

```
TS enumconcept.ts •
TS enumconcept.ts > Browser > Chrome
1 //Enum: Enumeartion: data types : hold the set of constants
2 //numeric
3 //string
4 //heterogenous
5
6 //numeric:
```

Numeric values are by default assigned starting from zero to all the enum values.  
Example chrome has value zero, ff has one and so on.

Js doesnt thave enum so creates function.

Print complete enum

```
... TS enum1.ts X
enum1.ts > ...
1 //numeric enum.
2
3 //Numeric values are by default assigned starting from zero to all the enum values.
4
5
6 enum browser{
7     chrome,
8     safari,
9     firefox,
10    edge
11 }
```

```
11 }
12
13 console.log(browser.chrome) //0
14 console.log(browser.safari) //1
15 console.log(browser.edge) //3
16 console.log(browser.firefox) //2
17
```


```
17
18 console.log(browser)
19 // {
20 //   '0': 'chrome',
21 //   '1': 'safari',
22 //   '2': 'firefox',
23 //   '3': 'edge',
24 //   chrome: 0,
25 //   safari: 1,
26 //   firefox: 2,
27 //   edge: 3
28 // }
```

We can override the default values-  
Then all values will be in the order mentioned.

```
enum2.ts X
enum2.ts > ...
1 //override default values.
2 //all values will then be in order of how its defined.
3
4
5 enum browser{
6   chrome=987,
7   safari,
8   firefox,
9   edge
10 }
```

```
• 10    }  
    11  
    12    console.log(browser.chrome) //987  
    13    console.log(browser.safari) //988  
    14    console.log(browser.edge) //990  
    15    console.log(browser.firefox) //989  
    16  
    17    console.log(browser)
```


```
17    console.log(browser)  
18  
19    // {  
20    //    '987': 'chrome',  
21    //    '988': 'safari',  
22    //    '989': 'firefox',  
23    //    '990': 'edge',  
24    //    chrome: 987,  
25    //    safari: 988,  
26    //    firefox: 989,  
27    //    edge: 990  
28    // }  
29
```

```
...  TS enum3.ts X
    TS enum3.ts > ...
1    //what if we give our value randomly in between.
2    //we also tried with negative values.
3    
4
5    enum browser{
6        chrome,
7        safari=-45.34534,
8        firefox,
9        edge
10   }
```

```
10   }
11
12   console.log(browser.chrome) //0
13   console.log(browser.safari) //-45.34534
14   console.log(browser.edge) //-43.34534
15   console.log(browser.firefox) //-44.34534
16
17   console.log(browser)
18
```

```
18
19 // {
20 //   '0': 'chrome',
21 //   chrome: 0,
22 //   safari: -45.34534,
23 //   '-45.34534': 'safari',
24 //   firefox: -44.34534,
25 //   '-44.34534': 'firefox',
26 //   edge: -43.34534,
27 //   '-43.34534': 'edge'
28 // }
29
```

You can give any random value-

```
...  TS enum4.ts X
    TS enum4.ts > ...
    1
    2 
    3 //we can give values however we like.
    4
    5
    6 enum browser{
    7     chrome=89,
    8     safari=-45,
    9     firefox,
   10     edge
   11 }
   12
```

```
11 }  
12  
13 console.log(browser.chrome) //89  
14 console.log(browser.safari) //-45  
15 console.log(browser.edge) //-43  
16 console.log(browser.firefox) //-44  
17  
18 console.log(browser)  
19  
20 // f
```

```
19  
20 ∨ // {  
21 //   '89': 'chrome',  
22 //   chrome: 89,  
23 //   safari: -45,  
24 //   '-45': 'safari',  
25 //   firefox: -44,  
26 //   '-44': 'firefox',  
27 //   edge: -43,  
28 //   '-43': 'edge'  
29 // }  
30
```

```
enum5.ts 8  enum5.ts 4 X
enum5.ts > browser
1 //give different value types and check.
2 //only boolean not allowed.
3
4
5 enum browser {
6     chrome = 89,
7     safari = -45,
8     firefox = 'tiger',
9     // edge=false
10    //compile error.
11    // //Type 'boolean' is not assignable to type 'number' as required for
12    // computed enum member values.ts(18033)
13    edge=-32434.32434
14 }
15
```

```
14 }
15
16 console.log(browser.chrome) //89
17 console.log(browser.safari) //-45
18 console.log(browser.edge) //-32434.32434
19 console.log(browser.firefox) //tiger
20
21 console.log(browser)
22
```

```

22
23 // {
24 //   '89': 'chrome',
25 //   chrome: 89,
26 //   safari: -45,
27 //   '-45': 'safari',
28 //   firefox: 'tiger',
29 //   edge: -32434.32434,
30 //   '-32434.32434': 'edge'
31 // }
32

```

We can use functions and pass value also-

But we get error for ones not initialised.

```

... enum6.ts 4 X
enum6.ts > ...
1 //we can pass functions as values.
2 //but if its the first one then the lower ones throw compile error.
3 
4 enum browser {
5   chrome = getVersion('chrome')
6   safari,
7   firefox,
8   edge
9 }
10 //compile error
11 // An enum member name must be followed by a ',', '=', or '}'.ts(1357)
12

```



```
12
13
14 function getVersion(browsername:string):number{
15     if(browsername==="chrome"){
16         return 123
17     }
18     return -1
19 }
20
21 console.log(browser.chrome) //89
22 console.log(browser.safari) //-45
23 console.log(browser.edge) //-32434.32434
24 console.log(browser.firefox) //tiger
25
26 console.log(browser)
```

Solution-

Move all non initialiser at top.

```
...  enum7.ts  X
enum7.ts > ...
1  //we can pass functions as values.
2  //but if its the first one then the lower ones throw compile error.
3  //solution all initialisers to bottom and non initialised to top.
4
5  enum browser {
6      safari,
7      firefox,
8      edge,
9      chrome = getVersion('chrome')
10 }
11
12
13 function getVersion(browsername:string):number{
14     if(browsername==="chrome"){
15         return 123
16     }
17     return -1
18 }
```

```
18 }
19
20 console.log(browser.chrome) //123
21 console.log(browser.safari) //0
22 console.log(browser.edge) //2
23 console.log(browser.firefox) //1
24
25 console.log(browser)
26
```

```

25 console.log(browser)
26
27 // {
28 // ... '0': 'safari',
29 // ... '1': 'firefox',
30 // ... '2': 'edge',
31 // ... '123': 'chrome',
32 // ... safari: 0,
33 // ... firefox: 1,
34 // ... edge: 2,
35 // ... chrome: 123
36 // }

```

If you dont want to move to top then assign value to ff-

Run

```

... enum8.ts X
enum8.ts > ...
1 //if you dont want to move from top, then assign value to second one.
2
3 enum browser {
4     chrome = getVersion('chrome'),
5     safari=1,
6     firefox,
7     edge,
8
9 }
10
11

```

```
10
11
12 function getVersion(browsername:string):number{
13     if(browsername==="chrome"){
14         return 123
15     }
16     return -1
17 }
18
```

```
18
19 console.log(browser.chrome) //123
20 console.log(browser.safari) //1
21 console.log(browser.edge) //3
22 console.log(browser.firefox) //2
23
24 console.log(browser)
25
```

```
24 console.log(browser)
25
26 // {
27 //   '1': 'safari',
28 //   '2': 'firefox',
29 //   '3': 'edge',
30 //   '123': 'chrome',
31 //   chrome: 123,
32 //   safari: 1,
33 //   firefox: 2,
34 //   edge: 3
35 // }
```

Another way

```
4 //numeric:
5
6 //numeric:
7 enum Browser{
8     Firefox,
9     Safari,
10    Edge = getVersion('chrome')*5,
11    Chrome = getVersion('chrome'),
12 }
13
```

```
19 }
20
21
22 console.log(Browser.Chrome);
23 console.log(Browser.Edge);
24
```

```
... enum9.ts 2 X
enum9.ts > ...
1 //see another way to use with functions only.
2 //we cannot have non initialiser at bottom with this also.
3 💡
4 enum browser {
5     chrome = getVersion('chrome'),
6     safari= getVersion('chrome')+10,
7     firefox,
8     edge,
9     // compile error
10    // Enum member must have initializer.ts(1061)
11
12 }
13
```

```
12 }
13
14
15 function getVersion(browsername:string):number{
16     if(browsername==="chrome"){
17         return 123
18     }
19     return -1
20 }
21
```

```
21
22 console.log(browser.chrome) //123
23 console.log(browser.safari) //1
24 console.log(browser.edge) //3
25 console.log(browser.firefox) //2
26
27 console.log(browser)
```

```
... TS enum10.ts X
TS enum10.ts > ...
1 //see another way to use with functions only.
2
3
4 enum browser {
5     firefox,
6     edge,
7     chrome = getVersion('chrome'),
8     safari= getVersion('chrome')+10,
9
10 }
11
```

```
10 }
11
12
13 function getVersion(browsername:string):number{
14     if(browsername==="chrome"){
15         return 123
16     }
17     return -1
18 }
19
```

```
19
20 console.log(browser.chrome) //123
21 console.log(browser.safari) //133
22 console.log(browser.edge) //1
23 console.log(browser.firefox) //0
24
25 console.log(browser)
26
```

```
26
27 // {
28 //   '0': 'firefox',
29 //   '1': 'edge',
30 //   '123': 'chrome',
31 //   '133': 'safari',
32 //   firefox: 0,
33 //   edge: 1,
34 //   chrome: 123,
35 //   safari: 133
36 // }
```

```
... enum11.ts X
enum11.ts > ...
1 //string enums
2
3 enum environment{
4     dev="d1",
5     qa='qa1',
6     stage='s1',
7     prod='p1'
8 }
9
10 console.log(environment) //{ dev: 'd1', qa: 'qa1', stage: 's1', prod: 'p1' }
11 console.log(environment.dev) //d1
```

We can use [] for accessing also -

```
... enum12.ts 1 X
enum12.ts > ...
1 //string enums
2
3 //another way to access using brackets
4 //quotes mandatory else compile error.
5
6 enum environment{
7     dev="d1",
8     qa='qa1',
9     stage='s1',
10    prod='p1'
11 }
12
13 console.log(environment) //{ dev: 'd1', qa: 'qa1', stage: 's1', prod: 'p1' }
14 console.log(environment[dev]) //compile error
15 //Cannot find name 'dev'.ts(2304)
```



```
... enum12.ts 1 enum13.ts X
enum13.ts > ...
1 //string enums
2
3 //brackets with quotes.
4
5 enum environment{
6     dev1="d1",
7     qa1='qa1',
8     stage1='s1',
9     prod1='p1'
10 }
11
12 console.log(environment) //{ dev: 'd1', qa: 'qa1', stage: 's1', prod: 'p1' }
13 console.log(environment['dev1']) //d1
14
```

```
... enum14.ts X
enum14.ts > ...
1 //hetergenous enums.
2
3 enum status1{
4     active="d1",
5     deactivate=-3434.32434,
6     pending,
7     // promotion=true
8     //compile error when adding boolean.
9     // Type 'boolean' is not assignable to type 'number' as required
10    // for computed enum member values.ts(18033)
11 }
12
```

```
11     }  
12  
13     console.log(status1)  
14  
15     // {  
16     //     active: 'd1',  
17     //     deactivate: -3434.32434,  
18     //     '-3434.32434': 'deactive',  
19     //     pending: -3433.32434,  
20     //     '-3433.32434': 'pending'  
21     // }
```

```
21     // }  
22  
23     console.log(status1.active) //d1  
24     console.log(status1.deactive) //-3434.32434  
25     console.log(status1.pending) //-3433.32434  
26
```