

Report on python

Comments in python:

- Comments can be used to explain Python code. Comments can be used to make the code more readable.
- It can be used to prevent execution when testing code.
- Comments starts with # symbol and Python will ignore them.

Example program:

```
#print ("Hello, World!")  
Print ("Cheers, Mate!")
```

Output:

Cheers, Mate!

Casting:

- When we want to specify a type on to a variable, this can be done with casting. Python is an object-orientated language, and as such it uses classes to define data types, including its primitive types.

Eg: x = int(1) output: 1

y = int(2.8) 2

z = int("3") 3

print(x)

print(y)

print(z)

String:

- String literals in python are surrounded by either single quotation marks, or double quotation marks. 'hello' is the same as "hello".
- Like many other popular programming languages, strings in Python are arrays of bytes representing Unicode characters. However, Python does not have a character data type, a single character is simply a string with a length of 1.

- Square brackets can be used to access elements of the string.

Eg: `a = "Hello, World!"` Output: `e`

```
print(a[1])
```

Slicing:

- Range of characters done by using the slice syntax. Specify the start index and the end index, separated by a colon, to return a part of the string.

Eg: `b = "Hello, World!"` Output: `llo`

```
Print (b[2:5])
```

Here in output the letters between 2to5 index numbers are printed this is called slicing.

Negative Indexing negative indexes used to start the slice from the end of the string

Eg: `b = "Hello, World!"` Output: `orl`

```
Print (b [-5:-2])
```

String Length: To get the length of a string, use the `len()` function.

Eg: `a = "Hello, World!"` Output: `13`

```
print(len(a))
```

String Methods: Python has a set of built-in methods that can use on strings.

- `Strip()` method removes any whitespace from the beginning or the end.
- `lower()` method returns the string in lower case.

Eg: `a = " HELLO, WORLD! "` Output: `hello, world!`

```
print(a.lower())
```

- `upper()`, `replace()`, `split()` these are the string manipulations.