FACE

# Constructors

# Constructors

- Initialize the instance members

- Executes when we create the object

- Performs any start-up task

# Types of Constructors

- Default constructors - doesn't accept any arguments.

- Parameterized constructors - constructor with parameters

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# Creating a Constructors

- Begins with double underscores(__)

- Name should be in __init__()

```python
// Predict the output
class Constructor:

    def __init__(self):
        self.name="Hello"

    def read_name(self):
        print(self.name)

cons=Constructor()
cons.read_name()
```

Hello

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```python
// Predict the output(Default Constructor)
class Car:
    name = "AUDI"
    def read_name(self):
        print(self.name)

c = Car()
c.read_name()
```

AUDI

```python
// Predict the output(Parameterized Constructor)
class Car:
    name = "Audi"

    def __init__(self, data):
        self.name = data

    def read_name(self):
        print(self.name)

c=Car("Benz")
c.read_name()
c1=Car("BMW")
c1.read_name()
```

Benz
BMW

# Defining a Constructor

- Object Creation
  - ✓ Controlled by static class
  - ✓ Method with the name __new__
- Object Initialization
  - ✓ Controlled by instance class
  - ✓ Method with the name __init__

```
// Predict the output(Object creation)
class Car:
    def __new__(self):
        return 'Audi Car'


c= Car()

print(c)
```

```python
// Predict the output(Parameterized Constructor)
class Car:
    name = "Audi"

    def __init__(self, data):
        self.name = data

    def read_name(self):
        print(self.name)

c=Car("Benz")
c.read_name()
c1=Car("BMW")
c1.read_name()
```

A constructor has

**A)** Return type integer

**B)** Return type char

**C)** No return type

**D)** Return type Boolean

What is the output of the below code?

```
class Sales:
    def __init__(self, id):
        self.id = id
        id = 100


val = Sales(123)
print (val.id)
```

**A)** 123

**B)** Error

**C)** Function is not called

**D)** Class is declared wrongly

What is the output of the below code?

```
class Person:
    def __init__(self, id):
        self.id = id

sam = Person(100)

sam.__dict__['age'] = 49

print (sam.age + len(sam.__dict__))
```

**A)** 49

**B)** 50

**C)** 51

**D)** 48

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Which Of The Following Statements Is True?

**A)** By default, the __new__() method invokes the __init__ method.

**B)** The __new__() method is defined in the object class.

**C)** The __init__() method is defined in the object class.

**D)** All the above