**Heap vs Stack**

* Stack – Linear Data Structure
* Static Memory Allocation
* All data is removed once the function exits
* LIFO data structure
* Like a RAM with very fast access.
* Closely managed by CPU, so it will not be fragmented.
* Variables can be only local.
* Limit on size of variables (depends on OS)
* There is no need to manage the memory yourself
* Variables are allocated and freed automatically
* Variables cannot be resized.
* Implemented in 3 ways simple array based, using dynamic memory, and Linked list based.
* Heap – Hierarchical Data Structure
* Dynamic Memory Allocation
* Not Closely managed by CPU
* You are responsible to manage the data on HEAP or ► Memory Leak.
* Like a HDD, slower access.
* No limit on memory size
* It may be fragmented as blocks of memory are allocated, then freed
* Variables can be resized.
* Pointer is used to access memory
* Implemented using array and trees.

**Can we add two integers in python ?**

* Yes, we can do basic math operations in every language.
* On top of that, we can also do some more math functions directly in the commandline of Python and we can even do math operations on complex numbers directly from commandline as well.

**Why is it possible to add two integers in python ?**

* Because it has an inbuilt functions that supports many different types of math operations on both simple and complex numbers.

**Difference between magic methods and attributes in python ?**

* (Cannot find anything anywhere)
* (there was only definition of magic methods)

**Difference between different types of arrays ?**

* There are no different type of arrays but it has different types of data types such as int, char and float.

**Why do we have multiple declarations of strings ?**

* So that some special characters can be used while programming such as single inverted comma, double inverted comma, slashes, etc. These type of characters are markers which can interfere with code so to avoid that different types of string declaration are used.

**What is string slicing ?**

* Method to get a part of the string. Here start index and end index are provided where start index is inclusive and end index is exclusive.

b = "Hello, World!"

print(b[2:5])

**How do you convert you string to list ?**

* string.split(“X”) method is used to convert string to list where X is a separator.

**How do you convert you list to string ?**

* X.join(list) where X is a separator.

**What are the rules to declare a variable in python ?**

* Name can only contain Alphanumeric Characters and Underscore.
* Name cannot start with a number
* Name is case sensitive where **A** and **a** are different variables.