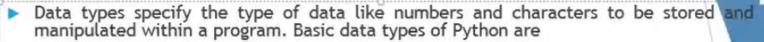
Data Types



- Numbers
- Boolean
- Strings
- None



Numbers

- Integers, floating point numbers and complex numbers fall under Python numbers category. They are defined as int, float and complex class in Python.
- Integers can be of any length; it is only limited by the memory available.
- A floating point number is accurate up to 15 decimal places.
- Integer and floating points are separated by decimal points.
- Complex numbers are written in the form, x + yi, where x is the real part and y is the imaginary part.

Data Types

Boolean

- Booleans -useful in conditional statements. since a condition is really just a yes-orno question, the answer to that question is a Bpolean value, either True or False.
- The Boolean values, True and False are treated as reserved words.

Strings

- A string consists of a sequence of one or more characters, which can include letters, numbers, and other types of characters.
- A string can also contain spaces.
- You can use single quotes or double quotes to represent strings and it is also called a string literal.
- Multiline strings can be denoted using triple quotes, " or "". These are fixed values, not variables that you literally provide in your script.

Click to add title

- print('ECE')
- print("ENGG")
- print("ECE BENGALURU")
- > s=(" ECE
- ENGG
- ▶ Bengaluru "')
- print(s)
- print(" ECE 'ENGG' Bengaluru")

None

- None is another special data type in Python. None is frequently used to represent the absence of a value.
- money = None

口

Comments

- Comments are an important part of any program. A comment is a text that describes what the program or a particular part of the program is trying to do and is ignored by the Python interpreter.
- Comments are used to help you and other programmers understand, maintain, and debug the program.
- Python uses two types of comments: single-line comment

#This is single line Python comment

multiline comments.

#This is

#multiline comments

#in Python

De

Reading Input

 In Python, input() function is used to gather data from the user. The syntax for input function is,

```
variable_name = input([prompt])
```

- >>> person = input("What is your name?")
- What is your name? Carrey
- >>> person
- 'Carrey'

Print Output

- The print() function allows a program to display text onto the console.
- print("Hello World!!")
 Hello World!!
- Two major string formats which are used inside the print() function to display the contents onto the console
- ▶ 1. str.format()
- 2. f-strings

str.format() Method •

- ► The syntax for format() method is, str.format(p0, p1, ..., k0=v0, k1=v1, ...)
- p0, p1,... are called as positional arguments and, k0, k1,... are keyword arguments with their assigned values of v0, v1,... respectively.
- Formatted strings or f-strings were introduced in Python 3.6. A f-string is a string literal that is prefixed with "f". These strings may contain replacement fields, which are expressions enclosed within curly braces

 }. The expressions are replaced with their values.

Example:

```
UNN = input("Enter your USN: ")

Name = input("Enter your Name: ")

print("Student USN is {0} and name {1}".format(USN, Name))

print("Student name is {1} and USN is {0}".format(USN, Name))

print("Student belongs to {Section}, ECE".format(Section = "6ABCD"))

print(f"Student USN {USN} and {Name}")
```

Type Conversions

You can explicitly cast, or convert, a variable from one type to another.

The int() Function

The float() Function

The str() Function

The chr() Function

The complex() Function

The ord() Function

The hex() Function

The oct() Function

The type() Function and is Operator type(object)

The type() function returns the data type of the given object

type(6.4)

<class 'float'>