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

Output
False
True

```
x=3, y=5 , z=2

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

Output

c

Valid  marriage  age  validation

```
1)    if ( g == M   &&   age == 21)     M, 22 — T
   else if ( g == F &&   age == 18)  X
```

```
2)    if ( g == M   &&   age > 21)    M, 21
   else if ( g == F  &&   age > 18)    F, 18       X
```

```
3)    if ( g == M   &&   age >= 21)  ✓  Right answer
```

```
else if ( g == F && age >= 28) ✓

4)   if ( g == M || age >= 21)  M, S
     else if ( g == F || age >= 28)  X
```

## Dry Run

↳ Run the code with a testcase using pen & paper

Test case ⇒ Input given to test correctness of code

## Electricity Bill

Given an integer A → units of electricity consumed

For units [1, 50] ⇒ ₹ 0.5 /unit
For units [51, 150] ⇒ ₹ 0.75 /unit
For units [151, inf] ⇒ ₹ 1.2 /unit

2 units ⇒ [1, 2] → 0.5

60 units ⇒ [1, 50] + [51, 60]
                ↓           ↓
               0.5         0.75

200 units ⇒ [1, 50] + [51, 150] + [151, 200]
                ↓           ↓            ↓
               0.5         0.75         1.2

50 × 0.5  +  100 × 0.75  +  50 × 1.2

40 units ⇒ [1, 40] × ₹ 0.5

⇒ 40 × ₹ 0.5

⇒ ₹ 20


70 units ⇒ [1, 50] × ₹ 0.5

[51, 70] × ₹ 0.75

⇒ 50 × ₹ 0.5 + 20 × ₹ 0.75

⇒ ₹ 25 + ₹ 15

⇒ ₹ 40


200 units ⇒ [1, 50] × ₹ 0.5

[51, 150] × ₹ 0.75

[151, 200] × ₹ 1.2

⇒ 50 × ₹ 0.5 + 100 × ₹ 0.75

+ 50 × ₹ 1.2

⇒ ₹ 25 + ₹ 75 + ₹ 60

⇒ ₹ 160


| Bucket | Ex | Final ans |
|---|---|---|
| A ≤ 50 | 25 | 0.5 × A |
| | 30 | |
| A > 50 && | 70 | 50 × 0.5 + (A − 50) × 0.75 |
| A ≤ 150 | 100 | |
| A > 150 | 200 | 50 × 0.5 + 100 × 0.75 + |
| | 250 | (A − 150) × 1.2 |

$= 50 \times 0.5 + 100 \times 0.75 + (250-150) \times 1.2$

$= 25 + 75 + 100 \times 1.2$

$= 25 + 75 + 120$

$= 220$

```
if ( A ≤ 50 ) {
      SOP( A × 0.5)
}
else if ( A > 50 && A ≤ 150) {
    SOP( 50×0.5 + (A-50) × 0.75)
}
else {
    SOP( 50 × 0.5 + 100 × 0.75 + (A-150) × 1.2)
}
```

Break → LO: 20

Loops

```
SOP( 1)          int i=1              int i = 1
SOP(2)           SOP(i)               while ( i ≤ 5) {
SOP(3)           i = i+1                  SOP(i)
SOP(y)           SOP(i)                   i = i+1
SOP(5)           i = i+1              }
                 SOP(i)
                 i = i+1
                 SOP(i)
                 i = i+1
```

int i = 1          SoP(i)
  i = i + 1        i = i + 1
⇒ i = 1 + 1        SoP(i)
⇒ i = 2            i = i + 1

int i = 1

| i | i ≤ 5 | Output | i (new) |
|---|---|---|---|
| 1 | T | 1 | 2 |
| 2 | T | 2 | 3 |
| 3 | T | 3 | 4 |
| 4 | T | 4 | 5 |
| 5 | T | 5 | 6 |
| 6 | F | ⇒ loop breaks | |

```
int i = 1
while (i ≤ 5){
   SoP(i)
   i = i + 1
}
```

## Syntax

STEP 1      // initialise condition variable
                int i = 1;

STEP 2      // Write while loop condition
                while ( condition ) {

STEP 3      // Write your logic
                   SoP(i)

STEP 4      // Update your condition variable
                   i = i + 1
            }

Class Code : https://www.interviewbit.com/
snippet/2cc3cc9c7b1106c46481/