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Relational **Operators** $\longrightarrow$ to compare 2 quanties
and
boolean **data type**

$a > b$

$a < b$

$a >= b$

$a <= b$

$a \mathrel{!=} b$

$a == b$

$a = b$

$\downarrow$

assignment

Ques: Take positive integer input and tell if it is odd or even

'n' even kab hota hai?
           ↓

jab ro 2 se divisible ho

if (n%2 == 0) Even

else odd

HW: Take positive integer input and tell if it is divisible by 5 or not.
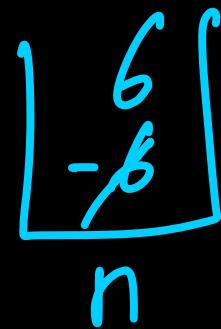
Ques: Take integer input and print the absolute value of that integer

$n = 5$

5

$n = -4$

4

$$\left\lfloor \begin{matrix} 6 \\ -6 \end{matrix} \right\rceil$$

n

$n = -n$

Ques: **Take real number input and check if it is an integer or not.**

double x = sc..

7.2

x

Ques: If cost price and selling price of an item is input through the keyboard, write a program to determine whether the seller has made profit or incurred loss or no profit no loss. Also determine how much profit he made or loss he incurred.

```
int cp = sc.nextInt();
int sp = sc.nextInt();
```

```
if (sp > cp) → profit
else loss
```

Else If Ladder

```
if (cond1)      — —

else if (c2)   — —

else if (c3)   — —

else if (c4)   ← —

else      __
```

HW: Take length and breadth of rectangle as input and write a program to find whether the area of rectangle is greater than its perimeter.

Ques: Take positive integer input and print:

Riya   **if number is divisible by 5**

Banu   **if number is divisible by 3**

Apurva   **if number is divisible by 5 & 3 both**

Isha   **if number is not divisible by 5 or 3**

HW: Given a point (x, y), write a program to find out if it lies in the 1st Quadrant, 2nd Quadrant, 3rd Quadrant, 4th Quadrant, on the x-axis, y-axis or at the origin.

Multiple Conditions using && and ||

logical and

logical or

Ques: Take positive integer input and tell if it is a four digit number or not.

$n = 23 \rightarrow$ not a 4 digit no

$n = 1484 \rightarrow$ 4 digit no.

if ($n > 999$ and $n < 10000$)

$\downarrow$

&&

1484/10	23/10
= 148/10	2/10
14/10	0
1/10	
0	

HW: Take integer input and tell if its magnitude is smaller than 69 or not.

$$n = -34$$
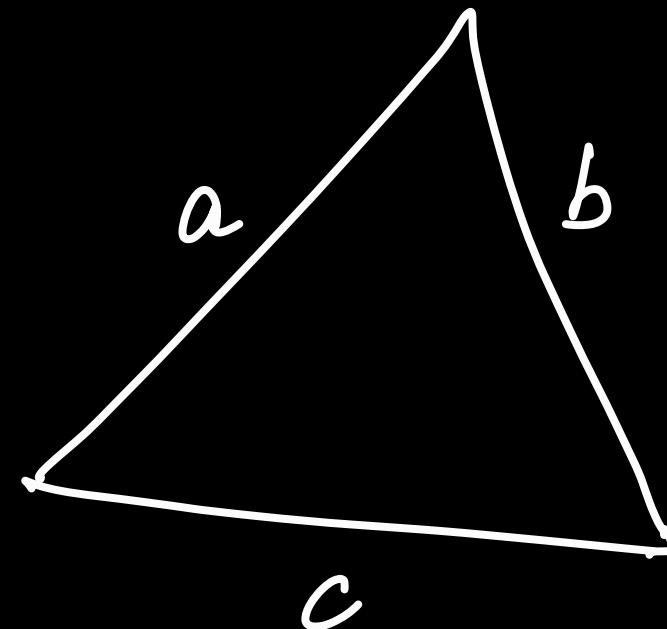
$$|-34| < 69$$

Ques: Take positive integer input and tell if it is divisible by 5 or 3.

$$3, 5, 6, 9, 10, 12, 15, 18, 20, 21, 24, 25, 27, 30 \ldots$$

if(n%5==0   or   n%3==0)
                ↓
                ||

Ques: Take 3 positive integers input and tell if they can be the sides of a triangle or not.

$$a + b > c$$

$$b + c > a$$

$$c + a > b$$

Ques: Take 3 positive integers input and print the greatest of them.

HW: Take 3 positive integers input and print the least of them.

Nested If-Else

```
if (    ) {
    if ( ) ——
    else ——
}
else {
    if ( ) ——
    else ——
}
```

Ques: **Take 3 positive integers input and print the greatest of them.** a, b, c

```
if(a>b){ // b to max nahi hai
    if(a>c)   sout(a)
    else    sout(c)

}
else{ // b>a  iska matlab  a  to max nahi hai
    if (b>c)  sout(b)
    else   sout(c)

}
```

Ternary Operator

condition ? sach : jhoot

If-Else ka shortcut

If-Else ko cool tareeke se likhne ka tareeka

Ques: Take positive integer input and tell if it is odd or even

Greatest of three →

```
if(a>b){
    if(a>c) sout(a)
    else sout(c)
}
else{ //.b>a
    if(b>c) sout(b)
    else sout(c)
}
```

(a > b) ? ((a>c)? a : c) : ((b>c)? b : c);

♡ ♡ ♡ ♡ ♡

THANKYOU
Cuties