

```

class Test(object):

    def __init__(self):
        self.id = 101 # can access directly
        self._id = 101 # should be considered protected
        self.__id = 101 # considered private, name mangled

t = Test()
print(t.id)
print(t._id)
print(t.__id) # AttributeError: 'C' object has no attribute '__a'

```

# private v in constructors and we can access private v in instance method

```

class User:
    def __init__(self):
        self.__id = 101 # Private V
        self.__name = 'NameOne' # Private V

    # Instance Method
    def display(self):
        print(self.__id) # Accessing private V, 101
        print(self.__name) # Accessing private V, NameOne

u = User()
u.display()

```

Output

101

NameOne

# private v in constructors and we cannot access them directly

```
class User:
```

```
    def __init__(self):
```

```
        self.id = 101 # Public V
```

```
        self.__name = 'NameOne' # Private V
```

```
u = User()
```

```
print(u.id) # 101
```

```
print(u.__name) # AttributeError: 'User' object has no attribute '__name'
```

# Mangling is used for private class members to call directly from class

```
class Student:
```

```
    def __init__(self):
```

```
        self.__id = 123 # Private V
```

```
        self.__name = 'John' # Private V
```

```
s = Student()
```

# Mangling is used for private class members

# Name mangling (\_Student\_\_id, Student\_\_name)

# Syntax: `_classname__dataMember`

```
print(s._Student__id)
```

```
print(s._Student__name)
```

```
#we wont have direct access to private variables, so we can use setters and getters
class Student:
    # Mutator Methods / setters
    def setDetails(self, sid, sname): # @ReservedAssignment
        self.__id = sid
        self.__name = sname

    # Accessor Methods / getters
    def getDetails(self):
        return self.__id, self.__name

s = Student()
s.setDetails(101, "SaiKiran")
print(s.getDetails()) # (101, 'SaiKiran')

# we don't have any direct access to private variables
# print(self.__id) # NameError: name 'self' is not defined
```