While loop.

Hello

System.out.print("Hello")

Hello System.out.print("Hello")
Hello System.out.print("Hello")
Hello System.out.print("Hello")
Hello System.out.print("Hello")
Hello System.out.print("Hello")

```
int count = 0
while (count < 5) {
    System.out.print("Hello")
    count++
}
```

count = count + 1

count = 0 ~~1 2 3 4 5~~

Hello
Hello
Hello
Hello
Hello

int i = 1

i = i + 1

i = i + 2

Q For N, Print 1 2 3 4 ---- N-1 N

i = 1 2 3 4 5

int i = 1

1 2 3 4

```
while ( i <= N ) {
    print (i)
    i++
}
```

Q Print N N-1 N-2 ---- 3 2 1

N = 5 5 4 3 2 1

```
int i = N

while (i >= 1) {

    print (i)
    i--

}
```

i > 0

Q Print all odd values from 1 to N

5 → 1 3 5

10 → 1 3 5 7 9

```
int i = 1
while (i <= N) {
    print(i)
    i = i + 2
}
```

i = ~~1 3 5 7~~ 9 11

1 3 5 7 9

Q Print multiples of 4 till N

18 → 4 8 12 16

```
int i=4
while (i<=N){
    print(i)
    i = i+4
}
```

Quiz

```
i = 1
while (i ≤ 10) {
    i = i * i
    print (i)
    i ++
}
```

i = 1 2 4 5 ~~25~~ 26

1 4 25

Quiz

```
i = 0
while (i ≤ 10) {
    print (i)
    i = i * i
}
```

i = 0

0 0 0

infinite loop

Q Print all perfect squares till N

N=30 1 4 9 16 25

```
int i = 1
while ( i*i ≤ N ) {
    print (i*i)
    i++
}
```

Q For N, print all digits

N= 6381 1 8 3 6

- How to print units digit → N % 10 1
- 6381 / 10 = 638 → N % 10 8
- 638 / 10 = 63 N % 10 3
- 63 / 10 = 6 N % 10 6
- 6 / 10 = 0

```
while (N > 0) {
    print (N % 10)
    N = N / 10
}
```

Q sum of digits for N ?

```
int sum = 0
while (N > 0) {
    sum = sum + N % 10
    N = N / 10
}
print (sum)
```

1034 —(×10)→ 10340 —(+8)→ 10348

How to add a digit d to the end of number r

$$10 \times r + d$$

Q Reverse the number

N = 6531 output = 1356

	ans
0	1356

1) digit = N%10

2) ans = ans * 10 + digit

3) N = N/10

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

N	ans
~~6381~~	~~0~~ 1836
~~638~~	
~~63~~ ~~6~~ 0	

6 3 8 1

1) Reverse the number 1 8 3 6

Print digits now.