

```
int N = 1234;

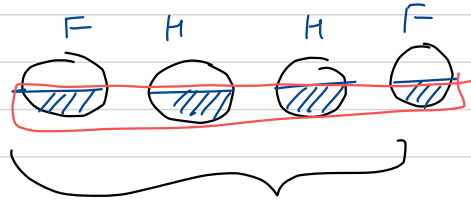
int ans = 0;

while(N>0){
    int rem = N%10;
    ans = ans*10 + rem;
    N = N/10;
}
```

WarmUp Puzzle

Fever Headache

✱✱ "Break & Make"



2 Fever + 2 Headache.

$$\frac{1}{2}F + \frac{1}{2}H + \frac{1}{2}H + \frac{1}{2}F = \boxed{F + H}$$

[Morning Dose 1 Fever, 1 Headache
[Evening Dose 1 Fever, 1 Headache

Loops

→ for loop
→ while loop] same

Entry Controlled loops



while $i \leq 10$ {
 ≡ work
}

3

{++ ,
java

$x = 5$
do {
 print(x) 1
 $x = x - 1$ 0
}
while ($x > 0$); NO

→

→ do-while



Exit controlled Loop

$x = -5$;
do {
 print("Hello");
}
while ($x > 0$);

3

atleast
onces

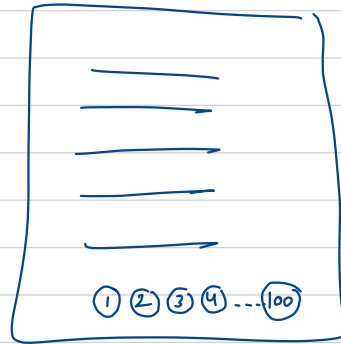
4 3 2 1 0
5, 4, 3, 2, 1, ↑ stop

✓

```

money = 0;
do {
    Shopping()           [ credit card ]
}
while (money > 0),

```



```

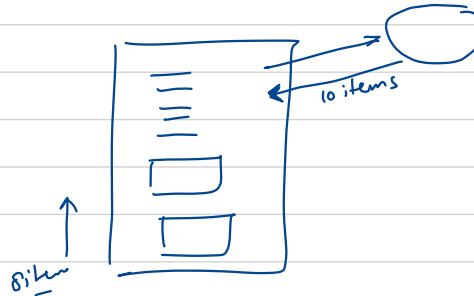
do {
    display Page();

```

```

}
while ( _ );

```



(a)

Take Input numbers until you get a -ve no

10
5
8
6
-5 stop

```
do {  
    num = sc.nextInt();  
} while (num > 0);
```

Read first

\Rightarrow num = sc.nextInt();

while (num >= 0) { \rightarrow 10, 11, 12, 13, (-5)

num = sc.nextInt();

3

(10) (11) (12) (13) (-5)
↑

\Rightarrow num = sc.nextInt();

```
for ( ; num >= 0 ; ) {  
    num = sc.nextInt();  
}
```

3

```
cal = 0
while ( cal <= 100 ) {
    =
    =
    if ( gf calls up ) {
        break; → stop in between
    }
    cal = cal + 1;
}
↓
sout ( go for a dinner ),
```

continue;

1, 2, 3, 4, 5, 6, 7, 9, 10

↑
Skip 8

ii $i = 1$
while ($i \leq 10$) {
 print(i)
 ⇒ if ($i \% 7 == 0$) {
 $i = i + 2$;
 continue;
 }
 $i = i + 1$;
}

if-else

skip

Q

Print all primes in the range A to B

A = 10

B = 25

11, 13, 17, 19, 23

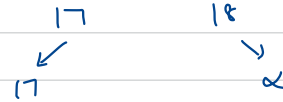
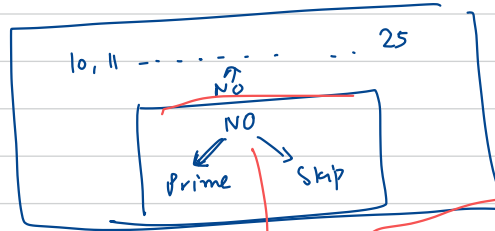
output

5 Mins

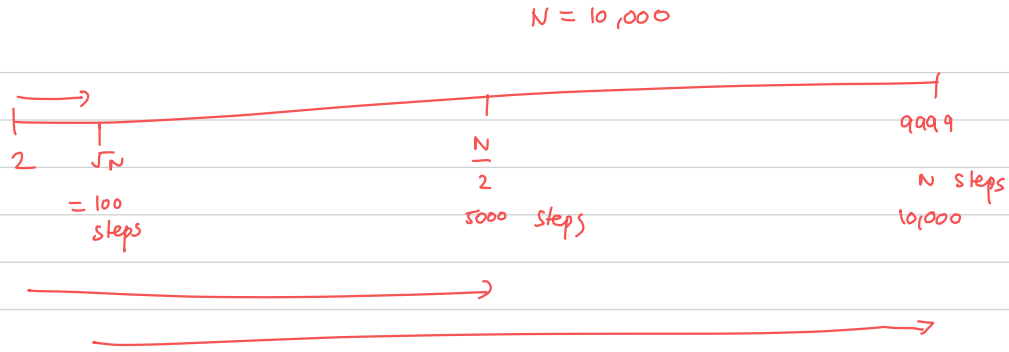
1s $\rightarrow 10^6$ times

A = 2

\rightarrow check for every No in A to B if it is Prime No



There are 0 divisors in the range 2 to 17 NO



<https://github.com/prateek27/java-jan-22>
Git Repository



Coffee
Break
10 50 →

128
 for (int $i=1$, $i \leq 100$, $i = i * 2$) {
 $i = i * 2$

So times

work

}

128

✓ $i=1$ $1 \leq 100$

✓ 2 $2 \leq 100$

✓ 4 $4 \leq 100$

✓ 8 $8 \leq 100$

✓ 16 $16 \leq 100$

✓ 32 $32 \leq 100$

✓ 64 $64 \leq 100$

128 $128 \not\leq 100$

Stop

128

if (1) - Monday
 elseif (2) - Tue
 else if (3) - wed
 else if (4) -
 else if (5) -
 : (6) -
 else (7) - Sunday

if (day == 1)
 print "Monday"

Switch (num) {

Case 1: print ("Monday"), break;
 Case 2: _____ break;
 Case 3: _____ :
 Case 4: _____

Case 7:
 default: print ("Invalid Input")

}

N

$N = 1234$

$$1+2+3+4 = 10$$

1234
 $N \% 10$

1234
 $\boxed{4}$
 10

1234
 \downarrow
 123
 \downarrow
 12
 \downarrow
 1
 \downarrow
 0

4

last-digit

\downarrow while ($N > 0$) {
 $rem = N \% 10$
 $sum = sum + rem;$
 $N = N / 10$
}

$sum = 0$

$+$
 4
 $+$
 3
 $+$
 2
 $+$
 1

Print

1 2 3 4
↑

```
while (NO > 0)
{
    print (NO % 10)
    N = N / 10
}
```

4321

N = 1 2 3

100
+20 ✓
+3

Ans
N = 3 2 1
= 300
+20 ✓
+1

3 × 10 × 10
+ 2 × 10
+ 1 × 10⁰
Ans = 0

N = 123

↑
10

1 23

rem = 3

N = N / 10

rem = 2

N = N / 10

rem = 1

Ans = (Ans × 10 + rem)

= 0 × 10 + 3

Ans = 3

= 3 × 10 + 2

= 32

32 × 10 + 1

= 320 + 1

= 321