Q1 :

```
if ( 4+5 == 10) {
        SOP(True)
}
else {
        SOP(False)
}
SOP(True)
```

SOP ⇒ System.out.println

Q2 : x = 3, y = 5, z = 2

```
if ( x < y  &&  x < z )
        SOP(a)
else if( y < x  &&  y < z )
        SOP (b)
else
        SOP(c)
```

Q3 :

```
if (g == "M" && age == 21)        M, 22
else if (g == "F" && age == 18)   F, 19

if (g == "M" && age > 21)         M, 21
else if (g == "F" && age > 18)    F, 18

if (g == "M" && age >= 21)        ✓
else if (g == "F" && age >= 18)
```

if (g == "M" || age >= 21) M, 5
else if (g == "F" || age >= 18) F, 2

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Test Case

Input for which you know correct output and you use it to check whether your code is correct or not

Dry Run

- Take a test case
- Run the code using pen & paper

Q Electricity Bill

Given an integer A → units of electricity used

Calculate the bill amount

1) [1 - 50] units ⇒ ₹ 0.5 / unit
2) [51 - 150] units ⇒ ₹ 0.75 / unit
3) [151 +] units ⇒ ₹ 1.2 / unit

$A = 20$

Bill $\Rightarrow$ $20 \times ₹0.5 \Rightarrow ₹10$

$A = 100$

Bill $\Rightarrow$ $50 \times ₹0.5 = ₹25$

$50 \times ₹0.75 = ₹37.5$

$₹62.5$

$A = 200$

Bill $\Rightarrow$ $50 \times ₹0.5 = ₹25$

$100 \times ₹0.75 = ₹75$

$50 \times ₹1.20 = ₹60$

$₹160$

Bucket	Ex	Final ans
$A \leq 50$	$A = 25$ $A = 30$	$\Rightarrow 0.5 \times A$
$A > 50$ && $A \leq 150$	$A = 100$ $A = 120$	$\Rightarrow 0.5 \times 50 + 0.75 \times (A - 50)$ $\Rightarrow 25 + 0.75A - 37.5$ $\Rightarrow 0.75A - 12.5$
$A > 150$	$A = 200$	$\Rightarrow 0.5 \times 50 + 0.75 \times 100$

A = 300	+ 1.2 x (A - 150) ⇒ 25 + 75 + 1.2A - 180 ⇒ 1.2A - 80

```
if ( A <= 50 )
    SOP( 0.5 x A)
else if (A > 50 && A <= 150)
    SOP( 0.75A - 12.5 )
else
    SOP( 1.2A - 80 )
```

Break : 10:10pm

While loops

1 time

```
SOP("Welcome")
```

5 times

```
SOP("Welcome")
SOP("Welcome")
SOP("Welcome")
SOP("Welcome")
SOP("Welcome")
```

100 times

Perform repetitive tasks

```
int count = 1;
while ( count <= 100 ) {
    SOP("Welcome");
```

```
    count = count + 1;
}
```

count	count <= 5	output	new count
1	True	Welcome	2
2	True	Welcome	3
3	True	Welcome	4
4	True	Welcome	5
5	True	Welcome	6
6	False	→ Breaks loop	

Syntax

1) // variable initialisation
2) // Write while and condition
3) // Write repeated task to perform
4) // Update variable

```
int x = initialise;
while ( condition ) {
    Write repeated task
    Update variable
}
```

Q1 Print numbers from 1 to 10

```
int num = 1;
```

```
while (num <= 10) {
    SOP(num);
    num = num+1;
}
```

Q2 Print numbers from 10 to 1

```
int num = 10;
while (num >= 1) {
    SOP(num);
    num = num-1;
}
```

Code : https://www.interviewbit.com/snippet/48f67d2332f099951ce5/