

DAY

15

DAY
15

keep calm,
wear mask
&
study hard

A person is working on a laptop, with their hands visible on the keyboard. The laptop is on a wooden desk. In the background, there are some books and a blurred figure of another person. The text 'WORK HARD IN SILENCE. LET SUCCESS MAKE THE NOISE.' is overlaid on the image in a bold, white, sans-serif font.

WORK HARD IN SILENCE.
LET SUCCESS
MAKE THE
NOISE.

**Everything in python
is an object**

Object Oriented Programming

classes & objects

What is a class ?

A class acts as a **blueprint** for creating **objects**.

**A class is a type
of an object**

Why was OOP introduced ?

**To reduce the
complexity of code
in software
engineering**

OOP is a **methodology**
of programming.

OOP is a **technique** of
programming

What is an object ?

**A object is a real world entity having some
properties and behaviour.**

Object has two things:

Attribute
Behaviour

Attributes are the
characteristics of
the class that help to
distinguish it from
other classes.

Attributes are the **characteristics** of the class that help to **distinguish** it from other classes.

Behaviors are the **tasks** that an object performs.

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Behaviors are the **tasks** that an object performs.

A **person's attributes**, for example, include their **age, name, and height**, while their **behaviors** include the fact that a person can **speak, run, walk, and eat**.

Characteristics of an **object**

Identity (address in memory)

Attributes (properties of the object)

Behaviour (tasks that it can perform)

Object in programming

An instance of a class which has certain properties and certain methods.

It occupies some memory in computer.

**A class can be used to
create
many many objects**

**Different objects will
be different due to
different values of
properties involved.**

Python OOP is different from other languages.

What is '**self**' in Python ?

self is a word in python which is used in the **definition** of each **method** in the class.

self means this **current object**

self in Python is like **this** in other languages.

**How to create a class in
Python ?**

using `class` keyword

**Demo Example of
an empty class**

**What is a
constructor method ?**

It is a **special method** in Python
that is used for the **creation**
of an object.

It is the **first method** to be called
when **creating** an object

How to write constructor in Python ?

```
def __init__(self):
```

**How to write attributes
in side class ?**

**Inside the constructor
function by using self
keyword**

Demo Example of **Student class**

How to create objects

```
s = Student([parameters])
```

parameters are optional

Some other demo examples

We will see in next class

Day-15

Ask Doubts

IN THE GROUPS

**THANK
YOU**

INSPIRE PYTHON COURSE