

Using Code Libraries

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CodeGraf landing page

- vanderbi.it/codegraf

Importing a function

Standard Library modules

- A **module** is:
 - reusable code stored in a separate file (has `.py` extension like other Python programs)
 - loaded into script using the **import** statement
- Modules in the **Standard Library** are:
 - included automatically when Python is installed
 - hidden away somewhere deep in your installation
- **Functions** in Standard Library modules are:
 - not automatically available like built-in functions
 - always available if the module is **imported**.

Import options: math module example

- Import a single function from the module

```
from math import sqrt  
answer = sqrt(3)
```

- Import the whole module

```
import math  
answer = math.sqrt(3)
```

- Import the module and abbreviate

```
import math as m  
answer = m.sqrt(3)
```

Methods

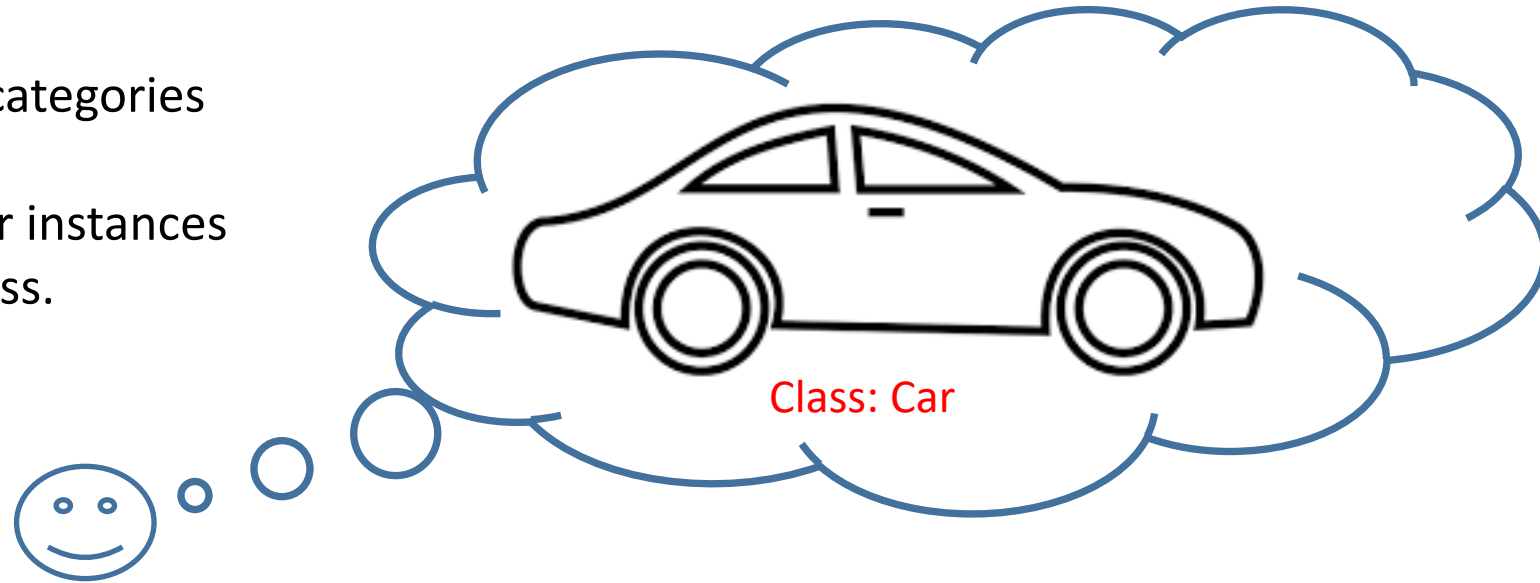


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classes and objects

Classes are abstract categories of things.

Objects are particular instances or individuals of a class.



object: toyotaPrius



object: ferrari



object: volkswagenBeetle

Methods

- Methods are essentially **functions** tied to a class.
- We can apply a method to any **object** that is an instance of the class that the method is associated with.
- Method names follow the object name, separated by a dot, followed by parentheses.
- Like functions, methods may or may not return any value.
- Example: class **Car** has methods **.drive()** and **.accelerate()**



`toyotaPrius.drive('Nashville')`

`newSpeed = toyotaPrius.accelerate(15)`

doesn't return a value.

returns a value.

Method example

- Built-in string class `str` has method `.upper()`
- Example:

```
my_message = 'Do not yell at me!'  
shouting = my_message.upper()  
print(shouting)
```

- The method has no arguments; it operates on the object.
- This method return value is the string in uppercase.

Points of confusion



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Is it a function from a module or a method?

- If you see this in somebody else's code:

`something.otherthing()`

- is it:

1. the **`otherthing()`** function from the **`something`** module?
2. an **`.otherthing()`** method operating on the **`something`** object?

`1. import something`

`2. something = something_else`

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