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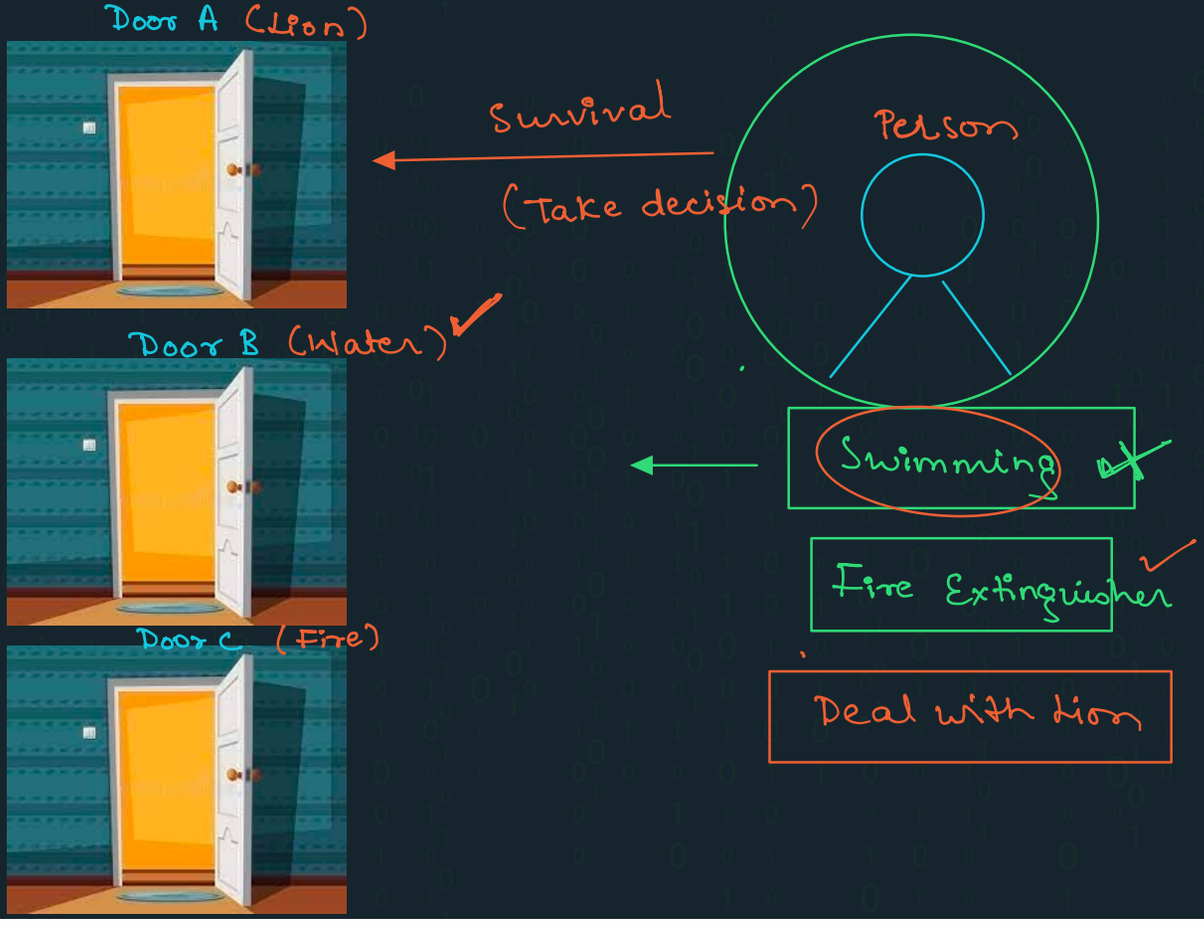
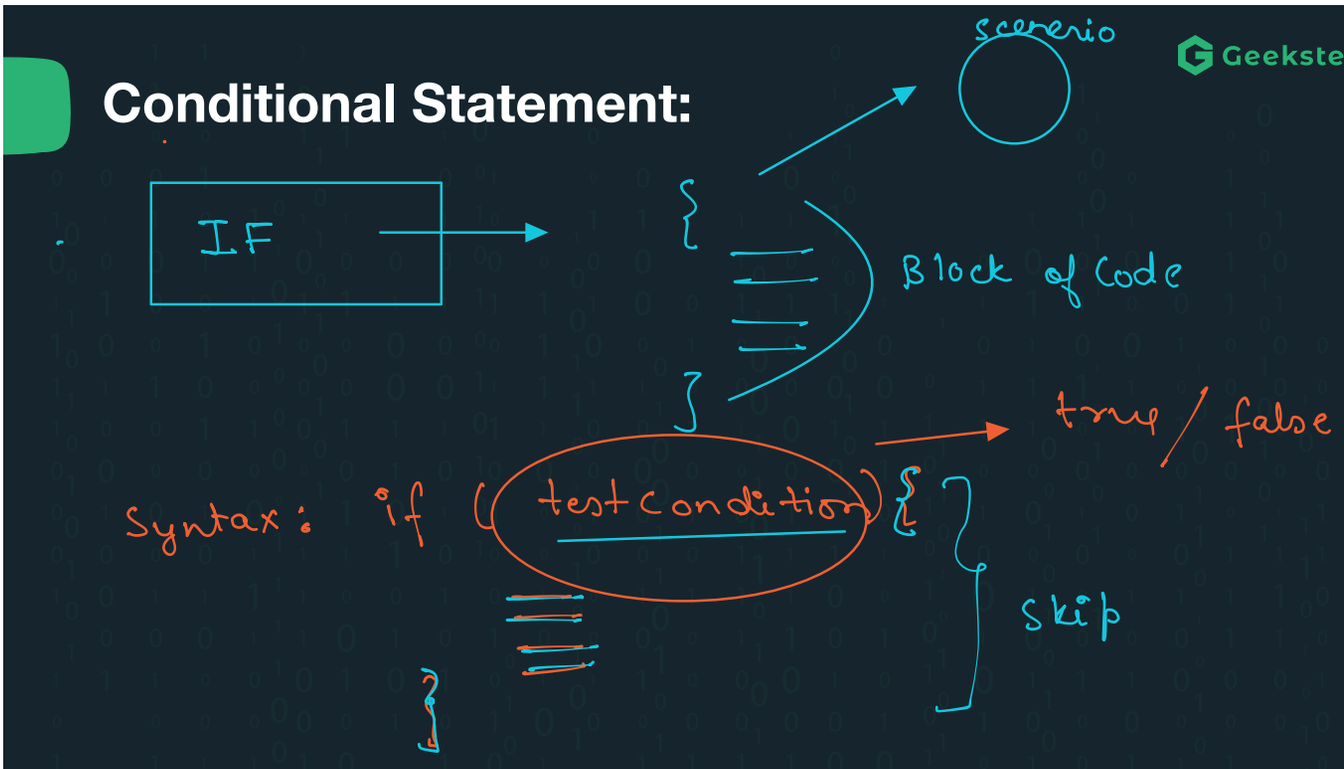
Conditional Statement:

- Decision Making
- If - Else Conditions
- If - Else Ladder
- Ternary Operators
- Hackerrank Questions
  - If - Else with Logical Operators
  - Print Bonus & shop discount!

Decision Making

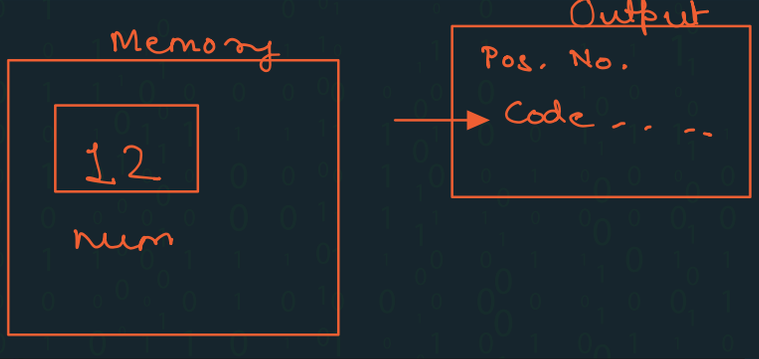


Conditional Statement:




```
int num = 12;
if(num > 0){
    System.out.println("Postive Number");
}

System.out.println("Code outside the if Statement");
```




```
class Main {
blic static void main(String[] args) {
  int num = -12;
  if(num > 0){
      System.out.println("Postive Number");
  }

  System.out.println("Code outside the if Statement");
```

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IF - ELSE Condition :

Tail / Head

Coin

if (test Condition) { tail }

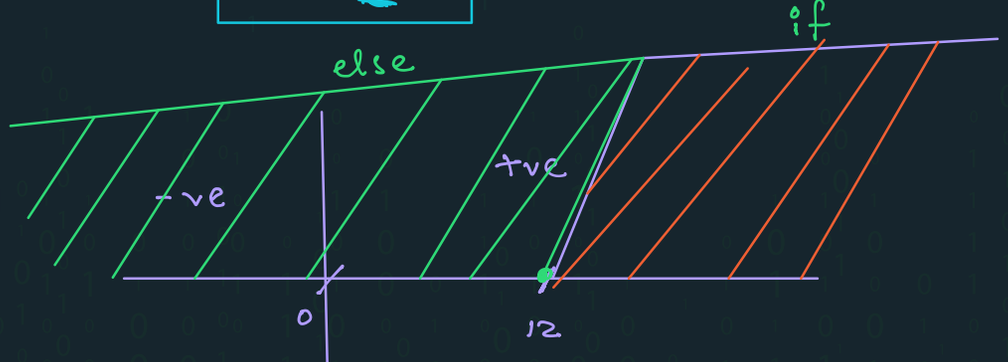
2 conditions

{ else { → head }

{

num > 12 → if

num ≤ 12 → else




```
class Main {
blic static void main(String[] args) {
  int num = -12;
  if(num > 0){
      System.out.println("Postive Number");
  }else{
      System.out.println("Zero OR Negative Number");
  }

System.out.println("Code outside the if Statement");
```

-12 > 0 (false) → skip

num ≤ 0

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IF - ELSE Ladder

dice ⟶ 6 faces

```
if ( 1 )
else if ( 2 )
else if ( 3 )
else if ( 4 )
else if ( 5 )
else if ( 6 )
else {
    invalid case
}
```

> 2 condition

```
int dice = 5; // 1 2 3 4 5 6
if(dice == 1){
    System.out.println("Dice Value is 1");
}else if(dice == 2){
    System.out.println("Dice Value is 2");
}else if(dice == 3){
    System.out.println("Dice Value is 3");
}else if(dice == 4){
    System.out.println("Dice Value is 4");
}else if(dice == 5){
    System.out.println("Dice Value is 5");
}else if(dice == 6){
    System.out.println("Dice Value is 6");
}else{
    System.out.println("Invalid Case");
}
```

dice = 5

false

false

false

true

skip

skip

top-down approach

Memory

5

dice

95x

100 cases

return

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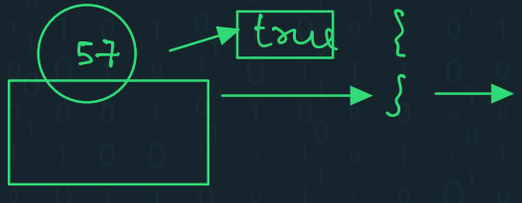
If - Else Ladder VS IF Statement

```
if ( dice == 1 )
if ( dice == 2 )
if ( dice == 3 )
if ( dice == 4 )
if ( dice == 5 )
if ( dice == 6 )
```

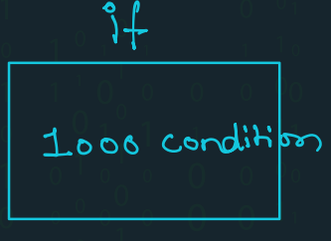
Not Useful



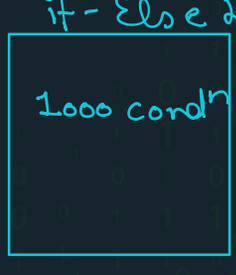
Time ↑

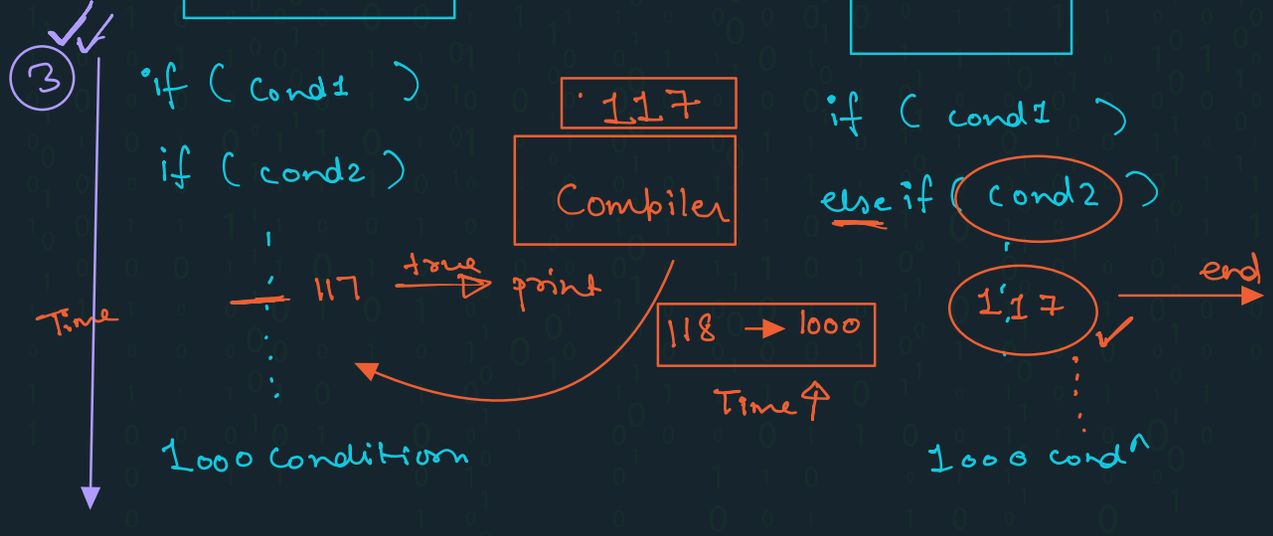
- ✓ 58
- ✓ 59
- ✓ 1
- ✓ 100 cases

100 cases



VS





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```
tatic void main must be defined in a public class.
c class Main {
ublic static void main(String[] args) {
    // EVEN OR ODD
    int num = 21;
    if(num % 2 == 0){
        System.out.println("Even Number");
    }else if(num % 2 == 1){
        System.out.println("Odd Number");
    }
```

```
Scanner scn = new Scanner(System.in);
int num = scn.nextInt();
if(num % 2 == 0){
    System.out.println("Even Number");
}else if(num % 2 == 1){
    System.out.println("Odd Number");
}
```

odd → else if ✗

else

if (num ≥ 12)

else (num < 12)

if ( )

else if ( )

HackerRank Questions :

Adult or not 1

Problem | Submissions | Leaderboard | Discussions

You will be given the age of a person as an integer input, you need to print "Adult" if the age is greater than or equal to 18 and print "Below age" if the age is below 18.

Input Format

For each test case, you will get the age of a person as an integer input.

Constraints

Scanner

int age

if (age ≥ 18)

print (Adult)

else { print (Below Age)

}

```
        /* Enter your code here. Read input from STDIN. Print outpu
        Scanner scn = new Scanner(System.in);
        int age = scn.nextInt();
        if(age>=18){
            System.out.println("Adult");
        }else{
            System.out.println("Below age");
        }
    }
```

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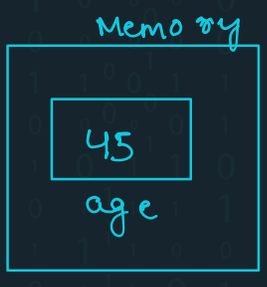

Ternary Operator : → if-Else Only [Replace] (2 condⁿ)

```
if(age>=18){
    System.out.println("Adult");
}else{
    System.out.println("Below age");
}
```

System.out.println(testCond ? "" : "")

print (age ≥ 18 ? "Adult" : "Below age")

true

false

testCondⁿ ? "1 statement" : "2nd statement"

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```java
Scanner scn = new Scanner(System.in);
int age = scn.nextInt();
System.out.println(age>=18 ? "Adult" : "Below age");
```

21 17

test, true, false

Comparison operator

ternary operator ✓

21 >= 18 → Adult

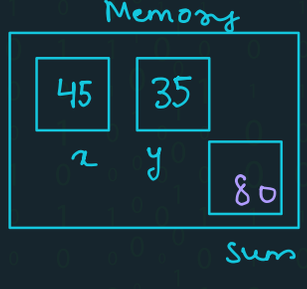
true

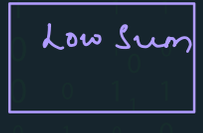
17 >= 18 → Below age

false

```java
Scanner scn = new Scanner(System.in);
int x = scn.nextInt(); 45
int y = scn.nextInt(); 35

int sum = x+y; → 80
if(sum >= 100){ → 80 >= 100
    System.out.println("High Sum"); ✗ Skip
}else{
    System.out.println("Low Sum"); → ✓
}
```






```java
/* Enter your code here. Read input from STDIN. Print outpu
Scanner scn = new Scanner(System.in);
int x = scn.nextInt();
int y = scn.nextInt();

int sum = x+y;
System.out.println(sum >= 100 ? "High Sum" : "Low Sum");
```

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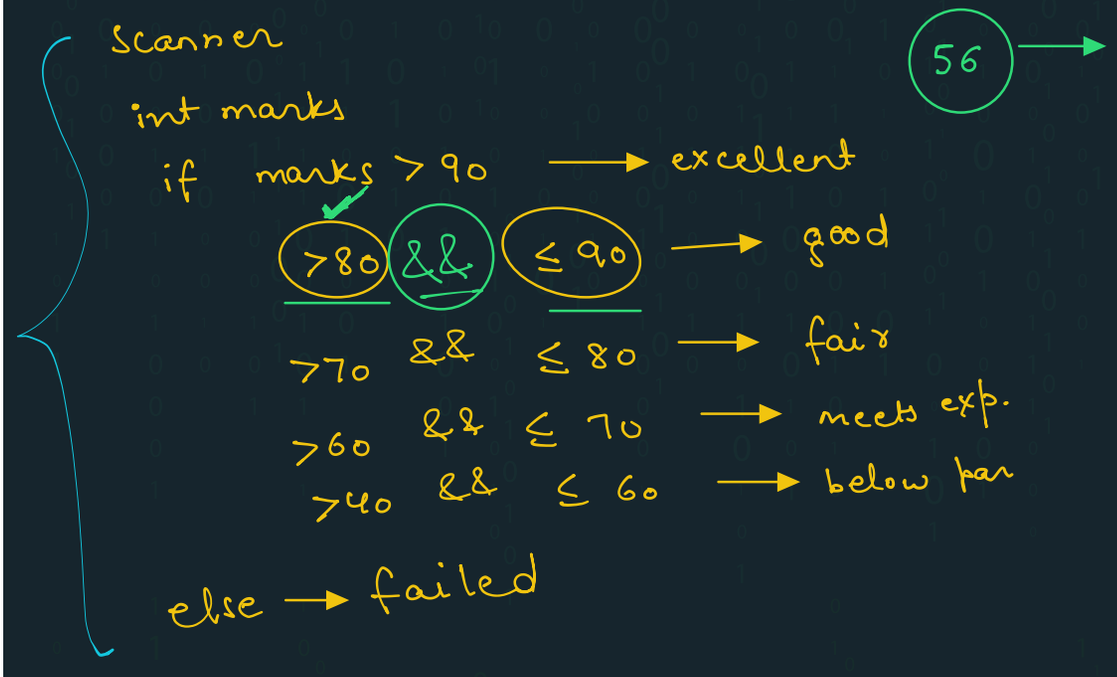
Grade the student 1

Problem | Submissions | Leaderboard | Discussions

You are given marks of a student as an integer input. You need to print according to the following rules: 1 for marks above 90, print excellent. 2 for marks above 80 and less than equal to 90, print good. 3 for marks above 70 and less than equal to 80, print fair. 4 for marks above 60 and less than equal to 70, print meets expectations. 5 for marks above 40 and less than equal to 60, print below par. 6 print failed if none of the above conditions follow.




```java
/* Enter your code here. Read input from STDIN. Pr
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");
}
```

85

return

end

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Shop Discount

Problem | Submissions | Leaderboard | Discussions

A shop will give a discount of 10% on the total cost if the cost of the quantity purchased is more than 1000. a. Ask user for the number of units b. Suppose, one unit will cost 100. c. Judge and print total cost for the user in the integer format.

Input Format

For each test case, You will be given the number of units in the integer format

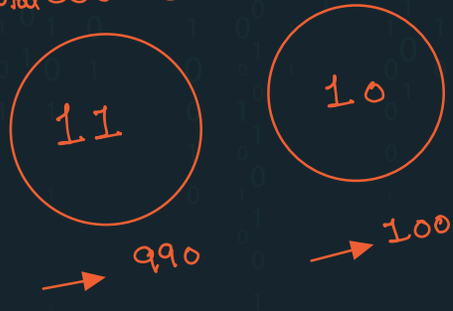
Scanner → user → 10 ✓

100 ✓ item

if(>1000) total Cost = 10 * 100 = 1000 > 1000 X

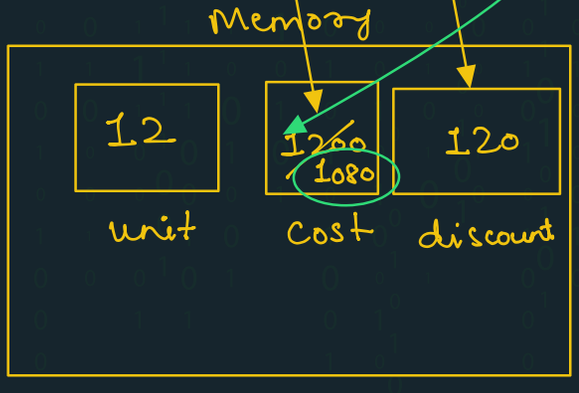
(totalCost = totalCost - 10% dis)

10% discount




```
Scanner scn = new Scanner(System.in);
int unit = scn.nextInt();  ✓ → 12 ✓   9
int cost = unit * 100;  → 1200  → 900
if(cost > 1000){  → true
    int discount = (cost * 10 ) / 100;  1209 × 10/100
    cost = cost - discount;  → 1200 - 120
    System.out.println(cost);
                                = 1080
}else{
    System.out.println(cost);  → 900
    }
}
```

1080



Cost - = discount

Cost = cost - discount

x -= 5 ⇒ x = x - 5

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```java
/* Enter your code here. Read input from STDIN. Print
Scanner scn = new Scanner(System.in);
int sal = scn.nextInt();
int exp = scn.nextInt();
if(exp > 5){
    int bonus = (sal * 5) / 100;
    System.out.println(bonus);
}else{
    System.out.println(0);
}
```