

enum keyword in java

enum

- ➡ enum was introduced in **Java 1.5**
- ➡ An enum is a special type of **data type** which is a collection of **constants**.
- ➡ Actually enum is a just like a class that can have constant , method and private constructor. (If we don't declare private, compiler internally creates private constructor.)
- ➡ enum constants are by default **public**, **static** and **final** that means it can not be changeable (cannot be overridden).
- ➡ Because of private constructor we can't create the instance of enum by using new keyword.
- ➡ ~~enum cannot extends other classes~~ , but enum can implement

enum keyword in java

enum declaration

```
enum Month
```

```
{  
    JAN, FEB, MAR;  
}
```

here semicolon is optional

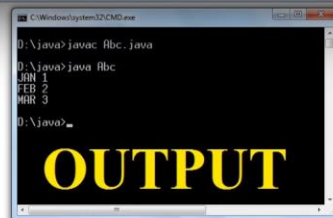
we can not declare enum inside method.

```
public enum Month {  
    JAN,  
    FEB,  
    MAR;  
    private Month () ;  
}
```

private constructor

enum keyword in java

```
public class Abc{  
    public enum Month{  
        JAN(1), FEB(2), MAR(3);  
    private int value;  
    private Month(int value){  
        this.value=value;  
    } }  
    public static void main(String[] args) {  
        for (Month m : Month.values())  
            System.out.println(m+" "+m.value);  
    }  
}
```



```
C:\Windows\system32\CMD.exe  
D:\Java>javac Abc.java  
D:\Java>java Abc  
JAN 1  
FEB 2  
MAR 3  
D:\Java>
```

OUTPUT

Important Note: Must have semicolon at the end when there is a enum field or method.

enum keyword in java

```
enum Month  
{  
    JAN, FEB, MAR;  
}
```

internally array arrange their content in an array.

JAN	FEB	MAR
0	1	2

so we can print the content of enum by using loop (for each loop).

~~we can also print the index of content of enum.~~

enum keyword in java

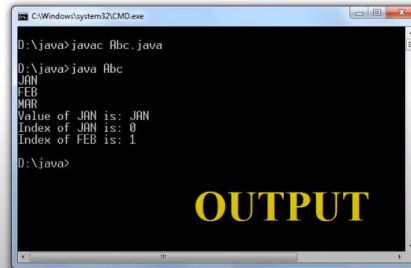
internally enum treated as array.that's why we can use following three method to access enum :

1. The **values()** method returns an array containing all the values of the enum.
2. The **valueOf()** method returns the value of given constant enum.
3. The **ordinal()** method returns the index of the enum value.

enum keyword in java

```
class Abc{
public enum Month { JAN,FEB,MAR}
public static void main(String[] args) {
//printing all enum
for (Month m : Month.values()){
System.out.println(m); }

System.out.println("Value of JAN is: "+Month.valueOf("JAN"));
System.out.println("Index of JAN is: "+Month.valueOf("JAN").ordinal());
System.out.println("Index of FEB is: "+Month.valueOf("FEB").ordinal());
}}
```



```
C:\Windows\system32\CMD.exe
D:\java> javac Abc.java
D:\java> java Abc
JAN
FEB
MAR
Value of JAN is: JAN
Index of JAN is: 0
Index of FEB is: 1
D:\java>
```

OUTPUT