SWITCH

INPUT a, b, op (int)

op : 1) +
2) -
3) *
4) /

```
if(op==1){
    RIS = a+b;
}
else if(op==2){
    RIS=a-b;
}
```

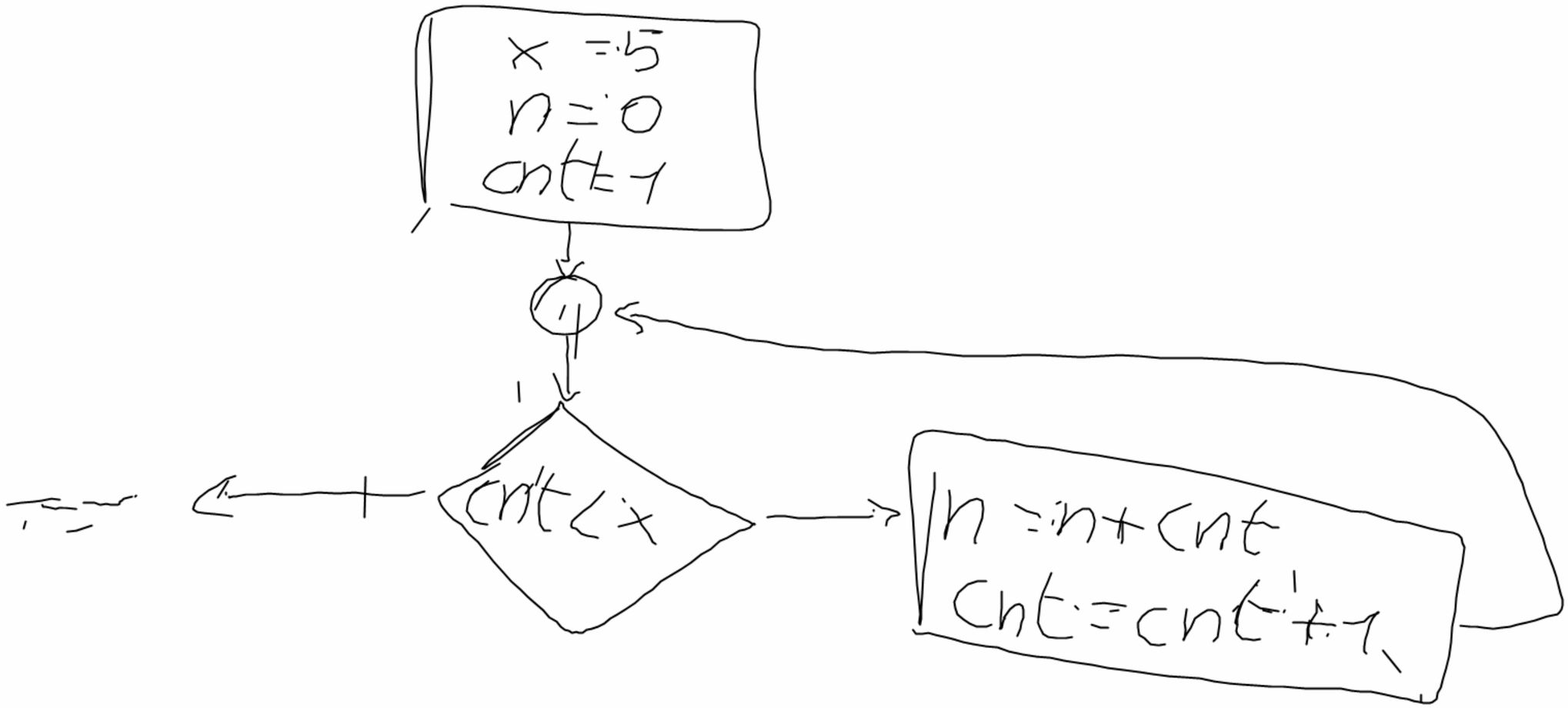
```
if(op==1){
    RIS=a+b;
}
else if(op==2){
    RIS=a-b;
}
else if(op==3){
    RIS=a*b;
}
else if(op==4){
    RIS=a/b;
}
else
```

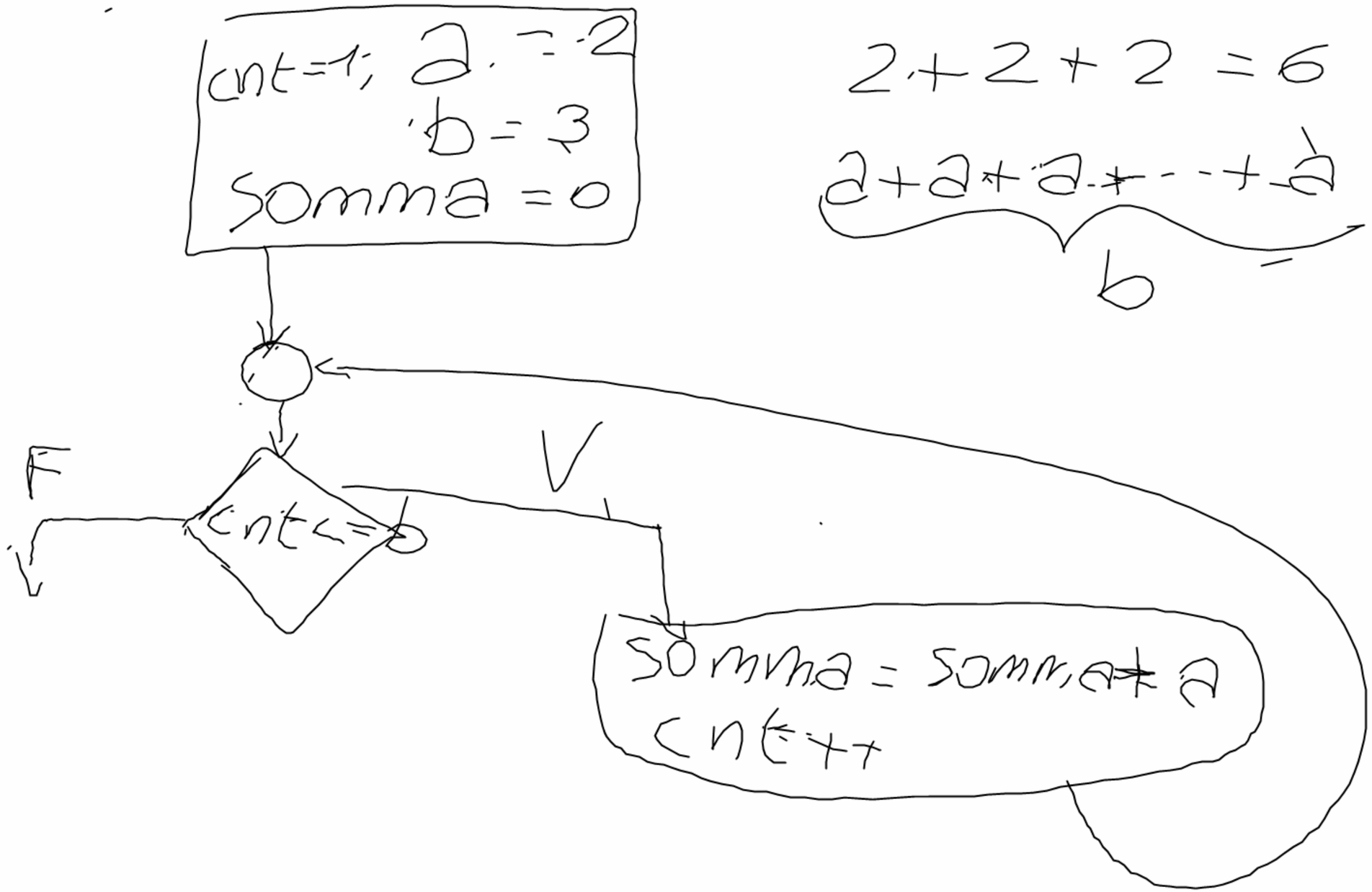
SWITCH

⟹

```
switch(op){
case 1:
    RIS=a+b;
    break;
case 2:
    RIS=a-b;
    break;
case 3:
    RIS=a*b;
    break;
case 4:
    RIS=a/b;
    break;
default:
}
```

CICLO CON CONTROLLO IN TESTA




cnt=1; a=2
b=3
somma=0
2+2+2=6
a+a+a+...+a
b
F
V
cnt<=b
somma=somma+a
cnt++

Es

INPUT : n → OUTPUT : n + (n-1) + (n-2) + ... + 1 + ~~0~~

Es : n = 5 → 5 + 4 + 3 + 2 + 1 + ~~0~~

= 15

ES FATTORIALE

$$n! = n \cdot (n-1) \cdot (n-2) \cdots 1$$

$$0! = 1$$

SE $n = 5 \longrightarrow 5! = 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 120$

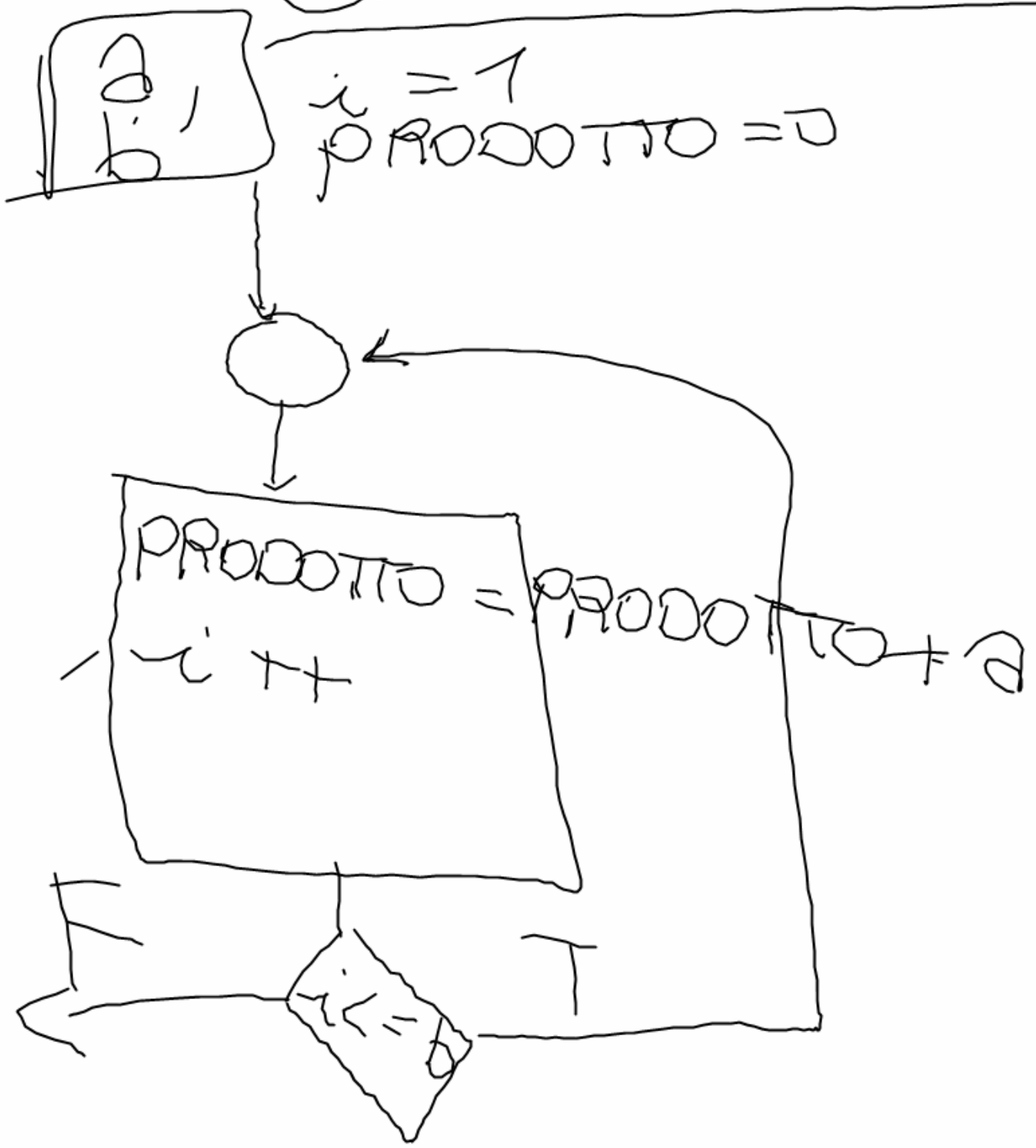
VAR

n ← LEGGI INPUT

FATT = 1

e COSÌ

CONTROLLO IN CODA




```
DO {
   .
   .
   .
} WHILE(CONDIZIONE);
```

WHILE

```
int cnt=1;
int a, b, somma=0;
   INPUT
[ //INPUT a e b
while (cnt<=b ) {
    somma=somma+a;
    cnt=cnt+1;
}
```

```
while(condizione){
  //codice
}
```

WHILE

```
int cnt=1;
int a, b, somma=0;
   INPUT
[ //INPUT a e b
while (cnt<=b ) {
    somma = somma + a;
    cnt = cnt + 1;
}
```

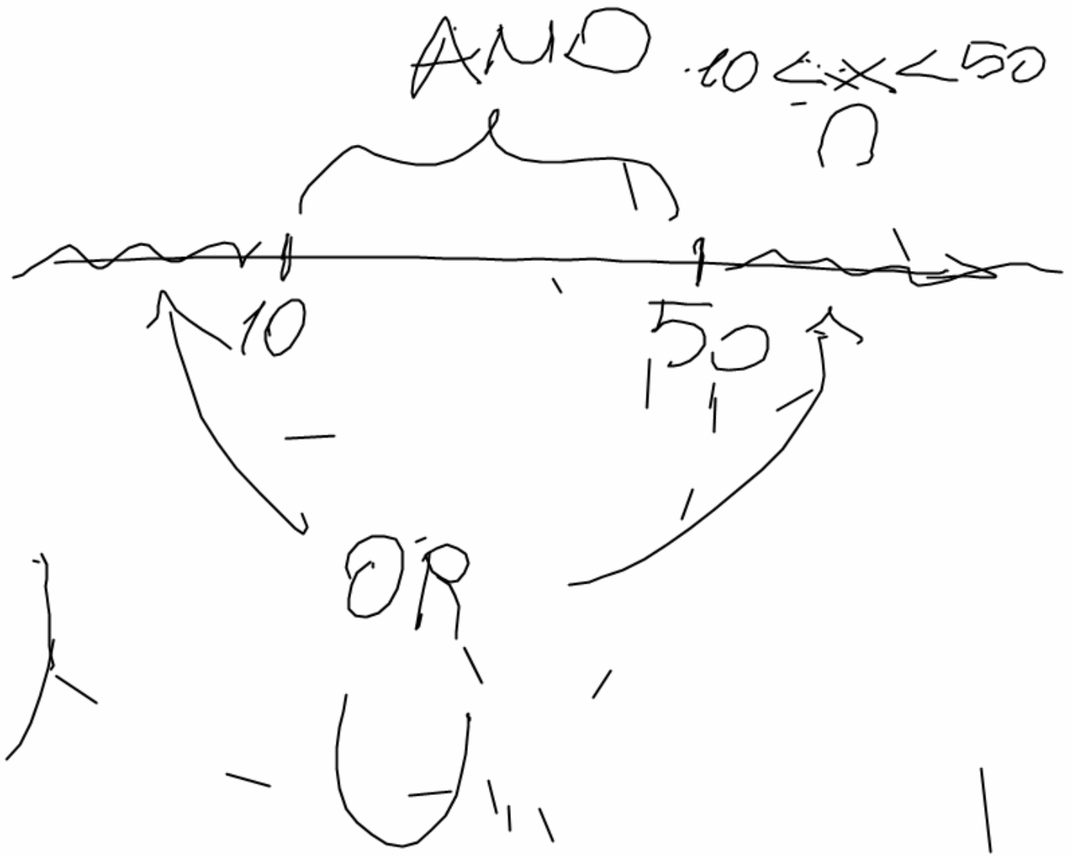
```
while(condizione){
  //codice
}
```

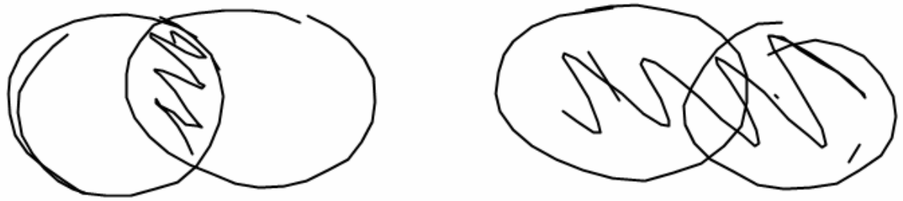
- num > 10 OPPURE num < 50
- PARI
- DISPARI

(num > 10 || num < 50)

- 10 < NUM < 50
- DISPARI
- DIV PER 4

(NUM > 10 AND NUM < 50)





DO WHILE

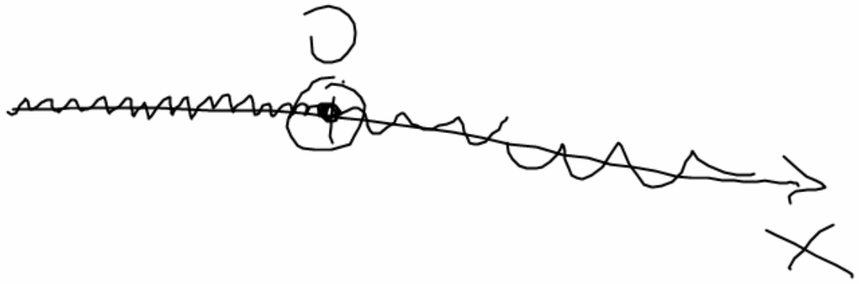
SE VOGLIO (a > 0)

DO {

...

} WHILE (a <= 0);

NOT



SE VOGLIO $10 < a < 50$

$a > 10$ && $a < 50$

NOT

OK


```
do {
  ... //INPUT
} while (a<=10 || a>=50);
```

FOR

```
FOR (INIZIAL. VAR ITERATORE; CONTROLLO VAR ITERATORE; INCREMENTO/DECREMENTO) {
    // CODICE
}
```

a , b

PRODOTTO = 0

→ a * b

i

i=0 ; i<=b ; i++

```
for(i=1 ; i<=b; i++ ){
    PRODOTTO = PRODOTTO + a ;
}
```

```
for(i=b, i>0 , i--) {
    :
    :
}
```

FATTORIALE

$$n! = n \cdot (n-1) \cdot (n-2) \cdot \ldots \cdot 1$$

$(n \geq 0)$ SE $n = 0 \rightarrow 0! = 1$

ES SE $n = 5 \rightarrow n! = 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1$

$= 120$

RISULTATO=1 i=1 n=?

```
INT RISULTATO=1;
INT i=1;
INT N;
DO{
   PRINTF("INSERISCI UNVALORE:");
   SCANF("%d",&n);
}WHILE(n<=0);
```

- WHILE (i<=n) {
  - RISULTATO=RISULTATO*i;
  - i=i+1;
  }
- DO {
  RISULTATO = RISULTATO * i;
  i++;
  } WHILE (i<=n);

- FOR (i = 1; i <= n; i++) {
  RISULTATO = RISULTATO * i;
  }

FOR (i = n; i > 0; i--) {
}

DIVISORI DI UN NUMERO

INPUT N (N>0) ——> OUTPUT: STAMPA DEI DIVISORI DI N

```
INT CNT;
INT n;
Do
{PRINTF("INSERISCI UN VALORE:");
 SCANF("%d", &n);
}WHILE(n<=0);
```

```
For(cnt=1;cnt<=n;cnt++){
    IF(n%cnt==0){
        PRINTF("%d", cnt);
    }
}
```