Programming Basics

A screenshot of a black screen

AI-generated content may be incorrect.

Methods or attributes are a special type of function that operate only on a specific data structure When using a method in python, you can use a period . to apply the function to an object.

my\_nums = [1,2,3,4,5]

my\_nums.sort()

Careful, though! If a function is not specifically designed to be an attribute of the structure, this . trick won’t work.

my\_nums.round()

2.3.1.1 Indexing

Every element in a list has an **index** (a location, indicated by an integer position)[3](https://ds-ml-with-python.github.io/Course-Textbook/01-basics.html#fn3).

In python, we count from 0.

x = ["a", 3, True]

x[0] *# This returns a list*

x[0:2] *# This returns multiple elements in the list*

x.pop(0)

List indexing with [] will return a list with the specified elements.

To actually retrieve the item in the list, use the .pop attribute. The only downside to .pop is that you can only access one thing at a time.

A screenshot of a computer code

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Webscraping

beautifulsoup4

* <img> specifies an image. The path to the image file is specified in the src= attribute.
* <a> specifies a hyperlink. The text enclosed between <a> and </a> is the text of the link that appears, while the URL is specified in the href= attribute of the tag.
* <table> specifies a table. The rows of the table are specified by <tr> tags nested inside the <table> tag, while the cells in each row are specified by <td> tages nested inside each <tr> tag.

import requests

response = requests.get("https://statistics.calpoly.edu/content/directory")

The HTML source is stored in the .content attribute of the response object. We pass this HTML source into BeautifulSoup to obtain a tree-like representation of the HTML document.

from bs4 import BeautifulSoup

soup = BeautifulSoup(response.content, "html.parser")