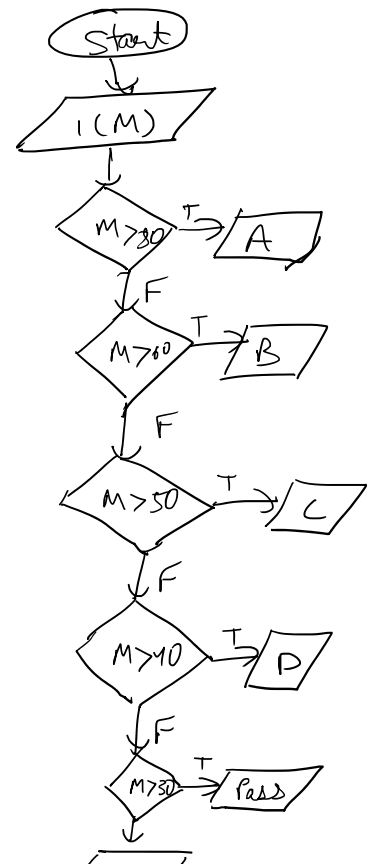
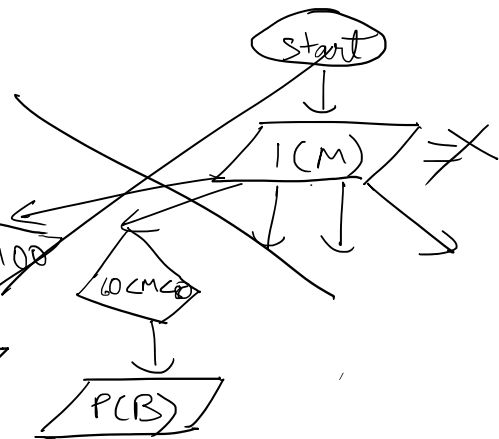
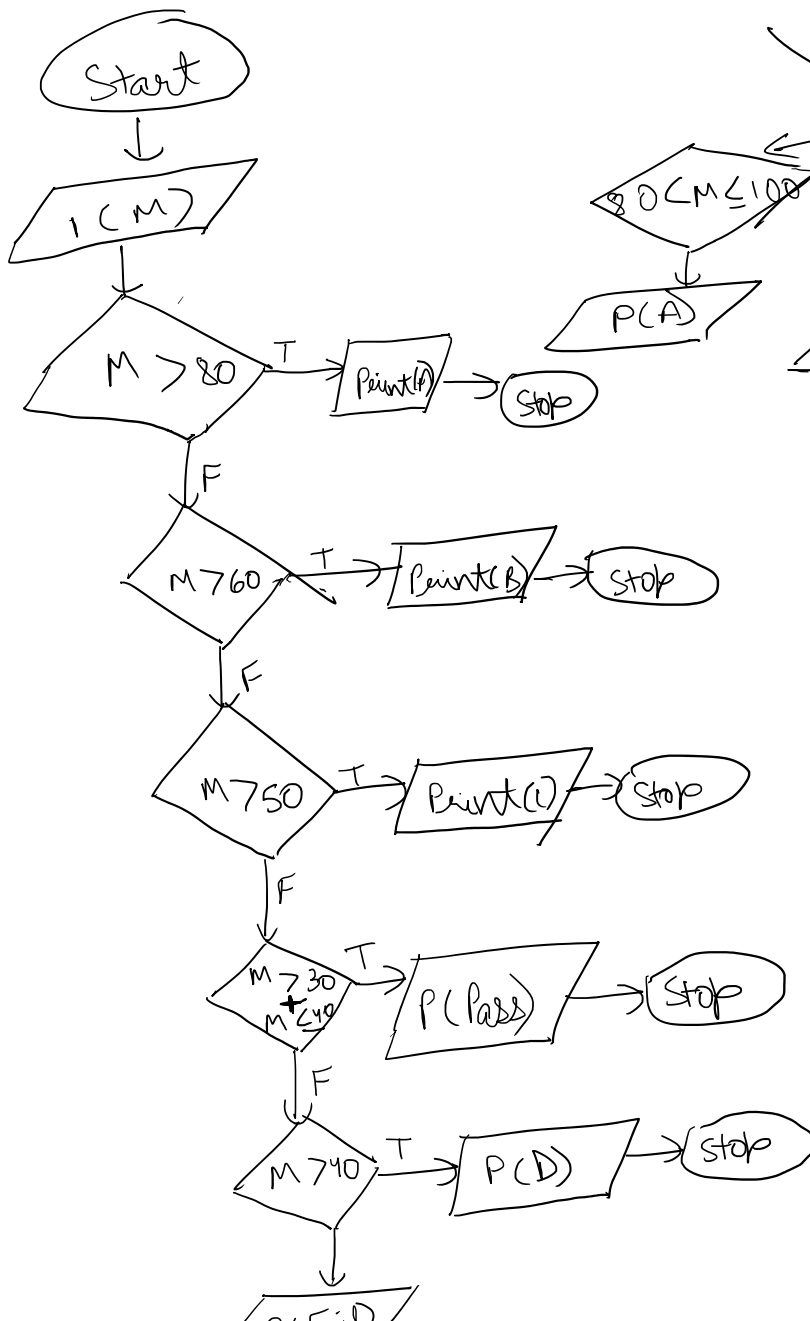
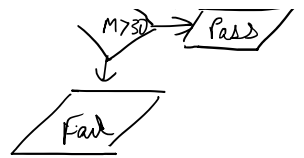
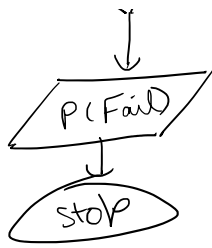


| Marks | Grade |
|-------------------|-------|
| $80 < M \leq 100$ | A |
| $60 < M \leq 80$ | B |
| $50 < M \leq 60$ | C ✓ |
| $40 < M \leq 50$ | D |
| $30 < M \leq 40$ | Pass |
| $M \leq 30$ | Fail |





Operators

07 October 2022 20:37

Java divides the operators into the following groups:

- Arithmetic operators ✓
- Assignment operators ✓
- Comparison operators ✓
- Logical operators ✓
- Bitwise operators ✓

$$2 + 3 = 5$$
$$2 - 3 = -1$$

Arithmetic Operators

Arithmetic operators are used to perform common mathematical operations.

| Operator | Name | Description | Example |
|----------|----------------|--|----------|
| + | Addition | Adds together two values | $x + y$ |
| - | Subtraction | Subtracts one value from another | $x - y$ |
| * / | Multiplication | Multiplies two values | $x * y$ |
| / | Division | Divides one value by another | x / y |
| % | Modulus | Returns the division remainder | $x \% y$ |
| ++ | Increment | Increases the value of a variable by 1 | $++x$ |
| -- | Decrement | Decreases the value of a variable by 1 | $--x$ |

Assignment

| Operator | Example | Same As |
|----------|----------------|------------------|
| = | $x = 5$ | $x = 5$ |
| += | $x += 3$ | $x = x + 3$ |
| -= | $x -= 3$ | $x = x - 3$ |
| *= | $x *= 3$ | $x = x * 3$ |
| /= | $x /= 3$ | $x = x / 3$ |
| %= | $x \% = 3$ | $x = x \% 3$ |
| &= | $x \& = 3$ | $x = x \& 3$ |
| = | $x = 3$ | $x = x 3$ |
| ^= | $x \wedge = 3$ | $x = x \wedge 3$ |
| >>= | $x >> = 3$ | $x = x >> 3$ |
| <<= | $x << = 3$ | $x = x << 3$ |

$$x = 5$$

Bits
=

Comparison \rightarrow true/false

| Operator | Name | Example |
|----------|--------------------------|---------|
| == | Equal to | x == y |
| != | Not equal | x != y |
| > | Greater than | x > y |
| < | Less than | x < y |
| >= | Greater than or equal to | x >= y |
| <= | Less than or equal to | x <= y |

$x = 5 > y = 5$
 $y = x?$

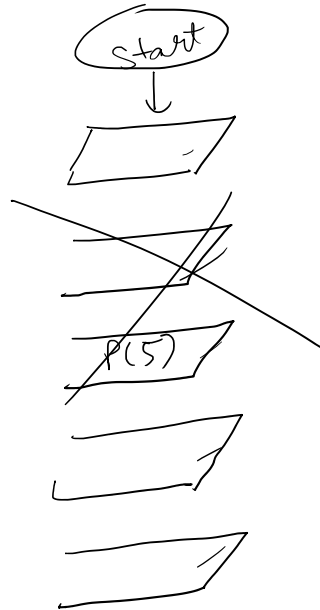
Java Logical Operators

You can also test for **true** or **false** values with logical operators.

Logical operators are used to determine the logic between variables or values:

| Operator | Name | Description | Example |
|----------|-------------|---|--------------------|
| && | Logical and | Returns true if both statements are true | x < 5 && x < 10 |
| | Logical or | Returns true if one of the statements is true | x < 5 x < 4 |
| ! | Logical not | Reverse the result, returns false if the result is true | !(x < 5 && x < 10) |

1-10



Print the num

Loops

↓
Mechanism → Repeating

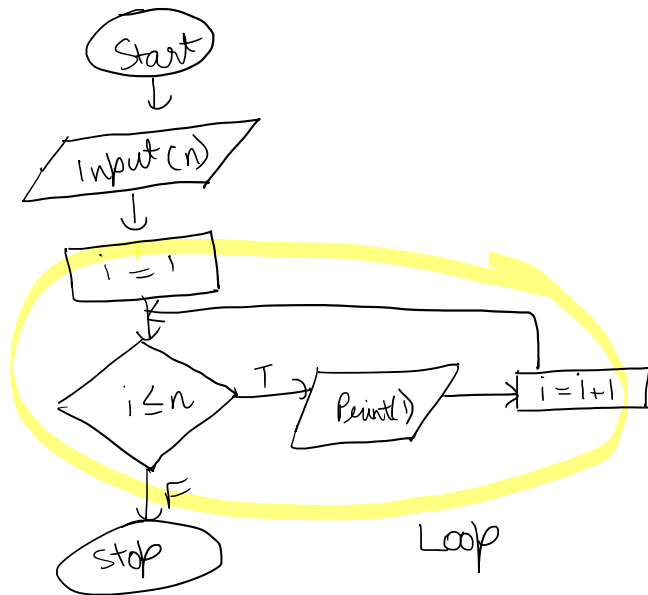
Kaam

Karo

+

Conditions

10



1
2
3
4
5
6
7
8
9
10

