

$\Rightarrow$  10 hours == Focus 1 hour

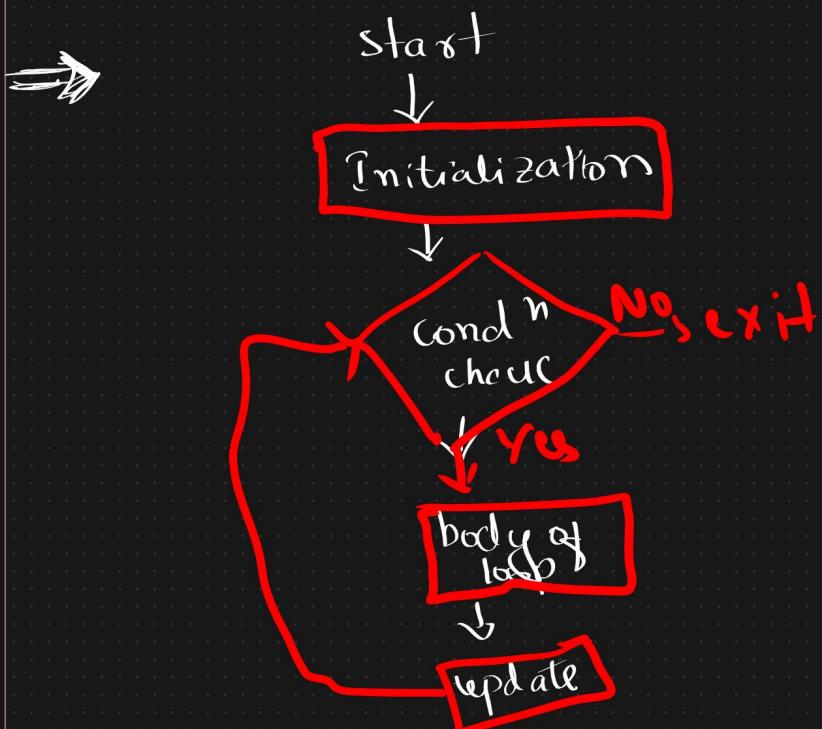
= Y variable }      loops  
datatype }      pattern programming  
Type casting }  
operators }  
conditionals }

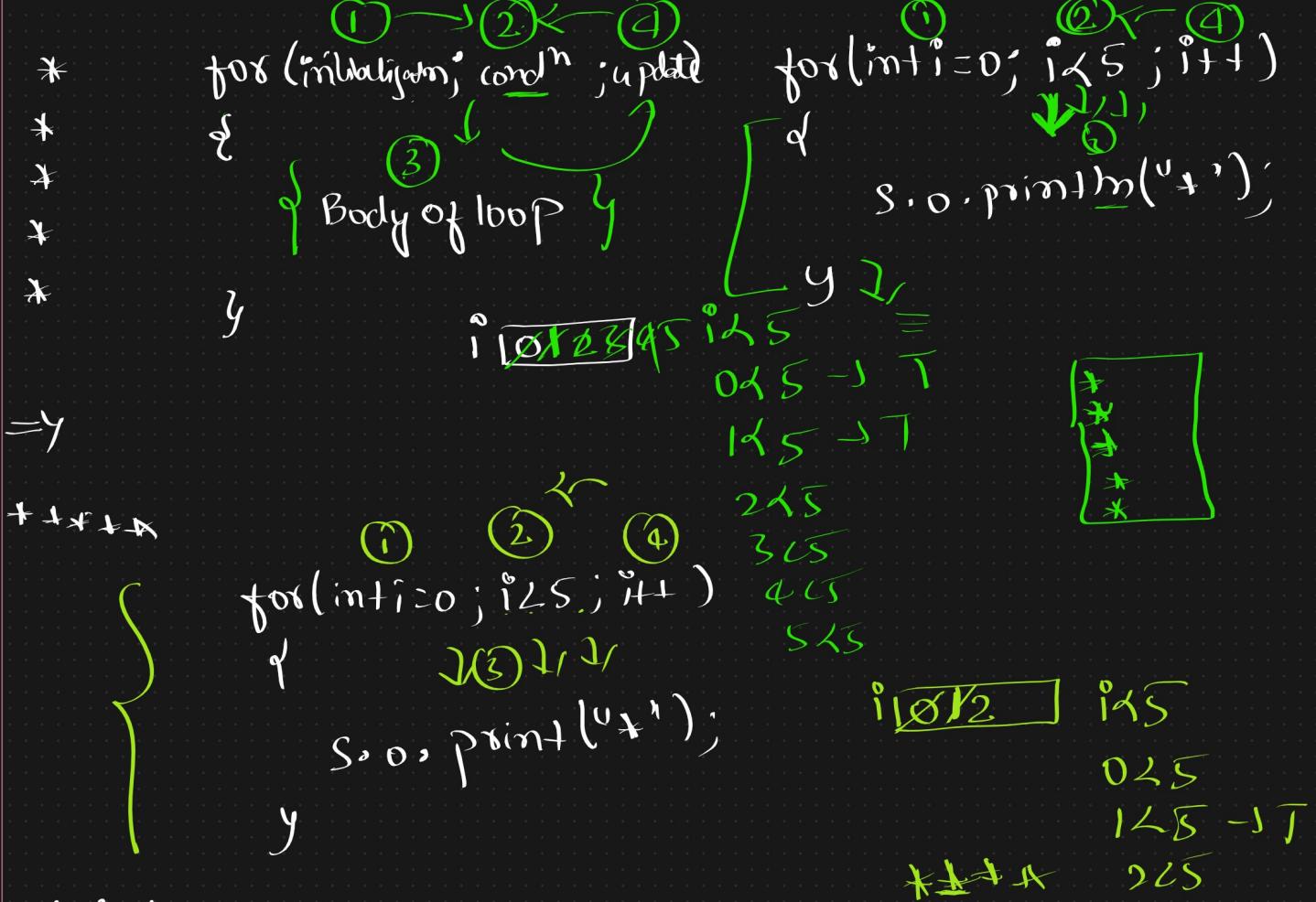
= Y loop = Y for loop }  
                  while }  
                  do-while }

S. Println(10);

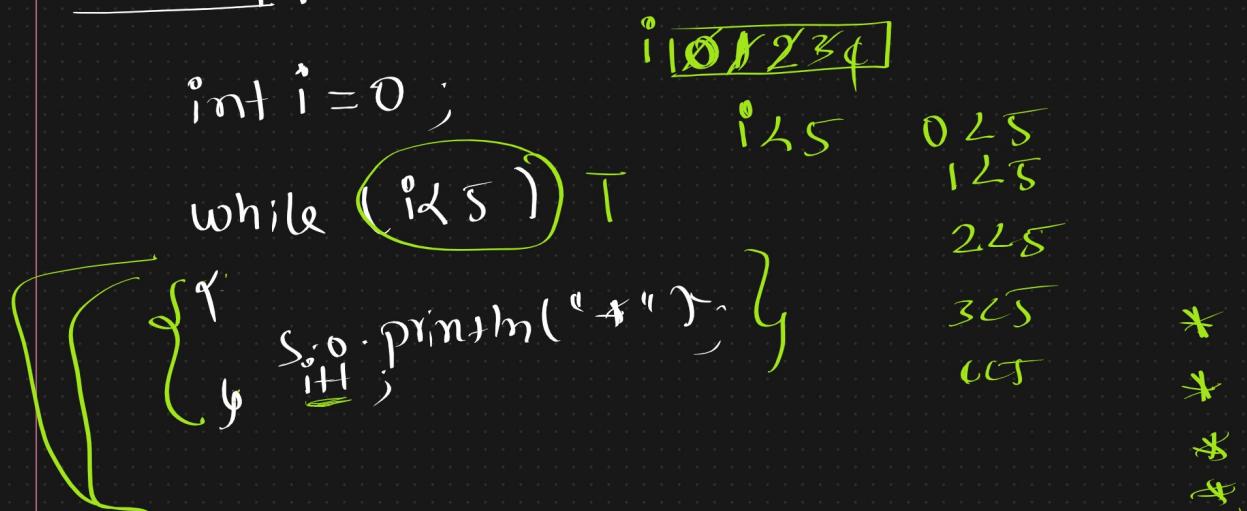
for

- \* S. o.p(\*);      + loops
- \* S. o.p(A);
- 
- 
- 
- 

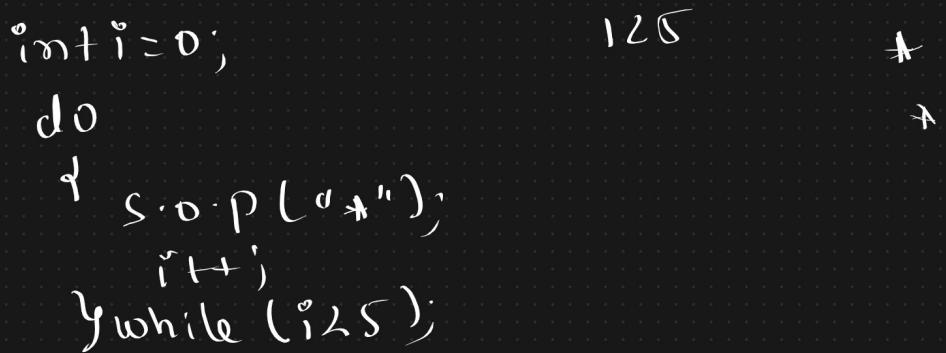




while loop :-

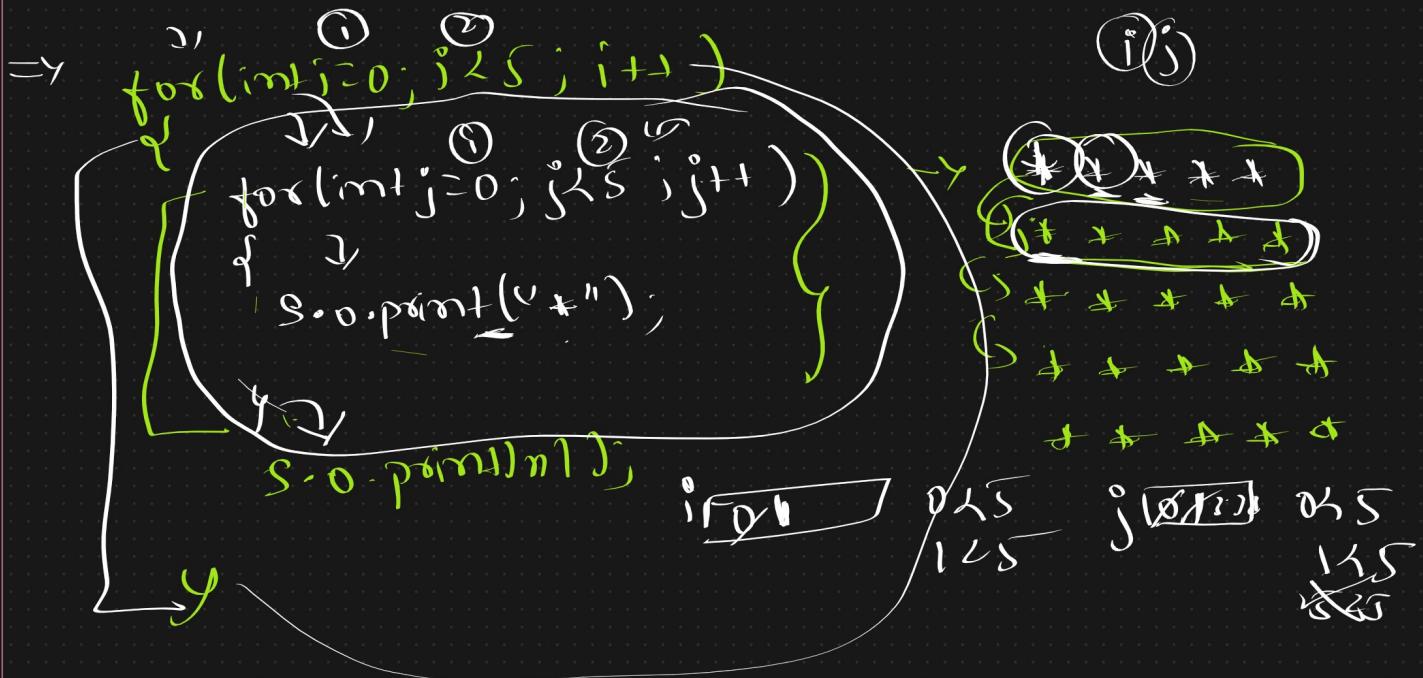


do-while:-



$\Rightarrow$  same task  $\rightarrow$  repetitive  $\rightarrow$  loops  $\Rightarrow$   $\sqcup$

for  $\rightarrow$   $\sqcup$   
while  $\rightarrow$   $\sqcup$   
do-while  $\rightarrow$   $\sqcup$

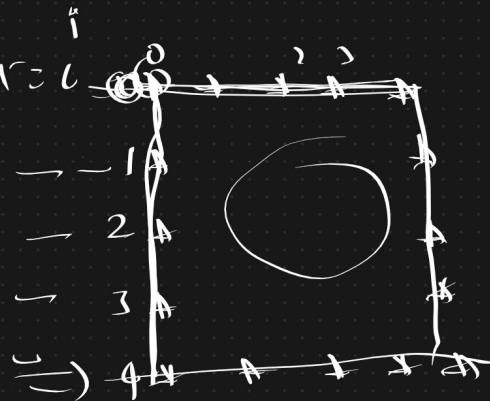


$\left\{ \begin{array}{l} \text{if } \rightarrow \text{else } \} = \sqcup \\ \text{operator } \& \text{ logical operators } \\ \quad || \quad \& \quad ! \end{array} \right.$

$\left\{ \begin{array}{l} i = 0 \& j = 0 \& \\ i = 4 \& j = 4 \end{array} \right.$

$\therefore \sqcup$

$i = 0 \text{ || } i = 4 \text{ || } j = 0 \text{ || } j = 4$   
 if  $(i = 0 \text{ || } i = 4 \text{ || } j = 0 \text{ || } j = 4)$   
 &  
 &  $S.O.\text{-}print(4)$ ,  
 else  
 &  $S.O.\text{-}print(0)$



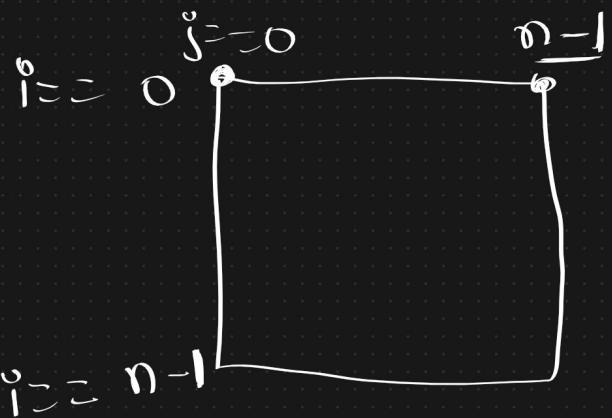
$$n = 5$$

$$n - 1 = 4$$

$$4 \left( 0 \rightarrow \frac{n-1}{2} \right)$$

$$\Downarrow$$

$$4$$



$$i = 0 \text{ || } i = n - 1 \text{ || } j = 0$$

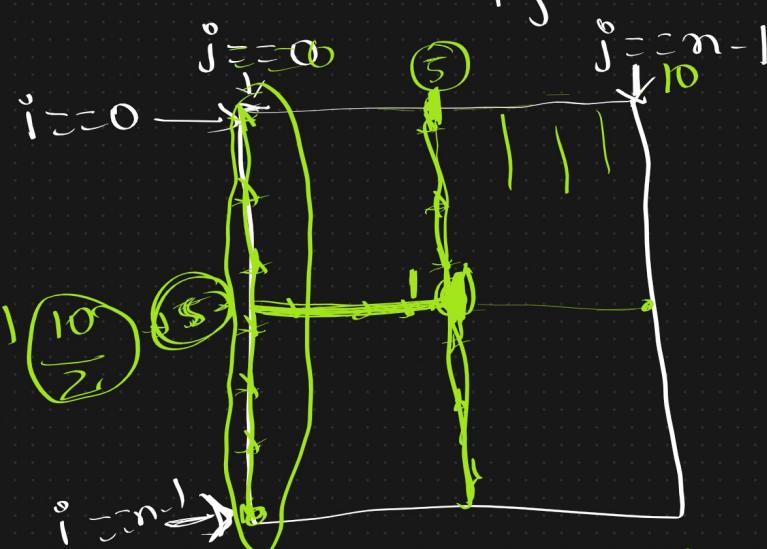
$$\text{|| } j = n - 1$$

$$n - 1 = 10$$

$$n = 10$$

$$n - 1 = 10$$

$$\frac{n-1}{2} = \frac{10}{2}$$



$$j = 0 \text{ || } j = \frac{n-1}{2} \text{ || }$$

$$i = \frac{n-1}{2} \text{ & } j = \frac{n-1}{2}$$

$j=0 \& i=0 \& n-1=0$   
 (0)

$j=0 \& i>0 \& i \leq n-1 = \frac{n-1}{2}$

$j=0 \& i>0 \& i \leq n-1 = \frac{n-1}{2}$   
 $i=n-1 \& j>0 \& j \leq n-1 = \frac{n-1}{2}$

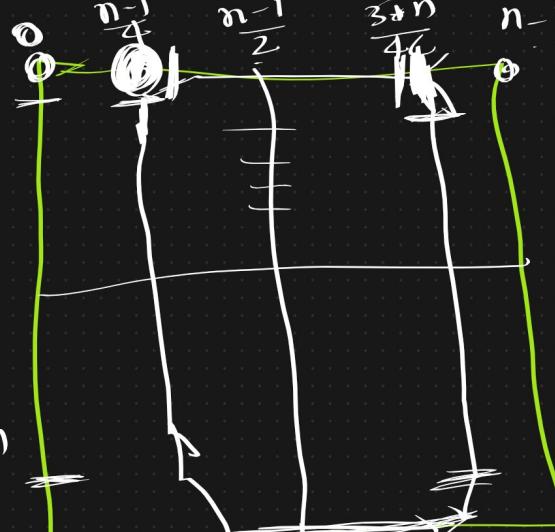
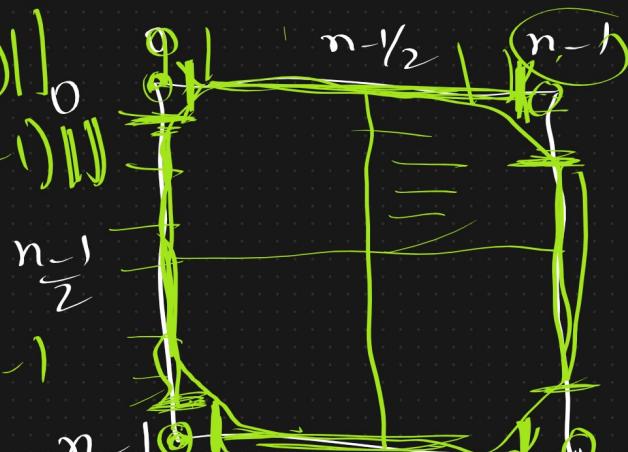
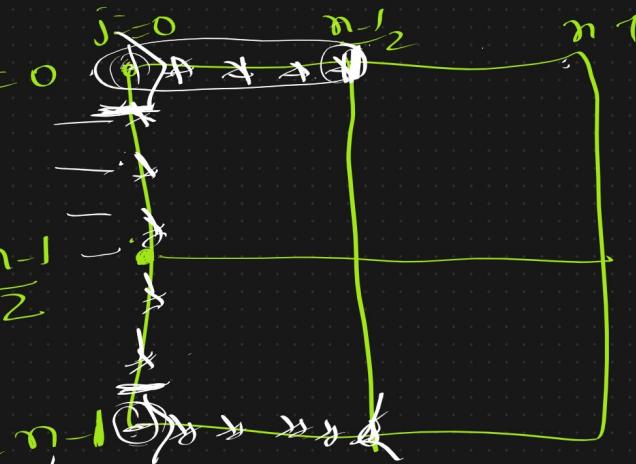
$(i=0 \& j>0 \& j \leq n-1) \& i \leq \frac{n-1}{2}$   
 $i=n-1 \& j>0 \& j \leq n-1) \& i \leq \frac{n-1}{2}$   
 $j=0 \& i>0 \& i \leq n-1 = \frac{n-1}{2}$   
 $j=n-1 \& i>0 \& i \leq n-1 = \frac{n-1}{2}$

$i=0$   
 $\Rightarrow 2\pi$

$\frac{n-1}{4} \rightarrow 2\pi$

$\frac{3n}{4} \rightarrow 2\pi$   
 $\frac{n-1}{2}$

$i=0 \& j \leq \frac{n-1}{4} \& i > j \leq \frac{3n}{4}$   
 $n-1$



$j=\frac{n-1}{4} \& i>0 \& i \leq n-1$   
 $j=\frac{3n}{4} \& i>0 \& i \leq n-1$

$\text{for}(i)$   
 $\quad \text{for}(j)$   
 $\quad \quad \text{if } s_{i,j}^{\text{sum}} > s_{i-1,j}^{\text{sum}}$   
 $\quad \quad \quad s_{i,j} = s_{i-1,j} + l_m(i)$   
 $\quad \quad \quad y$   
 $\quad \quad \quad \left\{ \begin{array}{l} f_{i,j}(i) \\ f_{i,j}(j) = s_{i,j}^{\text{sum}} + 1 - j \\ f_{i,j}(j) \rightarrow \dots \\ f_{i,j}(j) \end{array} \right.$   
 $\quad \quad \quad s_{i,j} = \underline{s_{i,j}^{\text{sum}}(n)}$   
 $\quad \quad \quad y$

$j=0 \quad ||$   
 $j=\frac{n-1}{2} \quad \text{for } i=0 \quad ||$   
 $j=\frac{n-1}{2} \quad \text{for } i=\frac{n-1}{2} \quad ||$   
 $i=0 \quad \text{for } j=\frac{n-1}{2} \quad ||$   
 $i=\frac{n-1}{2} \quad \text{for } j=\frac{n-1}{2} \quad ||$   
 $i=n-1 \quad \text{for } j=\frac{n-1}{2} \quad \Rightarrow$

$A \ B \ C \ D \ E \ F \ G \ H \ I \ J \ K \ L \ M \ N$   
 $O \ P \ Q \ R \ S \ T \ U \ V \ W \ X \ Y \ Z$

$\Rightarrow$  variables  $\Rightarrow$  ✓  
Datatypes  $\Rightarrow$  ✓  
Typecasting  $\Rightarrow$  ✓  
if - else ladder  $\Rightarrow$  ✓  
operators  $\Rightarrow$  ✓  
loops  $\Rightarrow$  ✓