



Enumeration and Exception

Rawlabs Academy

What is **Enumeration**?

An **Enums** or **Enumerations** is a special "*class*" that represents a group of constants (unchangeable variables, like **final** variables).

Final variables

```
public class Level {  
    public static final String LOW = "LOW";  
    public static final String MEDIUM = "MEDIUM";  
    public static final String HIGH = "HIGH";  
}
```

Enum

```
public enum Level {  
    LOW,  
    MEDIUM,  
    HIGH;  
}
```

Why use Java **Enums**?

Enum was introduced to **replace the use of int constant**.

```
public class Size {  
    public static final int SMALL = 1;  
    public static final int MEDIUM = 2;  
    public static final int LARGE = 3;  
    public static final int EXTRA_LARGE = 4;  
}
```

Can be simplify using enums.

```
public enum Size {  
    SMALL, MEDIUM, LARGE, EXTRA_LARGE;  
}
```

Java Enum - Basic Usage

```
public enum PizzaSize {  
    SMALL, MEDIUM, LARGE, EXTRA_LARGE;  
}  
  
public class Main {  
    public static void main(String[] args) {  
        System.out.println(PizzaSize.MEDIUM);  
        System.out.println(PizzaSize.LARGE);  
    }  
}
```

Java Enum in Switch Statement

```
public static void main(String[] args) {  
    PizzaSize myPizza = PizzaSize.LARGE;  
    switch(myPizza) {  
        case PizzaSize.SMALL:  
            System.out.println("I bought small pizza");  
            break;  
        case PizzaSize.MEDIUM:  
            System.out.println("I bought medium pizza");  
            break;  
        case PizzaSize.LARGE:  
            System.out.println("I bought large pizza");  
            break;  
    }  
}
```

Methods of Java Enum

- `ordinal()` : returns the position of an enum constant
- `compareTo()` : compare the enum constants based on their ordinal value
- `toString()` : returns string representation
- `name()` : returns defined name in a string form
- `valueOf()` : takes a string and return an enum constant having the same string name
- `values()` : return an array of enum type containing all the enum constants

Enum with **Predefined Value**

```
public enum Color {  
    RED("#F44336"),  
    GREEN("#43A047"),  
    BLUE("#0277BD");  
  
    private final String hex;  
  
    private Color(String hex) {  
        this.hex = hex;  
    }  
  
    public String getHex() {  
        return this.hex;  
    }  
}
```


Exception



