Starting at 8:35 pm

Till then enjoy the song

Q1

```
4+5 = 9 ≠ 10

if ( 4+5 == 10 )
    SOP( "Yes" )
else
    SOP( "No" )
```

Execute → SOP("No")

No

Q2

```
x = 3
y = 5
z = 2
if ( x<y && x<z )        // 3<5  3<2   False
    SOP("a")
else if ( y<x && y<z )   // 5<3        False
    SOP("b")
else
    SOP("c")             → Print c
```

Q3 Marriage age validation

1> `if ( gender == "M" && age >= 21 )` M 21 ✓

`else if (gender == "F" && age == 18)` M 22 — False

2> `if ( gender == "M" && age > 21 )` M 25

else if (gender == "F" && age ≥ 18) M 21
                                     False

3> if (gender == "M" && age ≥ 21) M = 21
   else if (gender == "F" && age ≥ 18) F ≥ 18   True

4> if (gender == "M" || age ≥ 21) M 1
   else if (gender == "F" || age ≥ 18) False

Q4 Electricity bill

Given an integer A → amount of electricity that you have consumed

50 For 1st 50 units → ₹ 0.5 / unit
150 Next 100 units → ₹ 0.75 / unit
250 Next 100 units → ₹ 1.2 / unit
+ Anything above 250 units → ₹ 1.5 / unit
Calculate total bill amount

A = 120 units
for 1st 50 units → 50 × 0.5 = ₹ 25
for next 100 units → 70 × 0.75 = ₹ 52.5 =
Total ₹ 77.5 =

A = 200 units
for 1st 50 units → 50 × 0.5 = ₹ 25 ←

for next 100 units → 100 × 0.75 = ₹ 75 ←

for next 100 units → 50 × 1.2 = ₹ 60 ←

Total ₹ 160

Bucket	Ex	Final ans
⇒ $A \leq 50$	$A = 25$ $A = 30$	⇒ $A * 0.5$
$A > 50$ && $A \leq 150$	$A = 75$, $A = 100$,	⇒ $0.5 * 50 + (A-50) * 0.75$ $= 25 + (A-50) * 0.75$
→ $A > 150$ && $A \leq 250$	$A = 200$ $A = 250$	⇒ $0.5 * 50 + 0.75 * 100$ $+ (A-150) * 1.2$ $= 25 + 75 + (A-150) * 1.2$ $= 100 + (A-150) * 1.2$
$A > 250$	$A = 300$ $A = 400$	⇒ $0.5 \times 50 + 0.75 \times 100$ $+ 1.2 \times 100$ $+ (A-250) \times 1.5$ $= 220 + (A-250) \times 1.5$

```
if ( A <= 50)
    SOP( A * 0.5)
else if ( A > 50 && A <= 150)
    SOP( 25 + (A-50) * 0.75)
else if ( A > 150 && A <= 250)
```

SOP (100 + (A-150) x 1.2)

else

SOP (220 + (A-250) x 1.5)

Q → Print first 5 natural numbers

1, 2, 3, 4, 5

①

SOP(1)

SOP(2)

SOP(3)

SOP(4)

SOP(5)

②

int num = 1

SOP(num)
num = num+1

SOP(num)
num = num+1

SOP(num)
num = num+1

SOP(num)
num = num+1

SOP(num)
num = num+1

1, 2, 3, 4, 5, 6

num ≤ 5

Loops

- While
- For

```
int num = 1          // While loop variable initialisation
while ( num ≤ 5 ) {          → Writing while loop condition
code → SOP(num )
num = num + 1
```

} {

↳ Update while loop variable

Q Print first n natural numbers in reverse ?

⇒ int n = scn.nextInt()

⇒ while (n >= 1) {

SOP(n) ← Print

n = n - 1 ← Decrement by 1

}

Break 10:00 pm

N = 5

5 4 3 2 1

n	Print	new n
5	5	4
4	4	3
3	3	2
2	2	1
1	1	0
0	STOP	