

## Int data type

**“int”** is predefined data type in python.

This data type is used to represent integer literals or values in memory.

# What is integer literal or value?

Integer is a numeric value without fractional part.

**Example:** whole numbers, even numbers, odd numbers, prime numbers, ...

**Q:**How much memory is reserved by “int” data type (OR) size of int data type in python?

The size of int data type in python is unlimited or dynamic. It reserve space based on the value size.

# What is variable?

Variable is an identifier, which is used to identify value

Variable is named memory location.

The value of variable changes (OR) various

Python is dynamically typed programming language. The type of variable is not fixed. Type of variable changes based on the value it holds. There is no variable declaration in python.

```
>>> int b
```

```
SyntaxError: invalid syntax
```

```
>>> b=50  
>>> type(b)  
<class 'int'>  
>>> b=1.5  
>>> type(b)  
<class 'float'>
```

**type()**: It is a predefined function in python, which returns type of variable.

```
type(variable-name/value)
```

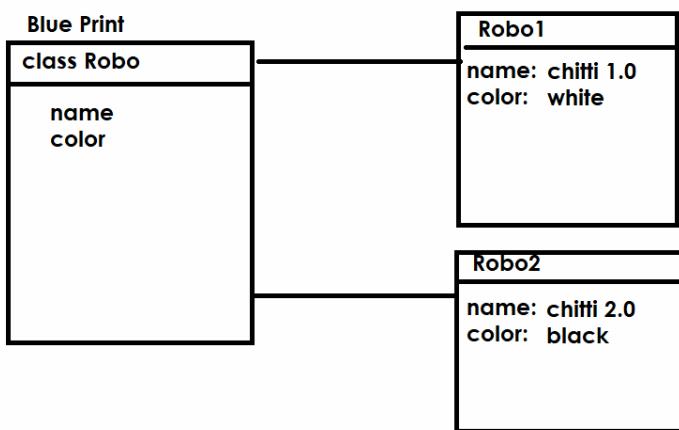
```
>>> type(10)  
<class 'int'>  
>>> type(1.5)  
<class 'float'>  
>>> a=10  
>>> type(a)  
<class 'int'>
```

Every data type in python is a **class** and data is represented as **objects**.

In object oriented programming languages a class represents data type.

Object is an instance of class, every object behind there is a class.

Class allocates memory for object.



In python integer values or literals are represented in 4 formats

1. Decimal integer
2. Octal Integer

3. Hexadecimal integer
4. Binary integer

Decimal, octal, hexadecimal and binary are called number system in python.

Number system defines set of rules and regulations for representing numbers in computer science.