2023 - FEBRUARY
S M T W T
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28

20
MONDAY • MARCH

6th | While Loops | 3 min

Increment & Decrement

Increasing some value.

Decreasing some value.

Let $x = 10;$

$x = 20;$

$\boxed{x = x + 10}$ Increment

Let $x = 10;$

$\boxed{x = x - 10}$ → Decrement

$(--x, x--)$

Decrementing value of x by 1.

$(++x, x++)$

* Increasing the value of x by 1.

$x++$ (Post Increment)

$++x$ (Pre Increment)

$(x--)$ Post Decrement

$(--x)$ Pre Decrement

Post Increment (X++)

↳ I will assign value first and then Increment it.

```
Let x = 10;
Let y;

y = x++;

console.log(y); 10;
console.log(X); 11;
```

→ ① Assign the new value to y

② Incrementing the value of x.

Pre Increment (++x)

↳ I will Increase the value first and then assign it.

```
Let x = 20;
y = ++x;
   ↳
console.log(y); 21
console.log(x); 21
```

(081-284) WK 12

2023 · FEBRUARY
S M T W T F S
            1 2 3 4
5 6 7 8 9 10
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28

22
WEDNESDAY • MARCH

(1.30hr)   16/05/22

Post Decrement (+--)

→ I will assign the value first and decrement it.

Let $x = 10$;
$y = +--$;

$y = 10$;
$x = 9$;

Pre decrement (--+)

→ I will increase decrease the value first and then assign it.

Let $x = 20$;
Let $y = --x$;

$y = 19$;
$x = 19$;

---

while Loops   3 components of loops

[know]   —① starting point

—② Ending point (where to stop)

—③ Inc ↑ / dec ↓ (No. of Jumps at a time)

[syntax]

① start;   ②
while (Ending con) {
// code (that I want to repeat)
② Inc ↑ / dec ↓
}

APRIL · 2023
M T W T F S S
            1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30

EX1 :-

```
Let Jump = 0;
while (Jump <= 100) {
    console.log ("Jump", Jump)
    jump++
}
```

Jump 0 →	Jump <= 100 →	console.log("Jump", Jump):	Jump++
Jump 0 →	0 <= 100 (T) →	Jump 0	1
Jump 1 →	1 <= 100 (T) →	Jump 1	2
:	:	:	
Jump 101 →	101 <= 100 (F) →		

(Go out of the loop)
    stop the loop.

Ex 2 :- Print "Hello world " 10 times .

=>

```
Let x = 1;
while (x <= 10) {
    console.log ("Hello world!");
    x++;
}
```

(083-282) WK 12

2023 - FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

24
FRIDAY • MARCH

EX 3!- print number 1 to 10.

8 →
```
Let x̶ =1;
w̶h̶i̶l̶e̶ (x̶ <=10'
```

```
Let i = 1;
while < i <=10) {
    console·log( i );
    i++; / i = i+1;
}
```

——— x ———

Break (to cut something / to stop the process

Ex :- print no. from 1 to 10;

```
Let i =1;
while (i <=10) {
    console·log( i );
```

```
Let i=1;
while (i <=10) {
    if (i ==5) {
        break;
    }
    console·log( i );
    i++;
}
```

output

1

2

3

4.

APRIL 2023

output
1
2
3
4
5
6
7
8
9
10.

```
let i = 20;        let i = 1;
                   while ( i <= 20) {
              console. log ( i );
              if ( i == 10 ) {
                  break;
              }
              i + +;
          }
```

※ | Continue |
   ↳ skip and go back to the condition

Ex.
```
          let i = 1;
          while ( i <= 10) {
          if ( i == 5 ) {
          continue; // skip everything and go back
                             to the cond".
          }
          console. log ( i )
              ( i + + )
          }
```
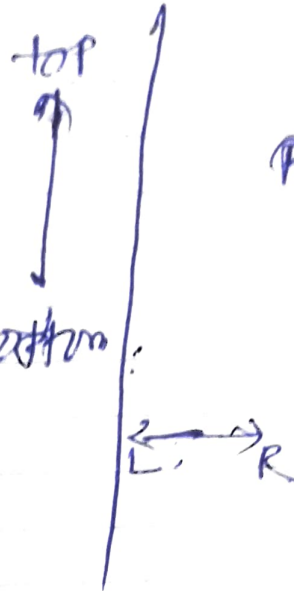
output
1
2
3
4
5
     (infinity)

27

✳ For Loops ✳   (2.23hrs)

while loop.   top

Initialization
while (condition) {
   // code ;
  incr / Decl   Bottom.

seq. of op^n
1 2 3 4 2 3 4 2 3 4.
   till cond^n is true.

L ⟷ R

For loop.

For (initialization; cond ; incr/decr)
   {
    // code;
   }

1 2 3 4 2 3 4 2 3 4.
   till cond^n is
   true.

Ex :-   print 'Hello world !"   5 time

output
"Helloworld

✳ while loop
```
Let i = 1;
while ( i <= 5) {
    console.log( "Helloworld!");
    i++;
}
```

✳ For loop
```
for ( let i=1; i<=5; i++) {
    console.log ("Helloworld!");
}
```

APRIL - 2023

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
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17	18	19	20	21	22	23
24			28	29	30	

WK 13 (087-278)

MARCH • TUESDAY

28

NOTE :-
EX 2 :- print 1 to 10 using Forloop.

① Initialization
② condition
③ code
④ Increment

$$\text{let} \\ for(i=1; (i<=10; i++) \{ \\ \quad console.log(i); \\ \}$$

Initialization	condition	code console.log(i)	i++
$i=1$	$i <= 10$		
$i=1$	$1 <= 10$ (T)	1	$i = i+1$ $= 2$ $i=3$
$i=2$	$2 <= 10$ (T)	2	$i=4$
$i=3$	$3 <= 10$ (T)	3	
$\vdots$	$\vdots$	$\vdots$	$\vdots$
$i=11$	$11 <= 10$ (F)		

at this cond^n
we are out of
forloop.

29

WEDNESDAY • MARCH

Ex: print 1 to 5 in same line

(Horizontal Manner)

=>

~~let i =~~

~~for (-q=1; i£-5; +n+}~~
~~console.log (i);~~

~~try=b~~ Let bag = " ";
concatenation concept ← for (Let i=1; i<=5; i++){
         bag = bag + i;
        }
        console.log(bag);

run

i=1	i<=5	bag = bag + i	i++
i=1	1<=5 (T)	bag = "" + 1 = "1"	i=2
i=2	2<=5 (T)	bag = "1" + 2 = "12"	i=3
i=3	3<=5 (T)	bag = "12" + 3 =	i=4
i=4	4<=5 (T)	bag = "123" + 4 = "1234"	i=5
i=5	5<=5 (T)	bag = "1234" + 5 = "12345"	
i=6	6<=5 (F)		

* when I want to add - take variable & initialize with 0

APRIL - 2023

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
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17	18	19	20	21	22	23
24	25	26	27	28	29	30

WK 13 (089-276)

MARCH • THURSDAY

30

* If I a want to print in horizontal manner
(concatenation)
↳ bagl jhula," " "

Ex