

MATLAB Mapping for Enumerations



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

Slice

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

The MATLAB mapping for `Fruit` is shown below:

MATLAB

```
classdef Fruit < int32
    enumeration
        Apple (0)
        Pear (1)
        Orange (2)
    end
    methods(Static)
        ...
        function r = ice_getValue(v)
            switch v
                case 0
                    r = Fruit.Apple;
                case 1
                    r = Fruit.Pear;
                case 2
                    r = Fruit.Orange;
                otherwise
                    throw(Ice.MarshalException(...));
            end
        end
    end
end
```

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

MATLAB

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

if f1 == Fruit.Apple % Compare with constant
    % ...
end

if f1 == f2          % Compare two enums
    % ...
end

switch f2            % Switch on enum
    case Fruit.Apple
        % ...
    case Fruit.Pear
        % ...
    case Fruit.Orange
        % ...
end
```

You can obtain the ordinal value of an enumerator using the `int32` function:

MATLAB

```
val = int32(Fruit.Pear);  
assert(val == 1);
```

To convert an integer into its equivalent enumerator, call the `ice_getValue` function:

MATLAB

```
f = Fruit.ice_getValue(2);  
assert(f == Fruit.Orange);
```

This function raises an exception if the given integer does not match any of the enumerators.

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).

The `Fruit` definition above shows the ordinal values assigned by default to the enumerators. Suppose we modify the definition to include a [custom enumerator value](#):

Slice

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

The generated code changes accordingly:

MATLAB

```
classdef Fruit < int32  
    enumeration  
        Apple (0)  
        Pear (3)  
        Orange (4)  
    end  
    ...  
end
```

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See Also

- [Enumerations](#)

