

GSET - Intro to Programming with Python

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Module 3 - Lists

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- Data Structures and Programming
- Using Lists in Python
- Common Methods
- Advanced Methods

Data Structures and Programming

There are many ways to store data in the computer.

Q: We have practiced using single values, but how do we store multiple values?

A:

Data Structures and Programming

Common Data Structures

Name	Description
Array	
*List	
Stack	
Queue	
*Tuple and Sequence	
*Set	
*Dictionary	

* Python Data Structures

Data Structures and Programming

Python Data Structures

- List
- Tuple
- Set
- Dictionary

Note: C++ and MATLAB use arrays, but Python does not.

Using Lists in Python

Initializing a List

```
buildings = ['Brown', 'Clement', 'Prescott', 'Bruner']
```

Using Lists in Python

Accessing Items in a List

```
buildings = ['Brown', 'Clement', 'Prescott', 'Bruner']  
  
print('The north building is', buildings[3])  
  
print('The south building is', buildings[0])  
  
print('The east building is', buildings[1])  
  
print('The west building is', buildings[2])
```

Using Lists in Python

Redefining Items in a List

```
buildings[3] = ['New Bruner']  
  
print('The CSC department is in', buildings[3])
```

Remember the data in the list is *mutable*, meaning it can be changed after it has been defined.

Common Methods

reference: some ref

Common Methods

