

Assigment & If-Else

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$$x = x+1 \rightarrow x-x = 1 \rightarrow \cancel{x} \neq 1$$

$\boxed{x_{\text{awal}} = 5}$ $\boxed{x_{\text{baru}} = x + 1}$ Memperbaharui nilai x

$$x = 5 + 1 = 6$$

Desirement → kuangjī ní wài

Increment → tingkatkan nilai

int x = 1
x = x + 1 → x = 1 + 1 = 2
 └ x++

Var operator = nilai Penambahan/
Pengurangan

```

int x;
cin>>x; → x = 5
x++; → x = 5 + 1 → x = 6
x += 2; → x = 6 + 2 = 8
x--;
x -= 2; → x = 5 6 angka L mod 2 = 1
int y = 2;
x *= y; → x = 5 * 2 = 10 → x = x * y
x /= y; → x = 10 / 2 = 5 → x = x / y
x %= y; → x = 5 mod 2 = 1 → x = x % y
cout<<x<<endl; // x = 8 (Terbaru)
    
```

~~$x+y$~~ = x
~~y~~

x kali y , x dibagi y

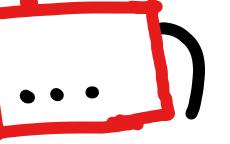
karena $x \bmod y \rightarrow x \bmod 2$

$x \bmod 2$

↓

$\begin{cases} 1, & x \text{ ganjil} \\ 0, & x \text{ genap} \end{cases}$

$a \bmod b = 0 \rightarrow a \text{ habiskan } b$

If () proposisi
{
 (Boolean)

} else {
 proposisi
 BENAR (1) SALAH (0)
 TRUE FALSE
}
}

P	q	$P \wedge q$	$P \vee q$
1	1	1	1
1	0	0	1
0	1	0	1
0	0	0	0

P and q = $P \wedge q$

$$1 \wedge 1 = 1$$

$$1 \wedge 0 = 0$$

$$0 \wedge 1 = 0$$

$$0 \wedge 0 = 0$$

ada satu saja
0 / False
hasil = False

$P \wedge q = P + q \rightarrow$ ada satu sajua

1 / true

False = false

* AND \Rightarrow Semua harus benar
Sari Sarah semua salah

$$\text{prop} = (P \text{ AND } (\cancel{(Q \text{ OR } R) \text{ AND } (S \text{ OR } T \text{ OR } U \text{ AND } V)}))$$

Jika P = FALSE,

X

prop = False

$$P \text{ AND } X = \text{FALSE} \text{ AND } X = \text{False}$$

* OR \Rightarrow minimal satu benar

Satu benar

benar

semua benar

False False

$$\text{prop} = (P \text{ OR } Q \text{ OR } X \text{ OR } Y) \text{ AND } ((S \text{ AND } T) \text{ AND } \cancel{(\text{NOT } V)})$$

P = True, V = True

prop = False

$\because \cdot, \times, -, + \rightarrow \text{Precedence}$

\cap, \neg, \wedge, \vee

+ XOR, Exclusive OR $\Rightarrow P \stackrel{\text{xor}}{=} q$

P	q	$P \text{xor } q$
1	0	1
0	1	1
1	1	0

unit = sangil xor prima

15 < sangil = true
prima = false

unik = true xor false

3 < sangil = true
prima = true
unik = true xor true

* NOT , Negasi'

Bilangan ganjil adalah bilangan bukan genap
Bilangan ganjil adalah bilangan yang bukan genap
Bilangan ganjil = Negasi dari bilangan genap

Bilangan ganjil = \sim (Bilangan Genap)

Bilangan genap = (bilangan mod 2 == 0)

Bilangan ganjil = !(bilangan mod 2 == 0)

Bilangan ganjil = (bilangan mod 2 != 0)

* Biimpikas: $C P \leftrightarrow q$) ($P == q$)

✓ if (P) {

✓ if (q) {

....

} }

if (P) {

} else { if (q)



if (P & q) {

....

}

if (P) {

} else if (q) {

}



- * AND (00) \Rightarrow Sami Samu semua saclu
Hanya bernilai benar jika semua benar
 \rightarrow False
 $\text{prop} = P \text{ AND } (((Q \text{ OR } X) \text{ AND } Y) \text{ OR } (S \text{ AND } T))$
P and Y
- diketahui P = False, Q = False, X = False, Y = True, S = True, dan T = False
- prop = .False
- * OR (11) \Rightarrow sam benar semua benar
hanya salah jika semua variable salah

~~P OR ((Q AND X) AND (X AND Y) OR (S OR T))~~ = True

P = True

P OR \cup $\boxed{\text{True}}$ or $\boxed{\dots}$ = true

* XOR $\Rightarrow (P \neq q) \Rightarrow (P \wedge q)$

$$\begin{array}{c} P \quad q \\ \hline 1 \quad 0 \\ 0 \quad 1 \\ 1 \quad 1 \\ 0 \quad 0 \end{array} \quad \frac{P \text{ xor } q}{\begin{array}{c} 1 \\ 1 \\ 0 \\ 0 \end{array}}$$

3 < is Ganjil = True
is Prima = True
is unit = TRUE xor T
(P) = False

2 < is Ganjil = False
(9)
is Prima = True

P xor q = True (unit)

15 < is Ganjil = True
is Prima = False
1 xor 0 = 1, (unit)

* NOT $\Rightarrow (!) \Rightarrow \top$

$!(\text{true}) = \text{False}$

$!(\text{false}) = \text{True}$

Bilangan genap



Bilangan habis dibagi 2
Mod 2 = 0

Bilangan ganjil $= \neg (\text{bilangan genap})$
ganjil $= \neg (\text{Mod 2} = 0)$

• Biimpikasi $\Rightarrow (P \Leftrightarrow Q) \Rightarrow (P == Q)$

$(1+2) \equiv 3$

$(2+2) \equiv (1+3)$

↓ Ekuivalen

Bentuknya beda
Nilainya sama

