⇒ Nested if else

Syntex

```
if ( condition 01 ) {

} else if ( condition 02 ) {

} else {

}
```

mandatory

all are optional

any no. of conditions are valid

Grade the student 1

- marks: 90+ ⇒ excellent
- marks > 80 , marks <= 90 ⇒ good
- marks > 70 , marks <= 80 ⇒ fair
- marks > 60 , marks <= 70 ⇒ meets expectations
- marks > 40 , marks <= 60 ⇒ below par
- otherwise ⇒ failed

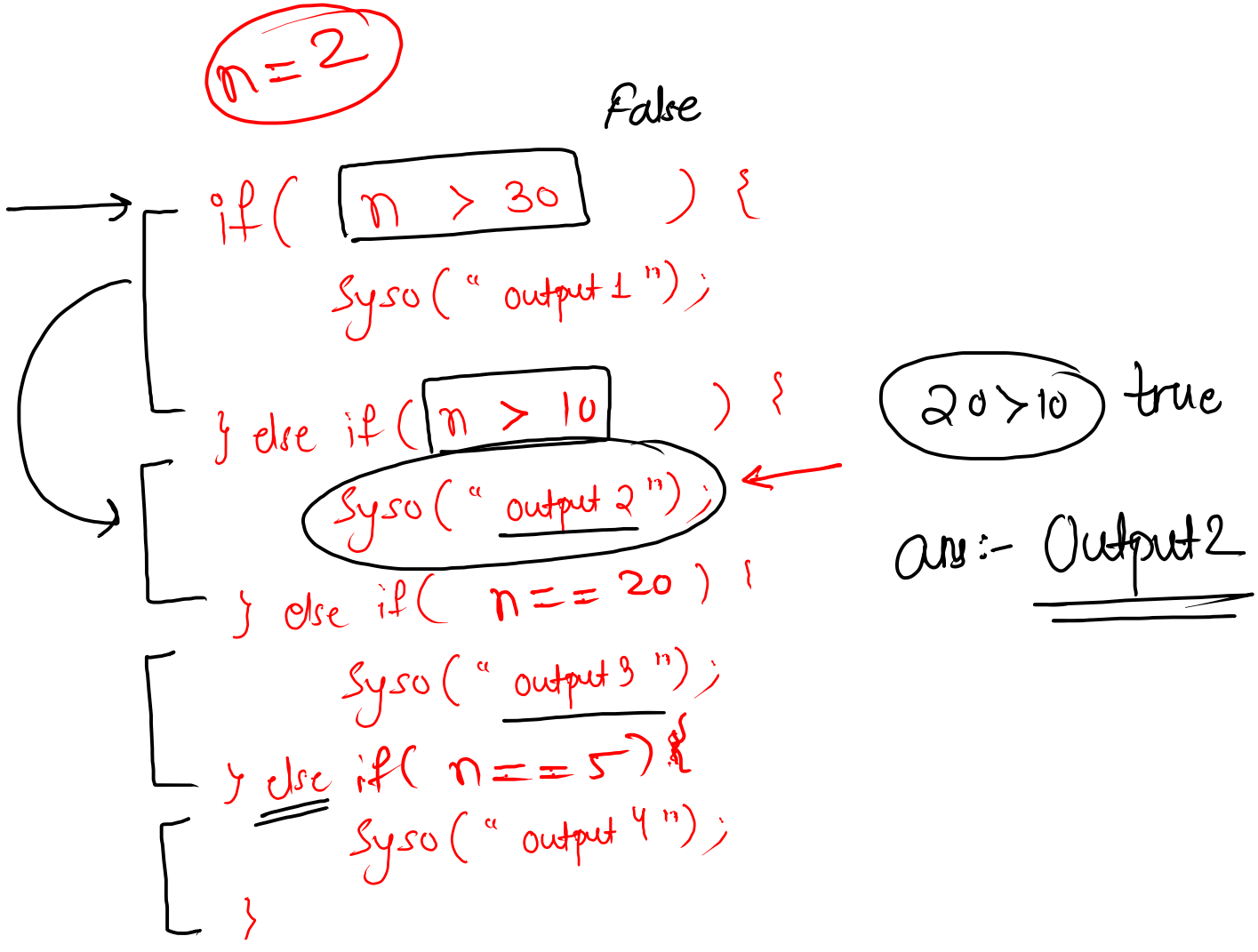
```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int marks = scn.nextInt();

    if ( marks > 90 ) {
        System.out.println("excellent");
    } else if ( marks > 80 && marks <= 90 ) {
        System.out.println("good");
    } else if ( marks > 70 && marks <= 80 ) {
        System.out.println("fair");
    } else if ( marks > 60 && marks <= 70 ) {
        System.out.println("meets expectations");
    } else if ( marks > 40 && marks <= 60 ) {
        System.out.println("below par");
    } else {
        System.out.println("failed");
    }
}
```

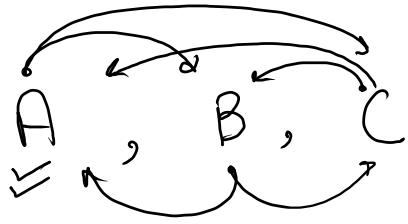
single

multiple

single


n=2
false
if(n > 30) {
Syso("output 1");
} else if(n > 10) {
Syso("output 2");
} else if(n == 20) {
Syso("output 3");
} else if(n == 5) {
Syso("output 4");
}
20>10 true
ans:- Output2

Print the oldest among three




```
if( A > B && A > C ){
    Syso("A");
} else if( B > A && B > C){
    Syso("B");
} else if( C > A && C > B ){
    Syso("C");
}
```

Code

```
public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int A = scn.nextInt();
        int B = scn.nextInt();
        int C = scn.nextInt();
        if (A > B && A > C) {
            System.out.println("A");
        } else if ( B > A && B > C ) {
            System.out.println("B");
        } else if ( C > A && C > B ) {
            System.out.println("C");
        }
    }
}
```

B=30, A=20, C=10

A>B, false ✓
A>C, true ✓

B>A, true
B>C, true, "B"

A=10, B=10, C=5

Rich Adult Young

age, salary

Take the **age** and **salary** of a person as an integer input,

If the **age** is **above 40** then

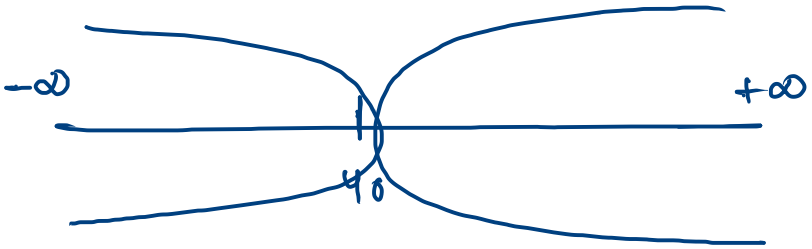
a. If the **salary is greater than or equal to 30,000** then print **You are rich and adult**

b. Else print **You are an adult**

Else if **age** is **less than or equal to 40**

a. If the **salary is greater than or equal to 12,000**, then print **You are rich and young**

b. Else print **You are young**



psudo code

```
if (age > 40) {
    if(salary >= 30000){
        syso ( R and A);
    }else{
        syso (A);
    }
} else {
    if(salary >= 12000){
        syso (R and Y);
    }else{
        syso (Y);
    }
}
```

⇒ Nested if else

Code

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int age = scn.nextInt();
    int salary = scn.nextInt();

    if ( age > 40 ) {

        if ( salary >= 30000 ) {
            System.out.println("You are rich and adult");
        } else {
            System.out.println("You are an adult");
        }

    } else {

        if ( salary >= 12000 ) {
            System.out.println("You are rich and young");
        } else {
            System.out.println("You are young");
        }

    }
}
```