

C++ Enum

⇒ Enum (Enumeration)

- User defined Datatype
- Represents a group of constants

→ Creating enum

```
enum enum-name {  
    element1,  
    element2,  
    element3    };
```

→ Example 1

```
enum Meal {  
    Breakfast,  
    Lunch,  
    Dinner };
```

→ Accessing enum Example

- In enum by default values start from 0.

```
2_access_enum.cpp > main()
1 // Accessing enum
2 #include<iostream>
3 using namespace std;
4
5 enum levels{
6     LOW,
7     MEDIUM,
8     HIGH
9 };
10
11 // By default, the first item (LOW) has the value 0, the second (MEDIUM) has the value 1, etc.
12 int main(){
13     levels l1 = LOW;
14     levels l2 = MEDIUM;
15     levels l3 = HIGH;
16
17 cout<<l1<<" "<<l2<<" "<<l3<<endl;
18
19
20 return 0;
21 }
```

→ Assigning Values

- We can change the default values in enum by assigning different values.

```
3_assigning_values.cpp > ...
1 // Assigning Values
2
3 #include<iostream>
4 using namespace std;
5
6 enum day{
7     mon = 5,
8     tue = 10,
9     wed = 100
10 };
11
12
13 int main(){
14     day first = mon;
15     day second = tue;
16     day third = wed;
17
18     cout<<first<<endl;
19     cout<<second<<endl;
20     cout<<third<<endl;
21
22 return 0;
23 }
```

→ Assigning value to single element

- Assigning value to single element make changes such that next all element's values continues consecutively from assigned one.

```
1 // Assigning value to only one of the element
2 // Next value becomes consecutive
3 #include<iostream>
4 using namespace std;
5
6 enum day{
7     mon,
8     tue = 5,
9     wed,
10    thu,
11    fri
12 };
13
14
15
16 int main(){
17     day d1,d2,d3,d4,d5;
18     d1 = mon;
19     d2 = tue;
20     d3 = wed;
21     d4 = thu;
22     d5 = fri;
23
24     cout<<d1<<" "<<d2<<" "<<d3<<" "<<d4<<" "<<d5<<endl;
25
26     return 0;
27 }
```