



# A Quick Python Intro

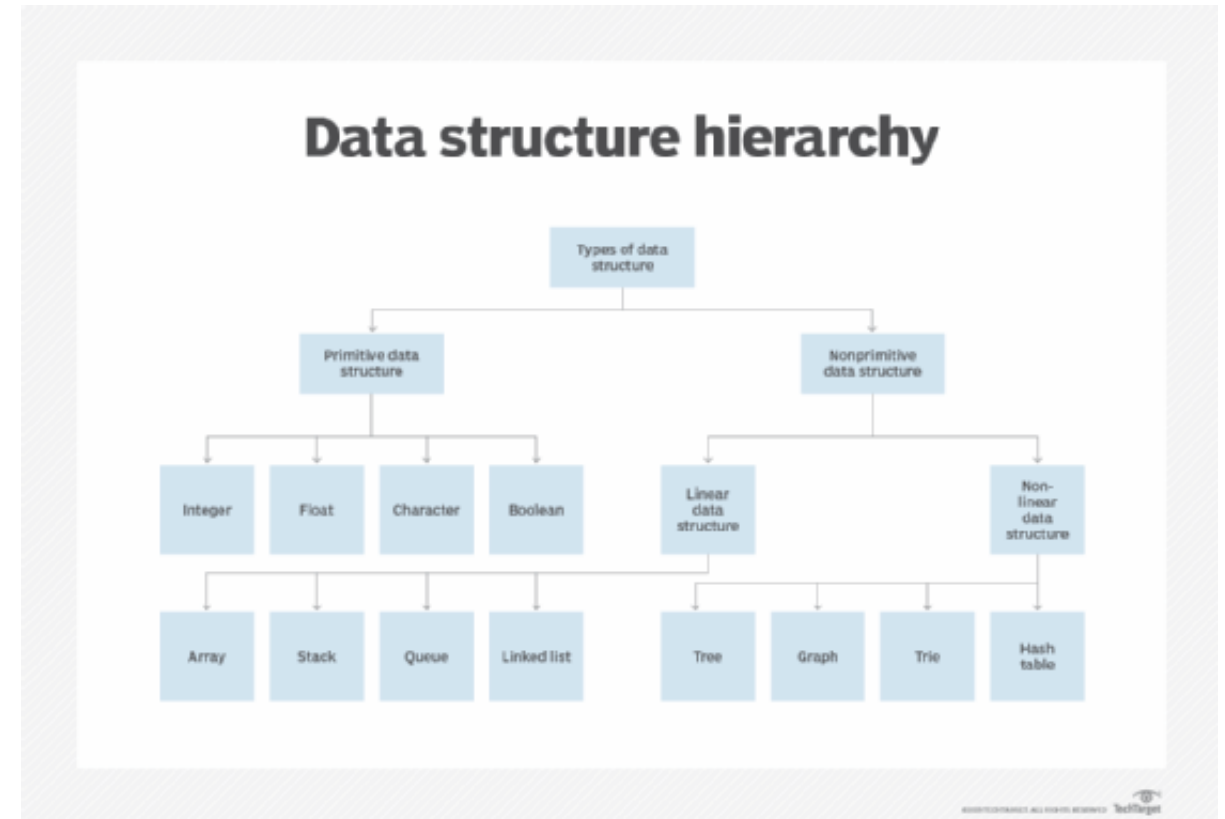
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# The Basic Data Structures

- Data representation and organization of relationships is fundamental to programming.
- There are many ways to represent data and their relationships. These range from simple variables to complex hashes.
- We will be focusing on variables and lists.



# A Variable Lets You Store A Value For Reference Later

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```
# We can make comments with the pound symbol

# We can assign a variable as the number 5
some_var = 5
# Typing that into the command line now returns "5"
some_var
5

# Example: variables can be used for math
first = 5
second = 7
first + second
12

# We can print our variables
print(some_var)
```

# A List Allows You To Store Many Variables Together And In Order

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```
# A list is sometimes also called an array or vector
```

```
# We can make a list of the numbers 1 to 5  
[1, 2, 3, 4, 5]
```

```
# We can store a list as a variable  
my_list = [1, 2, 3, 4, 5]  
# We can start an empty list  
my_list = []
```

```
# We can add values to the start of a list (index 0)  
my_list.insert(0, 8)  
# We can add to the end of a list  
my_list.append(8)
```

# We Can Use A For Loop To Perform Tasks On Every List Element In Order

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```
# Given our list
my_list = [1, 2, 3, 4, 5]

# We can use a loop to add to each element (white space matters!)
for i in my_list:
    z = i + 1
    print(z)
```

```
2
3
4
5
6
```

## More Resources

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- <https://learnxinyminutes.com/docs/python/>
- <https://leetcode.com>
- <https://stackoverflow.com>

# Problem To Solve (LeetCode 1480)

Description Solution Discuss (714) Submissions Python3 Autocomplete

## 1480. Running Sum of 1d Array

Easy 485 53 Add to List Share

Given an array `nums`. We define a running sum of an array as `runningSum[i] = sum(nums[0]...nums[i])`.

Return the running sum of `nums`.

**Example 1:**

**Input:** `nums = [1,2,3,4]`  
**Output:** `[1,3,6,10]`  
**Explanation:** Running sum is obtained as follows: `[1, 1+2, 1+2+3, 1+2+3+4]`.

**Example 2:**

**Input:** `nums = [1,1,1,1,1]`  
**Output:** `[1,2,3,4,5]`  
**Explanation:** Running sum is obtained as follows: `[1, 1+1, 1+1+1, 1+1+1+1, 1+1+1+1+1]`.

**Example 3:**

**Input:** `nums = [3,1,2,10,1]`  
**Output:** `[3,4,6,16,17]`

**Constraints:**

- `1 <= nums.length <= 1000`
- `-10^6 <= nums[i] <= 10^6`

```
1 class Solution:
2     def runningSum(self, nums: List[int]) -> List[int]:
3
```