
# Datatypes in Python

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- Built-in Datatype
  - None Type
  - Numeric Type
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# Datatypes

- A datatype represents the type of data stored into a variable or memory.
- The datatypes which are already available in Python language are called Built-in datatypes.
- The datatypes which can be created by the programmers are called User-defined datatypes.

# Five Types of Built-in Datatypes

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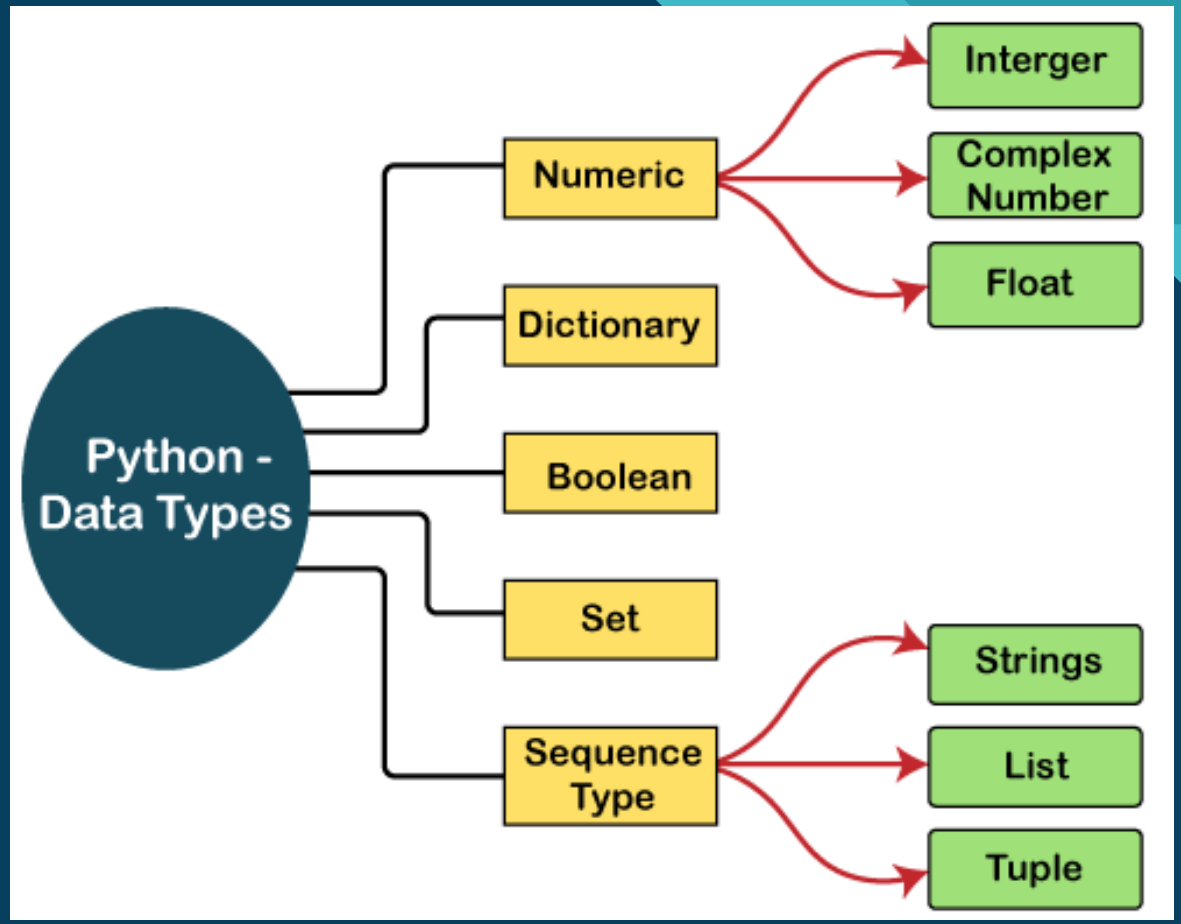
1. None Type
2. Numeric Type
3. Sets
4. Sequences
5. Mappings




# Built-in Datatypes

## (None Type, Numeric Type)

# Numeric Types

- The numeric types represents numbers.

1. int
2. float
3. complex

# Numeric Types Contd.

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- The int datatype represents an integer number.
- The float datatype represents floating point numbers.
- A complex number is a number that is written in the form of

**a + bj** or **a + bJ**

  - ‘a’ represents the real part of the number.
  - ‘b’ represents the imaginary part of the number.
  - ‘j’ or ‘J’ indicates the square root value of -1.
  - For example: 3+7j, -1-6.5j, 0.3+8.5j

# Representing Binary, Octal and Hexadecimal Numbers

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- Binary number should be written by prefixing **0b (zero and b)** or **0B (zero and B)** before the value.
- Hexadecimal numbers are written by prefixing **0x (zero and x)** or **0X (zero and big X)** before the value.
- Octal numbers are written by prefixing **0o (zero and small o)** or **0O (zero and big O)** before the actual value.


# Type Conversion

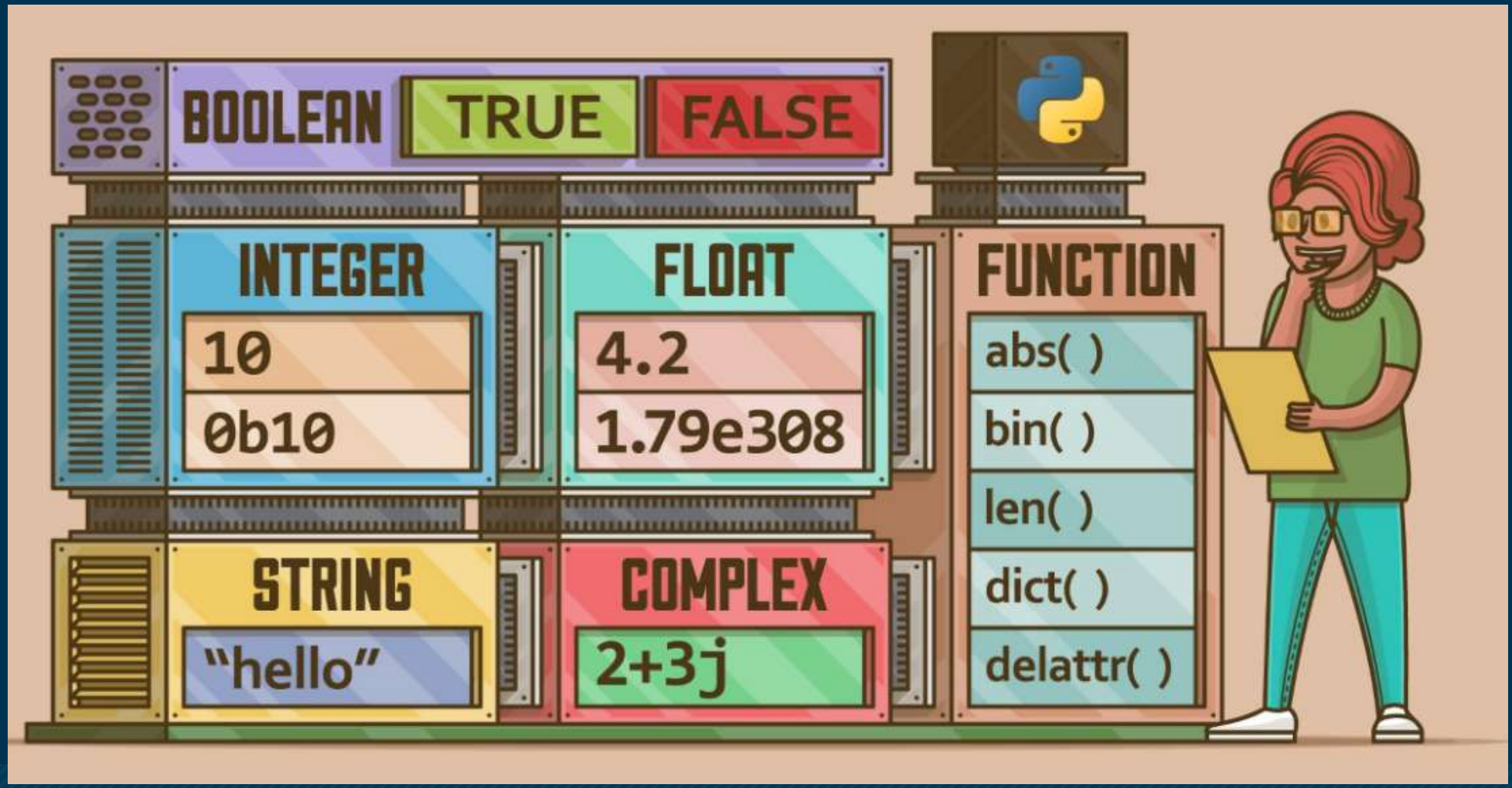
# Type Conversion

- Conversion of object from one datatype to another datatype.

1. **Implicit Type Conversion**
2. **Explicit Type Conversion or Type Casting**

- In implicit, automatically converts one datatype to another.
- In explicit, users convert the datatype.

# Data Types


BOOLEAN
TRUE
FALSE
INTEGER
10
0b10
FLOAT
4.2
1.79e308
FUNCTION
abs( )
bin( )
len( )
dict( )
delattr( )
STRING
"hello"
COMPLEX
2+3j

# Bool Datatype

- The bool datatype represents Boolean values.

1. True
2. False

- Python internally represents True as 1 and False as 0.
- Conditions will be evaluated internally to either True or False.

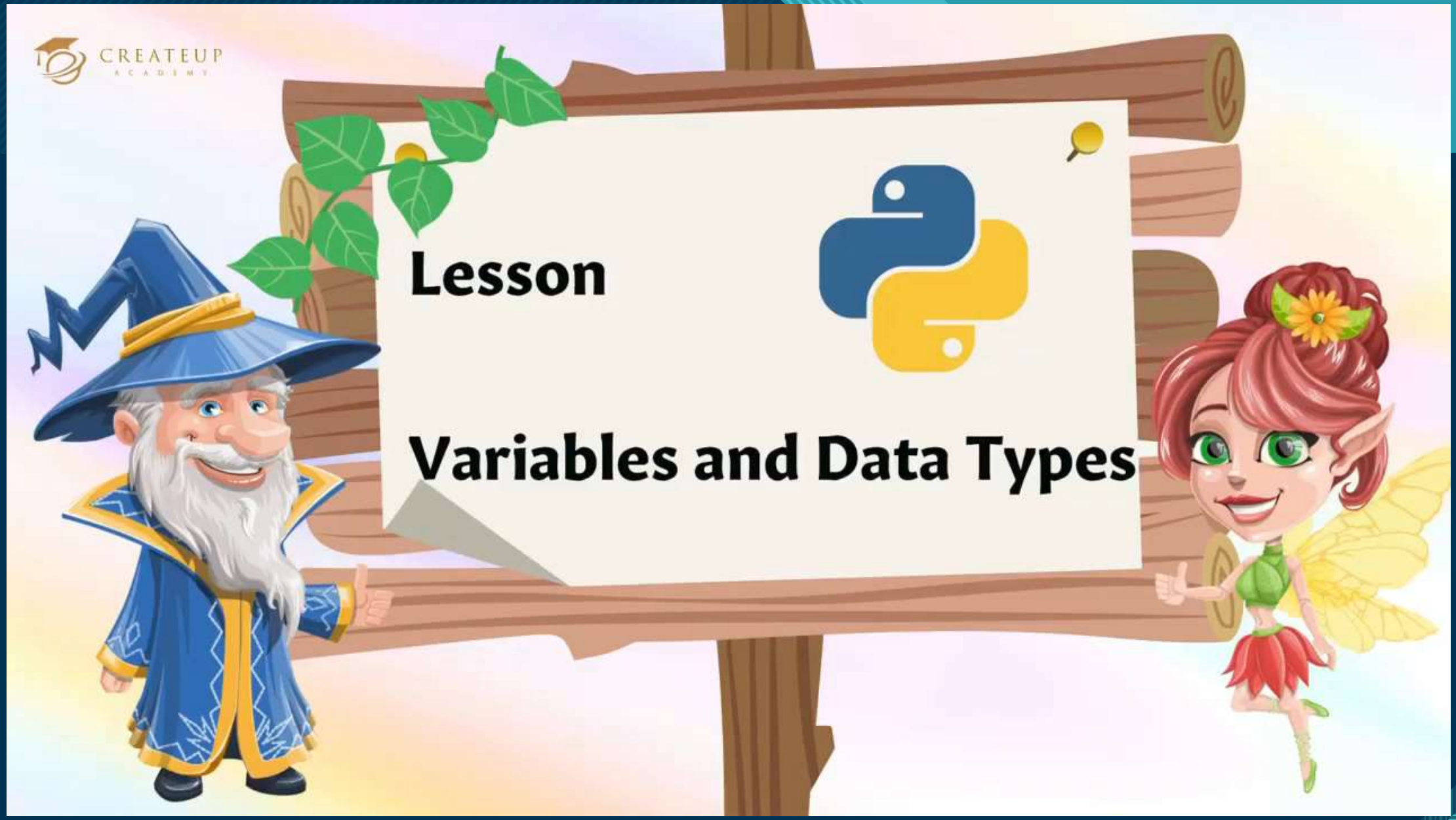
# Bool Datatype Examples

- a=10>2

  print(a)  #displays True

- b=6>9

  print(b)  #displays False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ACADEMY
Lesson
Variables and Data Types


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Thank You