**Python Definitions**

1. **Python** : -

Python is a high level, interpreter and object oriented programming language.

1. **Variables :-**

Variables are containers for storing data values.

1. **Comments : -**

Comments can be used to explain Python code.

1. **Strings:-**

String literals in python are surrounded by either single quotation marks, or double quotation marks.

1. **Lists :-**

List is a collection which is ordered and changeable. Allows duplicate members

1. **Dictionary :-**

Dictionary is a collection which is unordered, changeable and indexed. No duplicate members

1. **Tuples :-**

Tuple is a collection which is ordered and unchangeable. Allows duplicate members.

1. **Sets :-**

Set is a collection which is unordered and unindexed. No duplicate members.

1. **Operators :-**

Operators are used to perform operations on variables and values.

* Arithmetic operators
* Assignment operators
* Comparison operators
* Logical operators

1. **Loops :-**

**while : -**

while loop we can execute a set of statements as long as a condition is true.

**for :-**

for loop is used for iterating over a sequence (that is either a list, a tuple, a dictionary, a set, or a string)

1. **Function**:-

A function is a block of code which only runs when it is called. You can pass data, known as parameters, into a function. A function can return data as a result.

1. **Scope** :-

A variable is only available from inside the region it is created. This is called scope.

1. **List Comprehensions :-**

List Comprehensions provide an elegant way to create new lists.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Store Different Data types** | **Duplicate values or allowed** | **Order retained** | **Indexing and slicing is possible** | **mutable** |
| **Lists** | True | True | True | True | True |
| **Dictionary** | True | False | False | False | True |
| **Tuples** | True | True | True | True | False |
| **Sets** | True | False | False | False | False |

1. **lamba, map, filter :-**

* A lambda function is a small anonymous function.A lambda function can take any number of arguments, but can only have one expression.
* The map() function executes a specified function for each item in a iterable. The item is sent to the function as a parameter.
* The filter() function returns an iterator were the items are filtered through a function to test if the item is accepted or not.

1. **Exception Handling:-**

* The try block lets you test a block of code for errors.
* The except block lets you handle the error.
* The finally block lets you execute code, regardless of the result of the try- and except blocks.

1. **File Handling :-**

The key function for working with files in Python is the open() function.The open() function takes two parameters; filename, and mode.

There are four different methods (modes) for opening a file:

* "r" - Read - Default value. Opens a file for reading, error if the file does not exist
* "a" - Append - Opens a file for appending, creates the file if it does not exist
* "w" - Write - Opens a file for writing, creates the file if it does not exist
* "x" - Create - Creates the specified file, returns an error if the file exists

In addition you can specify if the file should be handled as binary or text mode

* "t" - Text - Default value. Text mode
* "b" - Binary - Binary mode (e.g. images)

1. **Modules :-**

Consider a module to be the same as a code library.A file containing a set of functions you want to include in your application.To create a module just save the code you want in a file with the file extension .py.

Import the module by using the import keyword.