CLASS : Blue print of an object.

↳ Property
↳ Behaviour
↳ variables
↳ methods.

*I/p - class human:

```
def __init__(self,n,a,g):
    self.name = n
    self.age = a
    self.gender=g

def drive(self):
    Print("Driving a car")

Pavani = human("pavani", 24, "Female")
Pavani.drive()
```

O/p - Driving a car

```
pavani = human("pavani", 24, "Female")
pavani.age()
```

O/p - 24

```
pavani = human("pavani", 24, "Female")
pavani.gender()
```

O/p - Female.

PASS : It is used as a placeholder for future code.

When the pass statement is executed, nothing happens, but we avoid getting an error when empty code is not allowed.

Empty code is not allowed in loops, functions, definitions, class definitions, or in if statements.

SYNTAX : def myfunction:
pass

I/p - a = 33

b = 200

if b > a :

pass.

O/p -

OBJECT CREATION :

my_ref_var = Myfirstclass( )

I/p - class car :

def __init__ (self, b, m, c, d, f):

self.brand = b

self.model = m

self.color = c

self.doors = d

self.fuel_type = f

def update_color (self, c):

self.color = c

def update_fuel_type (self, f)

if (self.fuel_type == "petrol")

```
            self.fuel_type = f
        else:
            Print("Exit")

    def display(self):
        Print("Brand: {}".format(self.brand))
        Print("Model: {}".format(self.model))
        Print("color: {}".format(self.color))
        Print("Doors: {}".format(self.doors))
        Print("Fuel type": {}".format(self.
                                    fuel_type))

maruti800 = car("suzuki", "Maruti800", 'white', "4",
                                    'Diesel")

maruti800.display()
```

O/P – Brand : Suzuki

Model : Maruti800

Color : white

Doors : 4

Fuel type : Diesel

```
nano = car('Tata', 'Nano', 'Pale pink', '4', 'petrol')
nano.display()
```

O/p - Brand : Tata
Model : Nano
color : Pale pink
Doors : 4
Fuel type: Petrol

```
nano.update_fuel_type('CNG')
nano.display()
```

O/p - Brand : Tata
Model : Nano
color : Pale pink
Doors : 4
Fuel type: CNG

I/p - print(type(nano))

O/p - <class '__main__.car'>

I/p - class human:

```
    category = 'Human'

    def __init__(self, n, g):
        self.name = n
        self.gender = g

    def drive(self):
        x = 10
        Print(x)
        Print("Drive a car")
```

In the above example,

↳ Instance variables/object variables are name, gender

↳ class variable - category

↳ local variable - x, n, g.

Therefore, the overall variables in the above examples is '6'

LOCAL AND GLOBAL VARIABLES:


```
I/P - a = 10
      b = 20
      def abc():
          a = 40
          Print(a)

      abc()
      Print(a)
```

```
O/P - 40
      10
```

In the above example,

- a = 10 is globally defined function.
- a = 40 is locally defined function.

```
I/P - a = 10
      b = 20
      def abc():
          Print(a)
      abc()
      Print(a)
```

```
O/P - 10
      10.
```

BUILT-IN CLASS ATTRIBUTES:

Every python class keeps following built-in class attributes and they can be accessed using dot operator like any other attribute.

↳ __dict__ : Dictionary containing the class's namespace.

↳ __doc__ : Class documentation string or none, if undefined.

↳ __name__ : class name

↳ __module__ : Module name in which the class is defined.

this attribute is '__main__' in interactive mode

↳ __bases__ : A possibly empty tuple containing the base classes, in order of their occurance in

the base class list.

i/p - pavani.__dict__

o/p - {'age': 24, 'gender': 'Female', 'name': 'pavani'}

i/p - help(pavani)

o/p - Help on human in module __main__ object:

class human(builtins.object)

Methods defined here:

__init__(self, n, a, g)

Initialize self. see help(type(self)) for accurate signature

drive(self)

Data descriptors defined here:

__dict__

dictionary for instance variables (if defined)

__weakref__

list of weak references to the object (if defined)

I/P - class test:

```
    c = 30
    def __init__(self):
        self.a = 10
        self.b = 20

    t1 = test()
    t2 = test()
    t3 = test()
```

} → Each object will have a copy of instance variable

```
    t1.__dict__
```

O/P - {'a': 10, 'b': 20}