operands

$$2 + 3$$

operator
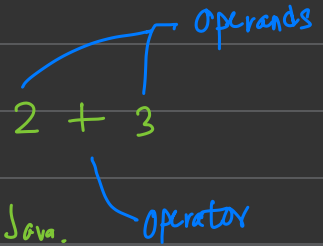
Ⓒ Ternary operator:

— 3 operands are reqd

— there is only one ternary operator in Java.

Syntax: int x, y;

x = 100;

y = 20;

int z;

z = (x > y) ? x : y;

Soln(z); // 100

(condition)? value if condn is True : value if condition is False

Ⓓ Assignment Operator: = += -= *= /= %=

a=10; // a = 10

$$a$$

$$\begin{array}{|c|}\hline 10_{\!\!+\!\!+}\; 12\; 24 \\ 48 \\\hline\end{array}$$

a = a+1 ;   a = 10+1 ;

a += 1 ; // += Compound Assignment Operator
                  It means   a = a+1 ;
                                a = 1+1 ;

a = a*2 ; //   a = 12*2

a *= 2 ; // a = a*2 ;
                  a = 24*2 ;

eg: x*=2   means   x = x*2
      y/=3   means   y = y/3
      z%=7   means   z = z%7
      m+=9   means   m = m+9

Control Stmnts.

Conditional Stmnts. if , if -else, if -else if - else

if stmnt. Syntax. if (condition)
{
do this;
do this;
}


```java
52
53    public class Main
54    {
55        public static void main(String[] args) {
56            int x=10;
57            if (x>0)    if (10>0)
58            {
59                System.out.println(x+" is a Positive Number.");
60            }
61            System.out.println(x: "This is not a part of if statement ");
62        }
63    }
64
65        |
66
67
68
69
70
```

PROBLEMS 1   OUTPUT   DEBUG CONSOLE   TERMINAL

10is a Positive Number.
This is not a part of if statement
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```java
public class Main
{

    public static void main(String[] args) {
        int x=-10;
        if (x>0)    // (-10>0) No
        {
            System.out.println(x+" is a Positive Number.");
        }
        System.out.println("This is not a part of if statement "
    }
}
```

TERMINAL

```
This is not a part of if statement
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```

---

if -else stmnt:

Syntax:

if (condn1 is True)
{ dothis;

    dothis;
}
else if (condn 2 is True)
{
    dothis;

    dothis;
}
else
{
    do this;

    dothis;
}

Screenshot 1 (x=10):

```java
public class Main
{

    public static void main(String[] args) {
        int x=10;
        if (x>0)
        {
            System.out.println(x+" is a Positive Number.");
        }
        else if (x<0)
        {
            System.out.println(x+" is a Negative Number.");
        }
        else
        {
            System.out.println(x+" is neither Positive or Negative Number.");
        }
        System.out.println(x:"This is not a part of if statement ");
    }
}
```

Terminal:
```
10 is a Positive Number.
This is not a part of if statement
(base) ingledarshan@192 NS 19 Feb 2023 %
```

Screenshot 2 (x=-10):

```java
public class Main
{

    public static void main(String[] args) {
        int x=-10;
        if (x>0)
        {
            System.out.println(x+" is a Positive Number.");
        }
        else if (x<0)
        {
            System.out.println(x+" is a Negative Number.");
        }
        else
        {
            System.out.println(x+" is neither Positive or Negative Number.");
        }
        System.out.println(x:"This is not a part of if statement ");
    }
}
```

Terminal:
```
-10 is a Negative Number.
This is not a part of if statement
(base) ingledarshan@192 NS 19 Feb 2023 %
```

```java
public class Main
{
    public static void main(String[] args) {
        int x=0;
        if (x>0)
        {
            System.out.println(x+" is a Positive Number.");
        }
        else if (x<0)
        {
            System.out.println(x+" is a Negative Number.");
        }
        else
        {
            System.out.println(x+" is neither Positive or Negative Number.");
        }
        System.out.println(x: "This is not a part of if statement ");
    }
}
```

TERMINAL

```
0 is neither Positive or Negative Number.
This is not a part of if statement
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```

Program:

month = 4;   //April

month = 12 or 1 or 2   → Winter

month = 3 or 4 or 5   → Spring

month = 6 or 7 or 8   → Summer

month = 9 or 10 or 11   → Autumn

month = any other value → Bogus Month

Nested if:

Syntax:

```
if (condition1 is True)
{
    dothis;
    if (condition2 is True)
        {
            do this
        }
    dothis;
}
else
{
    do this;
    do this;
}
```

—————— ✕ ——————