

Enum:

Enum were Introduced in Java 1.5

If we want to represent a group of **Named Constant** in our application, then we use Enum.

You should use enum types any time you need to represent a fixed set of constants.

Inside Enum all the variables are **public static final by default** and they are of same type

Each Enum by default is a **final class** and it is super class to **java.lang.Enum**

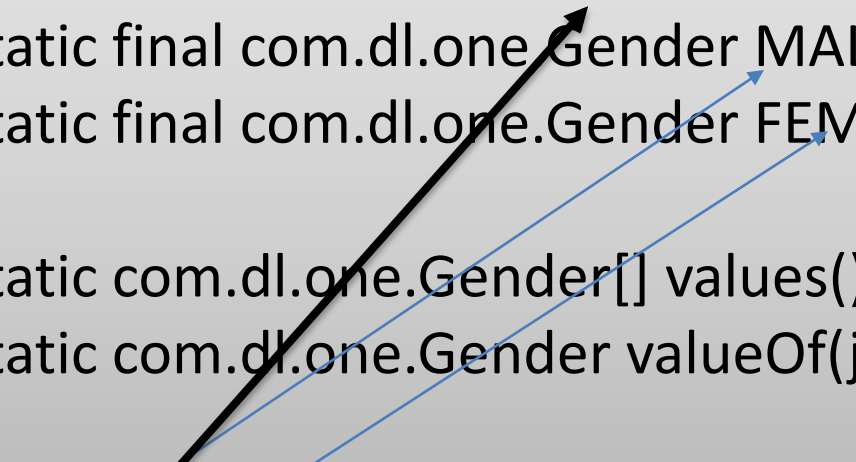
In Enums we cannot define **inheritance relationship** because **Enum by default is a final class**

Enum can have **variables and methods**

E:\Java Github\CoreJava\120_Enums\bin\com\dl\one>javap Gender.class

Compiled from "Gender.java"

```
public final class com.dl.one.Gender extends java.lang.Enum<com.dl.one.Gender> {  
    public static final com.dl.one.Gender MALE;  
    public static final com.dl.one.Gender FEMALE;  
    static {};  
    public static com.dl.one.Gender[] values();  
    public static com.dl.one.Gender valueOf(java.lang.String);  
}
```



```
public enum Gender {
```

```
    MALE, FEMALE;
```

```
}
```

```
package com.dl.one;
```

```
public enum Gender {
```

```
MALE, FEMALE;
```

```
}
```

```
public class Client {
```

```
public static void main(String[] args) {
```

```
System.out.println(Gender.MALE);
```

```
System.out.println(Gender.FEMALE);
```

```
}
```

```
}
```

```
package com.dl.two;
```

```
public enum Days {
```

```
SUNDAY, MONDAY, TUESDAY, THURSDAY, FRIDAY, SATURDAY;
```

```
public static void main(String[] args) {
```

```
Days d = Days.MONDAY;
```

```
System.out.println(d); // MONDAY
```

```
}
```

```
}
```

```
enum Books{
```

```
JavaBook, PythonBook,  
JavaScriptBook;
```

```
}
```

valueOf() method returns the **enum constant along with the defined name.**

```
public static void main(String[] args) {  
    Books valueOf = Books.valueOf("PythonBook");  
    System.out.println(valueOf); // PythonBook  
}
```

values() method can be used to **return all values present inside the enum**
ordinal() It can be used to **return the position/index of a constant in a Enum**

```
public static void main(String[] args) {  
    //can be used to return all values present inside the enum  
    Books[] values = Books.values();  
    for (Books books : values) {  
        System.out.println(books);  
  
        //return the position/index of a constant in a Enum.  
        System.out.println(books.ordinal());  
    }  
}
```