

# Python Mapping for Structures



A Slice [structure](#) maps to a Python class with the same name. For each Slice data member, the Python class contains a corresponding attribute. For example, here is our [Employee](#) structure once more:

## Slice

```
struct Employee
{
    long number;
    string firstName;
    string lastName;
}
```

The Python mapping generates the following definition for this structure:

## Python

```
class Employee(object):
    def __init__(self, number=0, firstName='', lastName=''):
        self.number = number
        self.firstName = firstName
        self.lastName = lastName

    def __eq__(self, other):
        # ...

    def __ne__(self, other):
        # ...

    def __str__(self):
        # ...

    def __hash__(self):
        # ...

    # ...
```

The constructor initializes each of the attributes to a default value appropriate for its type:

Data Member Type	Default Value
string	Empty string
enum	First enumerator in enumeration
struct	Default-constructed value
Numeric	Zero
bool	False
sequence	None
dictionary	None
class/interface	None

You can also declare different [default values](#) for members of primitive and enumerated types.

The `__eq__` method returns true if all members of two structures are (recursively) equal, and `__ne__` returns true if any member differs.

The `__str__` method returns a string representation of the structure.

For structures that are also [legal dictionary key types](#), the mapping also generates relational operators (`__lt__`, `__le__`, `__gt__`, `__ge__`) and a `__hash__` method. The `__hash__` method returns a hash value for the structure based on the value of all its data members.

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#### See Also

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