Conditional Statement

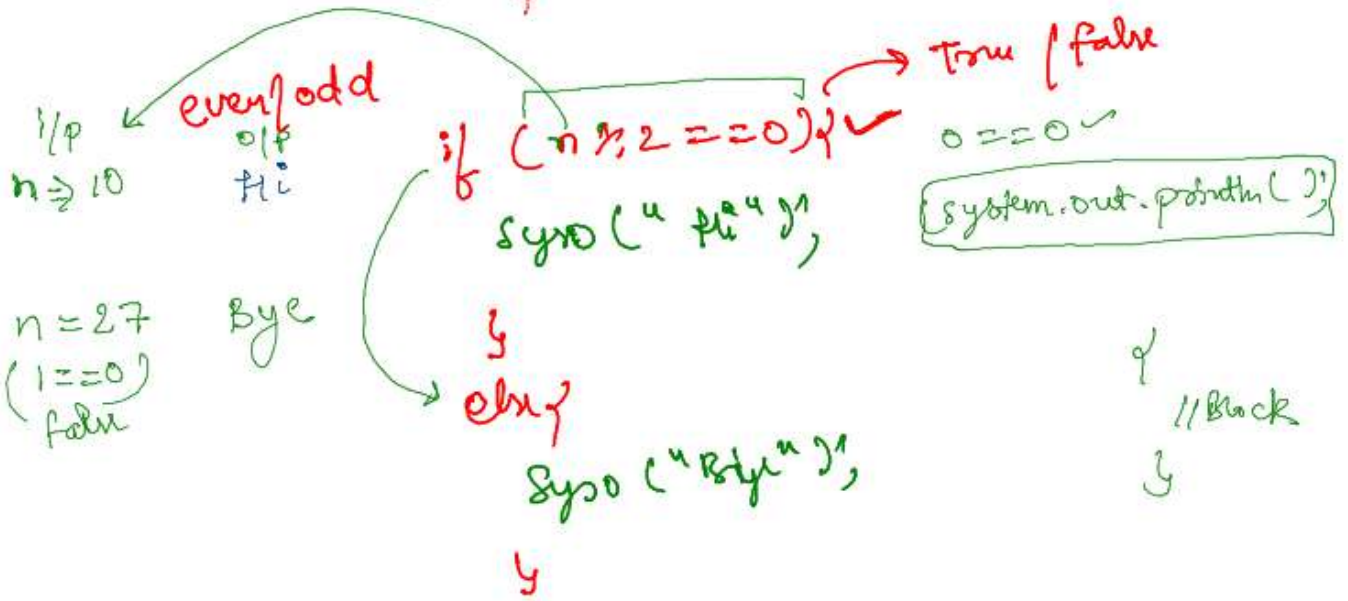
if-else statement

```
if (cloth dirty){
    // True statement code          // True Block
    Syso("wash cloth");
}
else{
    // rest of code                 // false Block
    Syso("don't wash");
}
```

```
int age = 19;
if (age >= 18){          // conditional statement
    Syso("vote");        // if Block True
}
else{
    Syso("not eligible");// else Block False.
}
```

General Statement

```
if (True){
    Run this code.
}
else{
    Run this code.
}
```




```
public class Solution{
    Run | Debug
    public static void main(String[] args){
        int marks = 34;
        if(marks>=33){
            System.out.println("Pass");
        }else{
            System.out.println("Fail");
        }
```

marks = 34

(34 >= 33) → true/false

if statement may or may not present individual

else Block is not possible without if Block;

```
if(){
}
```
↳ perfectly correct

```
if(){
}
else{
}
```
↳ correct

```
else{
}
```
incorrect

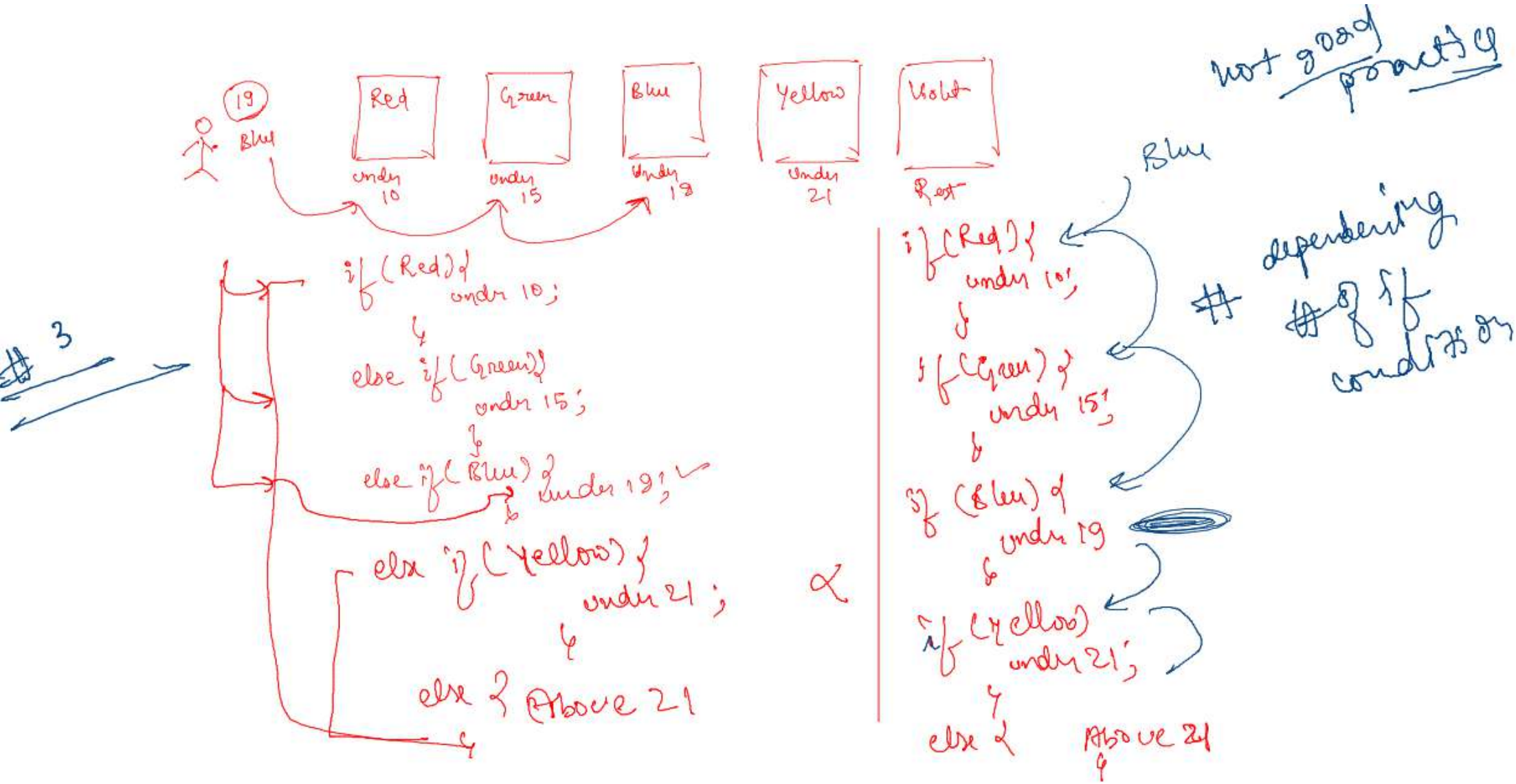
```
int marks = 34;
if(marks>=33 && marks <90){
    System.out.println(x: "Pass");
}

System.out.println(x: "result out");
```
True → Pass

Adult

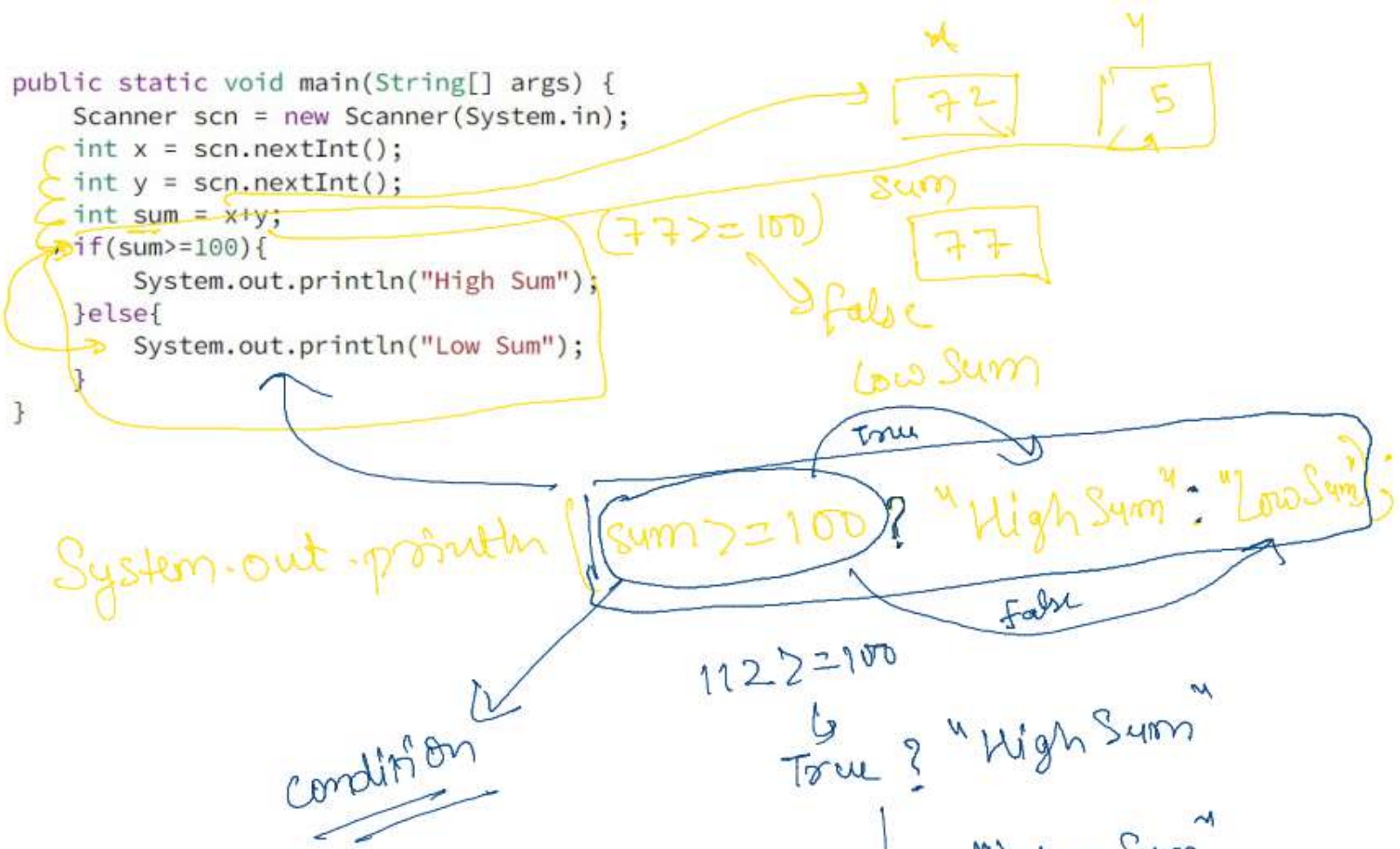
```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
1.  int age = scn.nextInt();
2.  if(age>=18){
3.      System.out.println("Adult");
4.  }else{
5.      System.out.println("Below age");
6.  }
    /* Enter your code here. Read input from STDIN. Print output to ST
}
```

age: 18

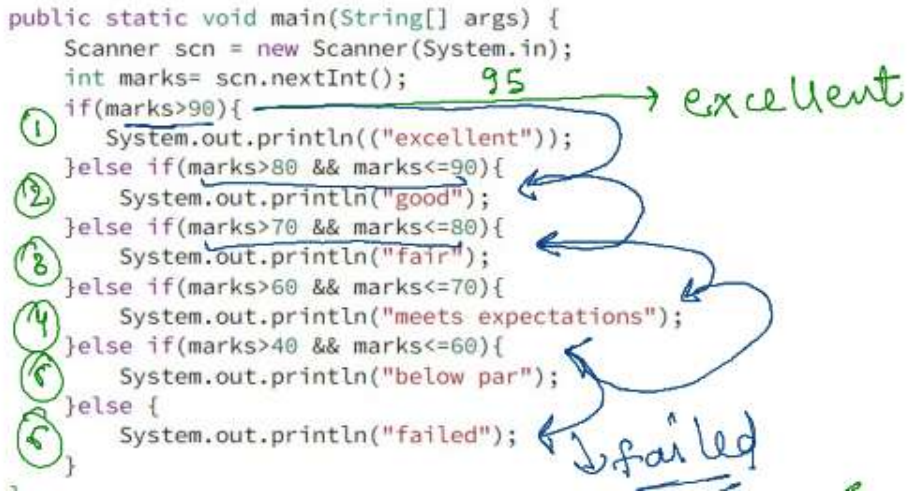
(18 >= 18) True → if true Block.

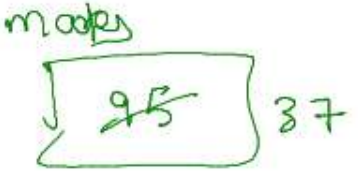

19
Blue
Red
Green
Blue
Yellow
Violet
under 10
under 15
under 19
under 21
Rest
if (Red){
under 10;
}
else if (Green){
under 15;
}
else if (Blue){
under 19;
}
elx if (Yellow){
under 21;
}
else { Above 21
}
# 3
Blue
if (Red){
under 10;
}
if (Green){
under 15;
}
if (Blue){
under 19
}
if (Yellow)
under 21;
}
else { Above 21
}
not good practice
depending # of if conditions

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int x = scn.nextInt();
    int y = scn.nextInt();
    int sum = x+y;
    if(sum>=100){
        System.out.println("High Sum");
    }else{
        System.out.println("Low Sum");
    }
}
```




```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");
    }
}
```





! ⇒ true / false

```
boolean ans = true
if (!ans) {
    // Block ①
}
else {
    // Block ②
}
```

true → false

!false = true

! true ⇒ false

```
① boolean flag = true;
② int n = 19;
③ int val = 19 % 2;
④ if (val == 1) {
⑤     flag = false;
   }
⑥ if (!flag) {
⑦     syso("odd");
   }
⑧ else { syso("even") }
⑨
```

flg [True] false

n [19]

val [1]

assignment op

! false

odd

```
if ( ) {   True
    // if block
}
else {
}
```

1 → 100
copy

→ a * 100 = a*100 > 1000
copies

⇓ 10% discount

else
no discount

1100 → 10% = 110 discount

1100
− 110
=

(am * 10/100)

(S.P * Dis%/100)

```
Scanner scn = new Scanner(System.in);
int x = scn.nextInt();            9
int amtpayable = x * 100;
if (amtpayable > 1000) {
    int discount = amtpayable * 10/100   => 1200 x 10/100 = 120
    amtpayable = amtpayable - discount;
    Syso(amtpayable);
}
else { syso(amtpayable)
}
```

x: 12

ampay: 1200

True

dis: 120

1080

980

980