

Print the oldest among three

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

```
int A = s.nextInt();
```

```
int B = s.nextInt();
```

```
int C = s.nextInt();
```

```
[ if(A > B && A > C){  
    System.out.println("A");  
}  
[ else if(B > A && B > C){  
    System.out.println("B");  
}  
[ else{  
    System.out.println("C");  
}]
```

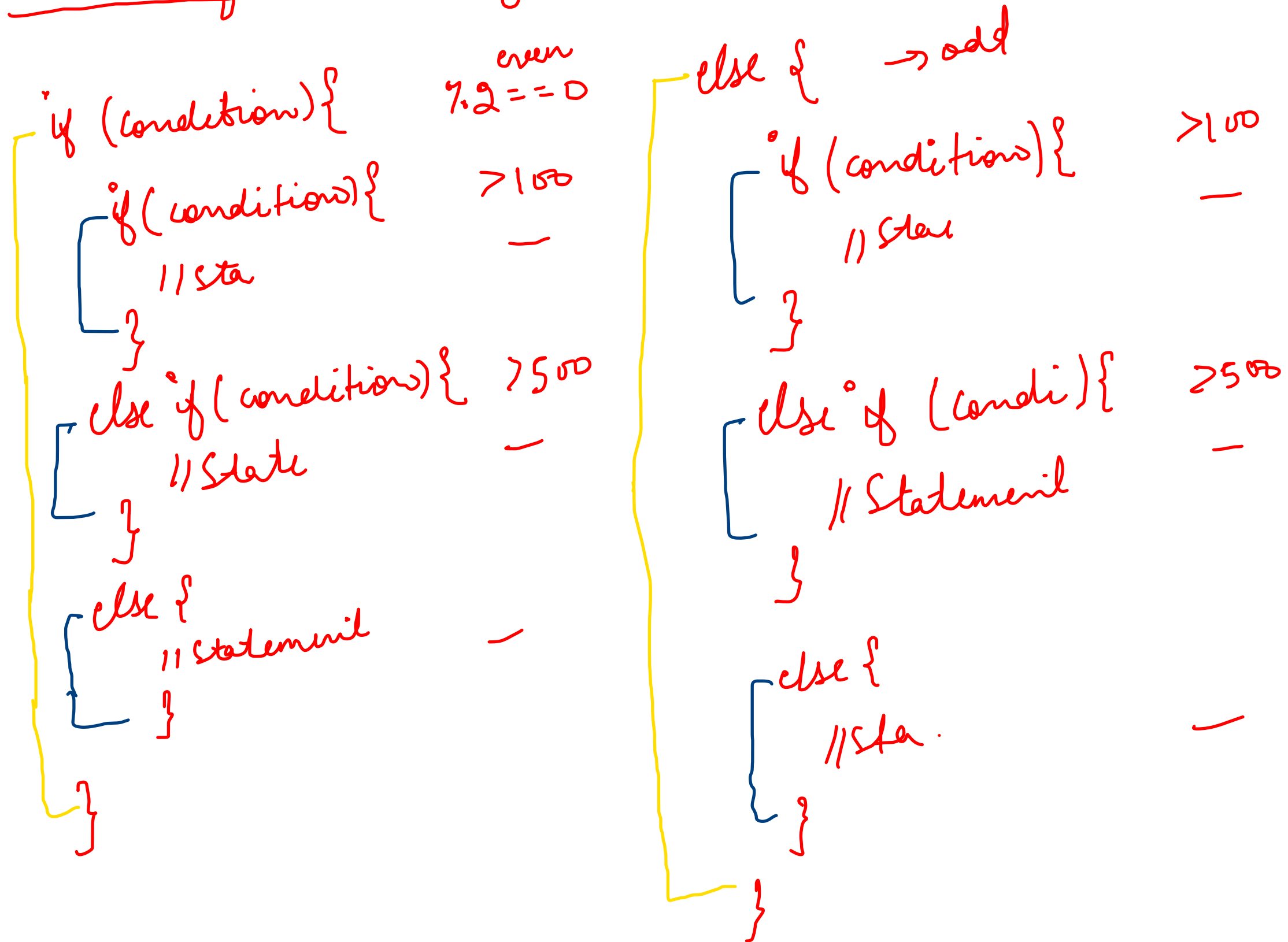
A → 10

B → 20

C → 15

10 > 20 → F
10 > 15 → F
20 > 15 → T
∴ B

Nested if-else → if-else within if-else.



Rich Adult Young

```
Scanner s = new Scanner(System.in);  
int age = s.nextInt();  
int salary = s.nextInt();
```

```
if(age > 40){  
    if(salary >= 300000){  
        System.out.println("You are rich and adult");  
    }  
    else{  
        System.out.println("You are an adult");  
    }  
}  
else if(age <= 40){  
    if(salary >= 12000){  
        System.out.println("You are rich and young");  
    }  
    else{  
        System.out.println("You are young");  
    }  
}
```

age - 15
s → 13000

15 > 40 F
15 ≤ 40 → T ✓
15000 > 12000 T ✓

age → 61
sal → 10000

Print final z

```
Scanner s = new Scanner(System.in);  
int x = s.nextInt();  
int y = s.nextInt();  
int z = s.nextInt();
```

$x \rightarrow 10$ $(10 \geq 20) \rightarrow F$

$y \rightarrow 20$

$z \rightarrow 30$

$(10 < 20) \rightarrow T$

$(20 \geq 100) \rightarrow F$

$(20 < 100) \rightarrow T$ $(20 \geq 50) \rightarrow F$

$(20 < 100) \rightarrow T$

$30 + 1 = 31$

o/p $\rightarrow 31$

```
if(x >= 20){  
    if(y >= 100){  
        z = z + 100;  
        //z += 100;  
        System.out.println(z);  
    }  
    else if(y < 100 && y >= 50){  
        z += 50;  
        System.out.println(z);  
    }  
    else{  
        z += 10;  
        System.out.println(z);  
    }  
}  
else if(x < 20){  
    if(y >= 100){  
        z += 3;  
        System.out.println(z);  
    }  
    else if(y < 100 && y >= 50){  
        z += 2;  
        System.out.println(z);  
    }  
    else{  
        z += 1;  
        System.out.println(z);  
    }  
}
```

Gaurav $\rightarrow 23$ ²⁴

if $(S > G \ \&\& \ S < J) \ || \ (S < G \ \&\& \ S > J)$
S

Sachin $\rightarrow 23$

Jyotirmay $\rightarrow 24$ ²²

else if $(G > S \ \&\& \ G < J) \ || \ (G < S \ \&\& \ G > J)$
G

G $\rightarrow 23$

S $\rightarrow 22$ ²⁴

J $\rightarrow 24$ ²²

else
J

runner up 3

pp $\rightarrow 25$

```
Scanner s = new Scanner(System.in);  
int a = s.nextInt();  
int b = s.nextInt();  
int c = s.nextInt();  
if((a > b && a < c) || (a < b && a > c)){  
    System.out.println(a);  
}  
else if((b > a && b < c) || (b < a && b > c)){  
    System.out.println(b);  
}  
else{  
    System.out.println(c);  
}
```

a $\rightarrow 23$

b $\rightarrow 25$

c $\rightarrow 27$

$(23 > 25) \ || \ (23 < 25)$
F T
 $(23 > 27)$
F

$25 > 23 \ \&\& \ 25 < 27$
T

Print z and x divisible by 3

```
int x, y, z;
if(x % 3 == 0){
    if(y >= 200){
        z += 10;
    }
    else if(y >= 100 && y < 200){
        z += 5;
    }
    else if(y >= 50 && y < 100){
        z += 4;
    }
    else if(y < 50){
        z += 1;
    }
}
else{
    if(y >= 200){
        z += 3;
    }
    else if(y >= 100 && y < 200){
        z += 2;
    }
    else if(y < 100){
        z += 1;
    }
}
z += 10;
Syso(z);
```

the end we add 10 to the value of z again, so now the value of z becomes 29.

Sample Input 1

41
150
7

Sample Output 1

19

Handwritten notes and calculations:

- $41 \% 3 \neq 0$ F
- $150 \geq 200$ F
- $150 \geq 100$ T
- $150 < 200$ T
- $7 + 2 = 9$
- $9 + 10 = 19$
- off

Switch Statement \rightarrow alternate of if-else.

Drawback :- Can check one condition at a time.

Syntax switch(condition) {

Case 1 :

sysol);

break;

Case 2 :

//State

break;

Case 3 :

//State

break;

(optional)

default :

//State

break;


```

class HelloWorld {
    public static void main(String[] args) {
        int i = 5;
        switch(i){
            case 1:
                System.out.println("a");
                break;
            case 2:
                System.out.println("b");
                break;
            case 3:
                System.out.println("c");
                break;
            case 4:
                System.out.println("d");
                break;
            default:
                System.out.println("e");
                break;
        }
    }
}

```

Output

```

java -cp .
e

```

$i = 3$ or $P \rightarrow C$

$i = 1$ or $P \rightarrow a$

characters → single entity.

alphabets, numbers, special characters.

'a', 'z', 'm', 'l', '7', '6', '+', '%'

'k' — all valid.

'10', 'aa', 't-', 't+' — not valid

always written in single inverted commas.

Character i/p

char ch = s.next().charAt(0); → m

71
0 1 2 3 4
mansi

Grade the student-2

```
Scanner s = new Scanner(System.in);  
char ch = s.next().charAt(0);
```

```
switch(ch){  
    case 'A':  
        System.out.println("Excellent!");  
        break;  
    case 'B':  
        System.out.println("Well done!");  
        break;  
    case 'C':  
        System.out.println("You passed!");  
        break;  
    case 'F':  
        System.out.println("Better luck next time!");  
        break;  
    default:  
        System.out.println("Invalid grade");  
        break;  
}
```