

# Java Mapping for Enumerations

A Slice [enumeration](#) maps to the corresponding enumeration in Java. For example:

## Slice

```
enum Fruit { Apple, Pear, Orange };
```

The Java mapping for Fruit is shown below:

## Java

```
public enum Fruit implements java.io.Serializable {
    Apple,
    Pear,
    Orange;

    public int value();

    public static Fruit valueOf(int v);

    // ...
}
```

Given the above definitions, we can use enumerated values as follows:

## Java

```
Fruit f1 = Fruit.Apple;
Fruit f2 = Fruit.Orange;

if (f1 == Fruit.Apple) // Compare with constant
    // ...

if (f1 == f2)           // Compare two enums
    // ...

switch (f2) {           // Switch on enum
case Fruit.Apple:
    // ...
    break;
case Fruit.Pear:
    // ...
    break;
case Fruit.Orange:
    // ...
    break;
}
```

The Java mapping includes two methods of interest. The `value` method returns the Slice value of an enumerator, which is not necessarily the same as its ordinal value. The `valueOf` method translates a Slice value into its corresponding enumerator, or returns `null` if no match is found. Note that the generated class contains a number of other members, which we have not shown. These members are internal to the Ice run time and you must not use them in your application code (because they may change from release to release).

In the `Fruit` definition above, the Slice value of each enumerator matches its ordinal value. This will not be true if we modify the definition to include a [custom enumerator value](#):

**Slice**

```
enum Fruit { Apple, Pear = 3, Orange };
```

The table below shows the new relationship between ordinal value and Slice value:

Enumerator	Ordinal	Slice
Apple	0	0
Pear	1	3
Orange	2	4



Java enumerated types inherit implicitly from `java.lang.Enum`, which defines methods such as `ordinal` and `compareTo` that operate on the *ordinal* value of an enumerator, not its Slice value.

## See Also

- [Enumerations](#)
- [Java Mapping for Structures](#)
- [Java Mapping for Sequences](#)
- [Java Mapping for Dictionaries](#)