



Starting at 7:05am  
Enjoy the song !!

### Today's Content

1. Context Details
2. Decision making
3. Intro to If
4. Intro to If Else

## Contest Details

- |                |                                 |
|----------------|---------------------------------|
| 1. If Else - 1 | Monday                          |
| 2. If Else - 2 | Wednesday                       |
| 3. Contest 1   | Friday [ 2 <sup>nd</sup> June ] |

Duration : 90 min  
No of question : 4 ques  
Timing : 7:00am - 8:30am  
Difficulty level : Easy  
Type of problem : Coding questions

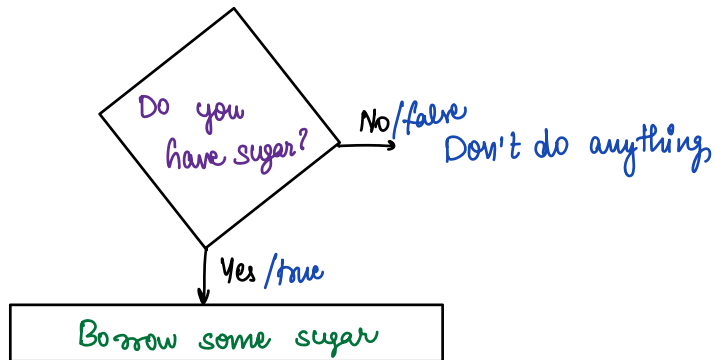
4. Content Based on last 6-7 sessions

Note : Just after contest we will have contest discussion  
8:30 am - 10:00 am

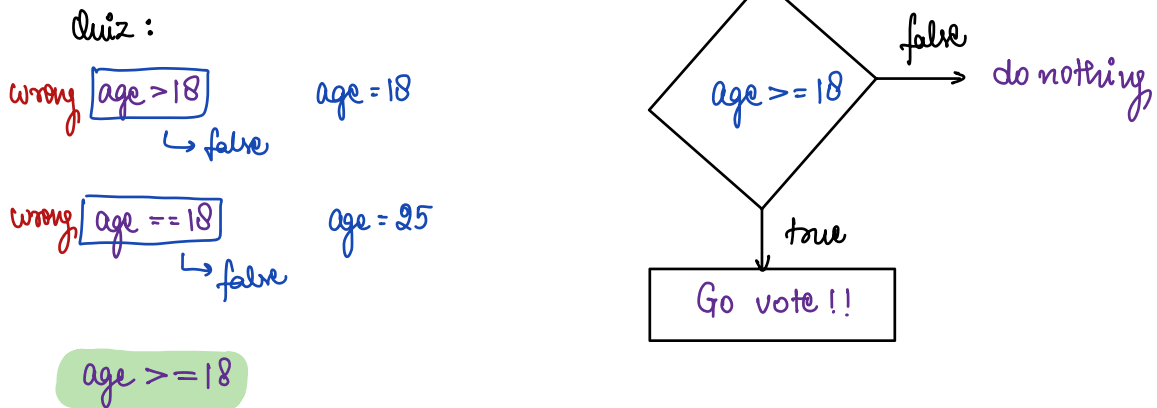
## Summary :

1. After every 6-7 sessions we will have one contest
2. Contest day and timing will be same as session.
3. After contest ends, contest discussion will start.
4. Type of problem - coding questions

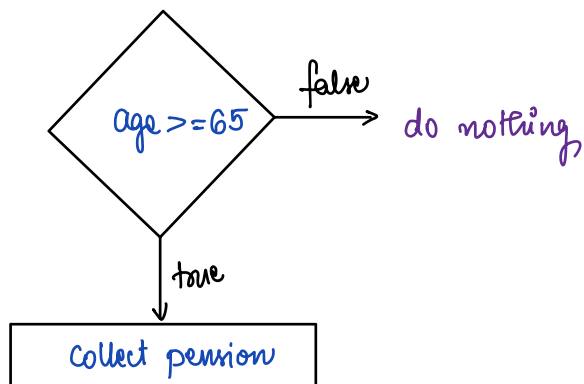
1. You love drinking tea but you are out of sugar and you are asking your neighbour.



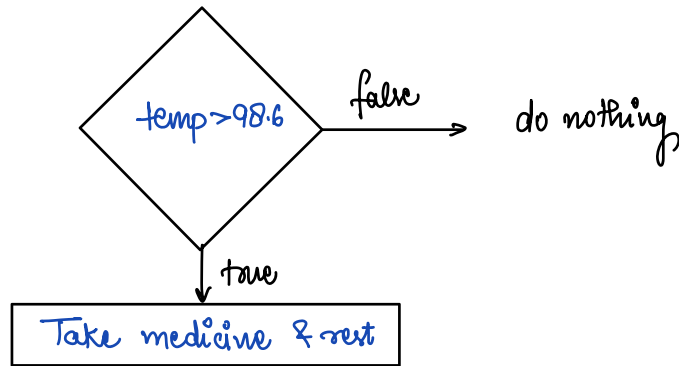
2. Eligibility criterion for voting



3. Check person is senior citizen or not , age >= 65.



4. Check whether person is suffering from fever or not.  
[normal temp is 98.6]



Idea : when we want to do something when condition is True.

Syntax :

if (condition) {  
    // statements we want to be executed  
    // when condition is true  
}

boolean expression: expression having value as true/false

Quiz 2:

- |             |   |         |
|-------------|---|---------|
| a) true     | → | yes ✓   |
| b) $4 == 5$ | → | false ✓ |
| c) $4 + 5$  | → | 9 ✗     |
| d) $4 < 5$  | → | true ✓  |
| e) false    | → | yes ✓   |

Voting Eligibility: check whether person is eligible to vote

```
public static void main () {  
    Scanner sc = new Scanner (System.in);  
    int age = sc.nextInt(); // age = 29  
    // person needs to be an adult  
    if (age >= 18) { // 29 >= 18 [true]  
        System.out.println ("You are eligible");  
    }  
}
```

Input: 29

Output: You are eligible

Ques: Check if person has fever or not. [Quiz 3]

ide.new

## If / Else Intro :

when we want to do something both scenerios :

1. when the condition is True
2. when the condition is False

## Syntax :

```
if block {
    if (condition) {
        // statements to execute
        when the condition is true
    }
}

else block {
    else {
        // statements to execute
        when the condition false
    }
}
```

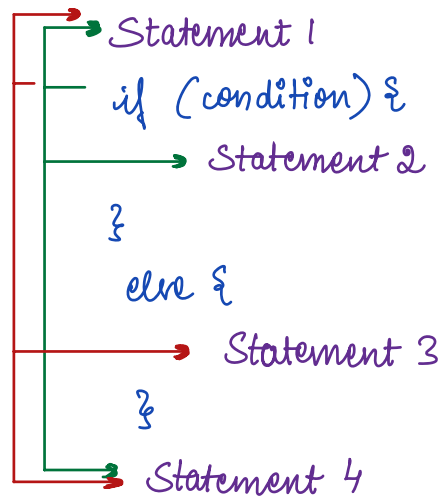
## Flow 1 :

```
if (condition) {
    Statement 1
} else {
    Statement 2
}
```

Q1. condition : True → Statement 1

Q2. condition : False → Statement 2

Flow 2:



		statement
Q.	condition <b>true</b> :	1, 2, 4
Q.	condition <b>false</b> :	1, 3, 4

Quiz12. Can we have if without an else block? Yes

Quiz13: Can we have else without an if block? No

## Categorise Number

Given an integer number, categorise it into positive, negative, zero

	<u>Input</u>	<u>Output</u>	
Ex-1.	35	positive	$[n > 0]$
Ex-2.	-27	negative	$[n < 0]$
Ex-3.	0	zero	$[n == 0]$

Code 1:

```
public static void main() {  
    Scanner sc = new Scanner(System.in);  
    int n = sc.nextInt();  
  
    [ if (n > 0) { → true  
      → // positive  
      }  
      n = 0  
      zero  
  
      if (n < 0) { → false  
        // negative  
        }  
        n = 15  
  
      else {  
        → // zero  
        }  
        wrong [ positive  
        zero  
      }  
    }  
}
```



```
public static void main() {
```

```
    Scanner sc = new Scanner(System.in);
```

```
    int n = sc.nextInt();
```

```
    if (n > 0) { → true
```

```
        // positive
```

```
    }
```

```
    if (n < 0) { → false
```

```
        // negative
```

```
    }
```

```
    if (n == 0) { → false
```

```
        // zero
```

```
    }
```

```
}
```

n = 15

positive

Code is correct

Issue : Wastage  
comparisons

## If Else if

Syntax :

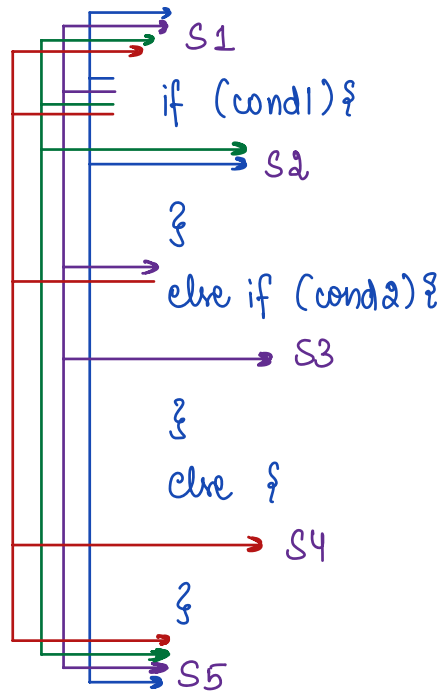
```
if block {
    if ( cond 1 ) {
        // statements will execute
        when cond1 is true
    }
}

else if block {
    else if ( cond 2 ) {
        // statements will execute
        when cond1 is false and cond2 is true
    }
}

else block {
    else {
        // statements will execute
        when cond1 and cond2 both are false
    }
}
```

Note: We can have multiple else ifs

flow:



Conditions : true      Statements

cond 1      → S1, S2, S5

cond 2      → S1, S3, S5

cond 1, cond 2      → S1, S2, S5

all false      → S1, S4, S5

```
public static void main() {
```

```
    Scanner sc = new Scanner(System.in);
```

```
    int n = sc.nextInt();
```

```
    if (n > 0) {
```

```
        // positive
```

```
    }
```

```
    else if (n < 0) {
```

```
        // negative
```

```
    }
```

```
    else {
```

```
        // zero
```

```
    }
```

```
}
```

$$N \text{ ~~Rahul~~ } = 30$$

$$M \text{ ~~Karan~~ } = 20$$

int N = Rahul; // N = 30

1.) Rahul gave 5 apples to Karan

$$\text{Rahul} = 25 \quad [30 - 5] \Rightarrow \text{Rahul} = \text{Rahul} - 5$$

$$\text{Karan} = 25 \quad [20 + 5] \Rightarrow \text{Karan} = \text{Karan} + 5$$

2.) Rahul plucked two times of initial apples

$$\text{Rahul} = 25 + 30 \times 2 = 85$$

$$\Rightarrow \text{Rahul} = \text{Rahul} + N \times 20$$

print (Rahul + " " + Karan);