

Running Sum for loop

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int n = scn.nextInt();  
    int sum = 0;  
    int i = 0;  
    while ( i < n ) {  
        int val = scn.nextInt();  
  
        sum = sum + val;  
        System.out.print(sum + " ");  
  
        i++;  
    }  
}
```

int val =

n = 5

sum = 0

i = 0

val = 3, sum = 3

i = 1, val = 2, sum = 5

i = 2, val = -2, sum = 3

i = 3, val = 4, sum = 7

i = 4, val = 5, sum = 12 o/p

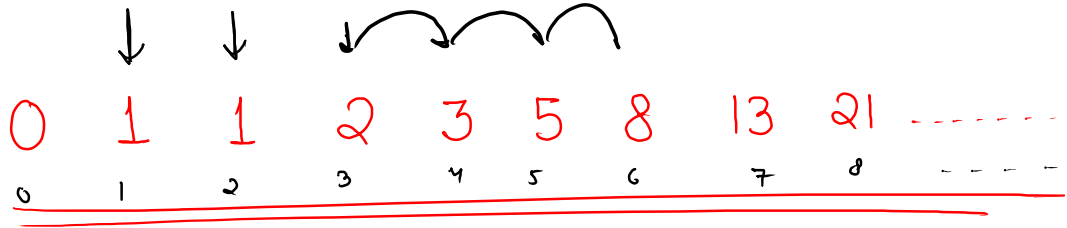
i = 5

3
7
12
17
5

⇒ Fibonacci series

(every no. will be
sum of prev. 2 no.)

series



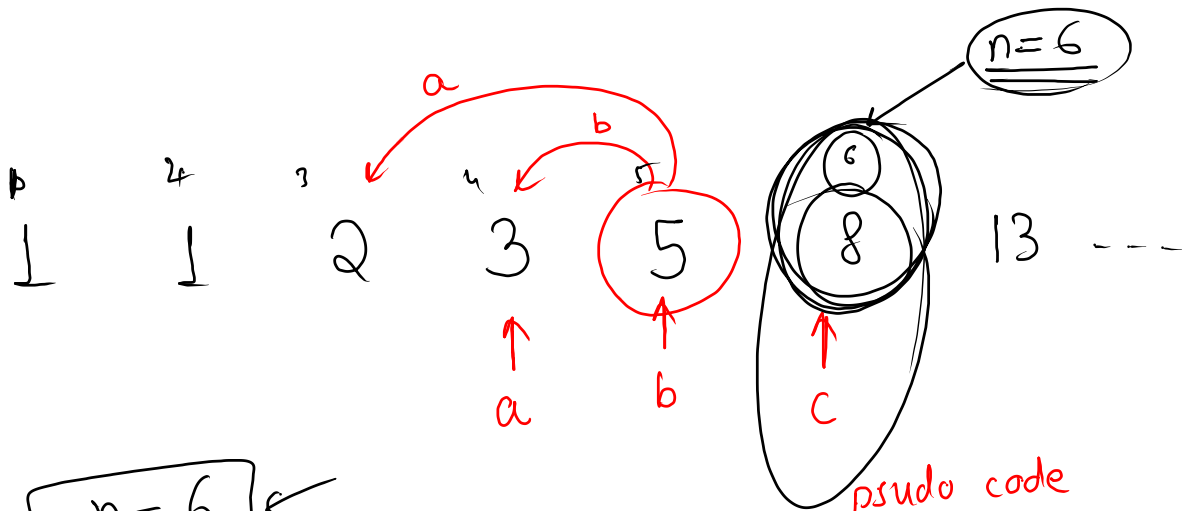
i/p n = 6 , ans = 8

code

```
int i = 3;
while (i <= n) {
    int c = a + b;
    a = b;
    b = c;
    i++;
}
```

Annotations:

- prev. (points to `a`)
- prev. to prev (points to `b`)
- i/p = n
- // times (n-2)



$n=6$

4

$n-2$

pseudo code

$a=1, b=1$

→ $\left[\begin{array}{l} \underline{c = a + b; (2)3,} \\ a = b; \\ b = c; \end{array} \right] \underline{\underline{M.gmp}}$

Print 0 to n

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int n = scn.nextInt();  
  
    int i = 0;  
    while ( i <= n ) {  
        System.out.println(i);  
        i++;  
    }  
}
```

Printing 5 to N(While Loop)

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int n = scn.nextInt();  
  
    int i = 5;  
    while ( i <= n ) {  
        System.out.println(i);  
        i++;  
    }  
}
```

Print 4,13,22,31.....n

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int n = scn.nextInt();  
  
    int i = 4;  
    while ( i <= n ) {  
        System.out.println(i);  
        i += 9;  
    }  
}
```

Print n, n-k, n-2k, n-3k.... till l

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int n = scn.nextInt();  
    int k = scn.nextInt();  
    int l = scn.nextInt();  
  
    int i = n;  
    while ( i >= l ) {  
        System.out.println(i);  
        i -= k;  
    }  
}
```

Running sum series

series 1 2 5 -2 0 4

RSS 1 3 8 6 6 10

Running product series

RPS 1 2 10 -20 0 0

series 1 2 5 -2 0 4