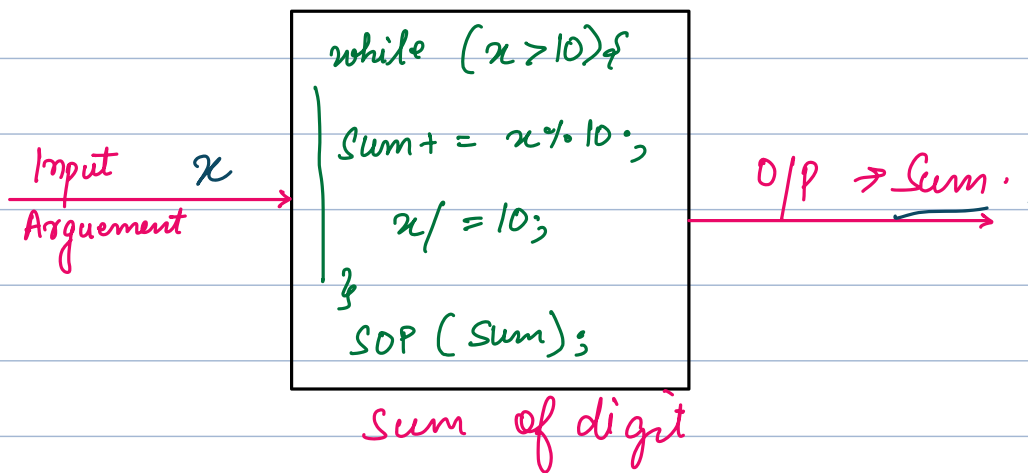
Syntax of function

```
ansType functionName (inputType    input    ) {
    //Main logic
    return ans;
}
```

function to add two numbers.

```
int intSum (int a, int b) {
    int sum = a+b;
    return sum;
}
```

function to print "Hello World"

```
void printHello () {
    System.out.print ("Hello World");
}
```

Quiz1.

```
                         15          10
public static int Sum (int a,  int b){
        return a+b;                              15+10 = 25
}


public static void main (String [] args){
    int  a = 15,    b = 5;
    System.out. println ( Sum (a,10));
                              25
}                                            ⇒   25
```

Quiz 2

```
public static int Sum (int a,  int b){
        return a+b;
}


public static void main (String [] args){
    int  a = 15,    b = 5;
    Sum (a,b)     . .
}
```

Quiz 3.

```
public static int Sum (int a, int b){
    System. out. print (a+b);
                            ⟶ λ return missing
}
```
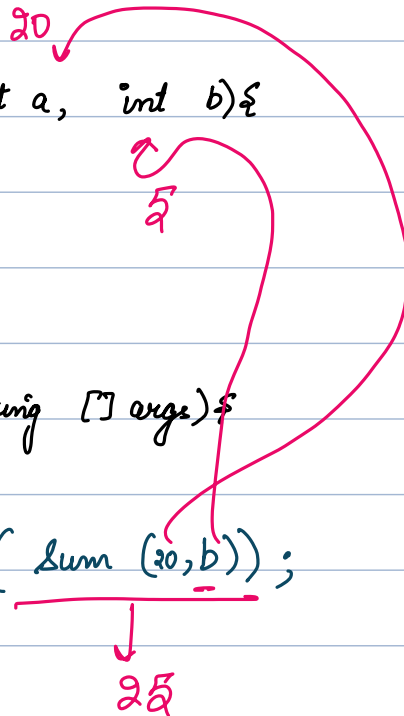
```
public static void main (String [] args){
    int a = 15,   b = 5;
    Sum (a,b);

}
```

Quiz 4

```
                                    20
public static int Sum (int a,  int b){
    return a+b;
                            ↑
                            5
}
```

```
public static void main (String [] args){
    int a = 15,   b = 5;
    System. out. println ( Sum (20,b));
                            ↓
                            25            ⟶ 25 ,
}
```

Quiz 2

```
public static int Sum (int a, int b){
        return a+b;
                          6      10
              16
}

public static void main (String [] args){
    int a = 15,    b = 5;
    System.out. println ( Sum (6,10));
                                    16
}
```

Question 1.

Given an integer N, return whether the integer is even or not

Input 1 :   12   → True

Input 2 :   5   → false

```
Static boolean isEven ( int n ) {
        if (n % 2 = = 0)
            return true ;
        else
            return false ;
}
```

Question 2.

Given an integer N, return whether its height is small, medium or large

- If it is less than 10, then its small
- If it is b/w 10 to 20, then its medium
- If it is greater than 20, then large

Input: 5 ⇒ **Small**

Input: 51 ⇒ large

```
static String height ( int n ) {
    String result = " ";
    if ( n < 10)
        result = "small";
    else if ( n < 20)
        result = "medium";
    else
        result = "large";
    return result;
}
```

Question 3.

Given Two doubles as arguement, return the area of rectangle

Input : a = 1.0   2.0
        b = 2.0

```
static double area (double a, double b) {
    return a * b;
}
```

Question 4.

Given radius (double) of circle, return the area of circle

Input → 7.0 $\pi * r * r$
                                        ↓
$\pi * r^2$ 3.14
                                        ↓
3.14 * 7 * 7   ⟹ $\underline{154.0}$
                    $\underline{154}$.   Math.PI
                                        $\underline{\hspace{3cm}}$

Static   double   area of circle (double radius) {

        return   (Math. PI * radius * radius);

    }

Question 5.

Given an integer N as an input, print all prime numbers b/w 1 to N.

Input :   10   1 to 10

                                                          2 3 5 7


```
static    boolean    is prime  (int n) {

       int factors = 0;
       for   (int i = 1;    i <= n;   i++) {
                if    (n % i  = = 0) {
                          factors ++;
       }

       if (factors = = 2)
                return true;

       else
                return false;

}
```

```java
Static    void    primeNumbers (int n) {
    for    (int num=1;  num<=n;  num++){
        if ( isPrime (num)) {
            System.out.print  (num);
        }
    }
}
```