

Type of Variable

- Instance Variable
- Class Variable / Static Variable

Instance Variable

Instance variables are the variables whose separate copy is created in every object.

Instance variables are defined and initialized using a constructor with self parameter.

Ex:-

```
class Mobile:
```

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

```
        self.model = 'RealMe X'
```



Instance Variable

```
    def show_model(self):
```

```
        print(self.model)
```

```
realme = Mobile( )
```

Accessing Instance Variable

With Instance Method

To access instance variable, we need instance methods with self as first parameter then we can access instance variable using self.variable_name

class Mobile:

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

```
    self.model = 'RealMe X'
```

Instance Variable

```
def show_model(self):
```

Instance Method

```
    self.model
```

```
realme = Mobile( )
```

Accessing Instance Variable

Accessing Instance Variable

Outside Class

We can access instance variable using object_name.variable_name


class Mobile:

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

```
    self.model = 'RealMe X'
```



```
def show_model(self):
```




```
    self.model
```



Accessing Instance Variable

```
realme = Mobile()
```

```
realme.model
```



Accessing Instance Variable from outside Class

Instance Variable

Instance variables are the variables whose separate copy is created in every object. If we modify the copy of Instance variable in an instance, it will not effect all the copies in the other instance.

```
class Mobile:
```

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

```
        self.model = 'RealMe X'
```

```
    def show_model(self):
```

```
        print(self.model)
```

```
realme = Mobile( )
```

```
redmi = Mobile( )
```

```
greek = Mobile( )
```

← Instance Variable

Heap Memory

self.model = 'RealMe X'

realme

self.model = 'RealMe X'

redmi

self.model = 'RealMe X'

greek

Class Variable / Static Variable

Class variables are the variables whose single copy is available to all the instance of the class. If we modify the copy of class variable in an instance, it will effect all the copies in the other instance.

Ex:-

```
class Mobile:
```

```
    fp = 'Yes'
```



Class Variable

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

```
        self.model = 'RealMe X'
```

```
    def show_model(self):
```

```
        print(self.model)
```

```
realme = Mobile( )
```

Accessing Class/Static Variable

With Class Method

To access class variable, we need class methods with cls as first parameter then we can access class variable using cls.variable_name

class Mobile:

fp = 'Yes'



Class Variable

def __init__(self):

self.model = 'RealMe X'

def show_model(self):

print(self.model)

@classmethod



Class Method

def is_fp(cls):

cls.fp



Accessing Class Variable inside Class Method

realme = Mobile()

Accessing Class/Static Variable

Outside Class

We can access class variable using Classname.variable_name

class Mobile:

fp = 'Yes'

Class Variable



@classmethod

Class Method

def show(cls):

cls.fp

Accessing Class Variable inside Class Method

realme = Mobile()

Mobile.fp

Accessing Class Variable outside class

Class Variable / Static Variable

Class variables are the variables whose single copy is available to all the instance of the class. If we modify the copy of class variable in an instance, it will effect all the copies in the other instance.

```
class Mobile:
    fp = 'Yes'
    @classmethod
    def is_fp(cls):
        print(cls.fp)
realme = Mobile()
redmi = Mobile()
greek = Mobile()
print(Mobile.fp)
```

