PYTHON DAY - 8

Pantech e Learning
DIGITAL LEARNING SIMPLIFIED

CLASS AND OBJECT

Class

- **Red**
- **Ford**
- **Mustang**

- **Blue**
- **Toyota**
- **primus**

- **Green**
- **Volkswagen**
- **Golf**
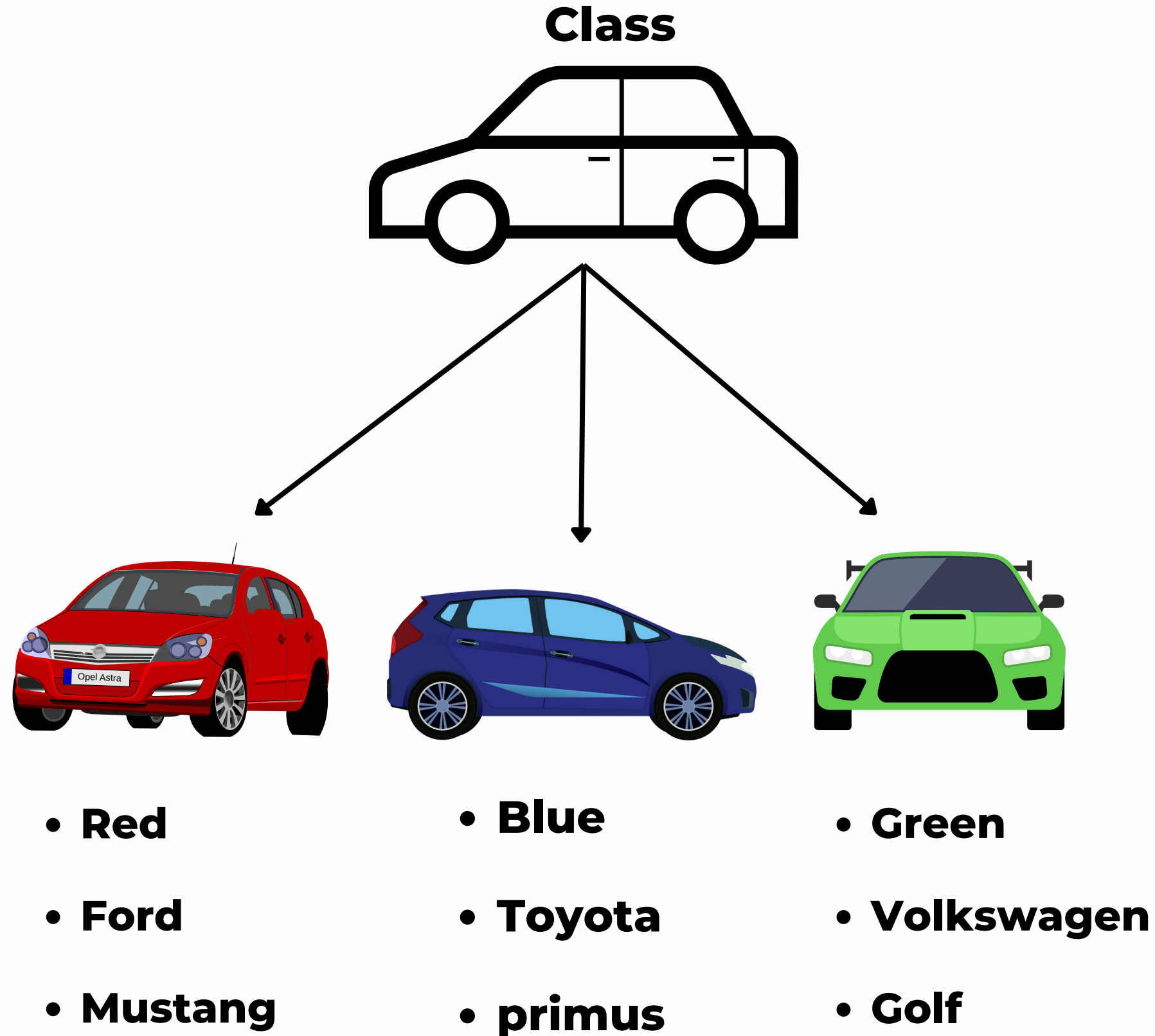
- Python is an object oriented programming language, almost everything in python is object, with its properties and methods

- A class is like object constructor, or a "blueprint" for creating objects

```
class number:

    x = 5
```

```python
class number:

    x = 5

obj = number()

print(obj.x)
```

```python
class course:

  def session(self):

    print("This is object and class session")


obj = course()

obj.session()
```

```
class myclass:

def __init__(self)

        body of the constructor
```

- Constructor is used for instantiating an object.

- The task of the constructor is to assign values to the data members of the class

- In python the __init__() method is called the constructor

```python
class person:

  def __init__(self, name, age):

    self.name = name

    self.age = age

  def one(self):

    print(f"My name is {self.name},my age is {self.age}")

  def two(self):

    print(f"I am {self.name}, and i am {self.age} years old")

  def three(self):

    print(f"Hi, i am {self.name}, {self.age} yrs")
```

```
person1 = person("Manish",20)

person2 = person("Tom", 23)

person3 = person("sam", 25)


person1.two()

person2.three()
```

1. Instance variables

2. Class variables

INSTANCE VARIABLES

```python
class car:

  def __init__(self):

    self.milage = 20

    self.company = "BMW"


one = car()

two = car()

print(one.milage, one.company)

print(two.milage, two.company)
```

```python
two.milage = 30


print(one.milage, one.company)


print(two.milage, two.company)
```

CLASS VARIABLES

```python
class car:

    wheel = 4

    def __init__(self):

        self.milage = 20

        self.company = "BMW"


one = car()

two = car()


print(one.wheel)

print(two.wheel)
```

```python
car.wheel = 8


print(one.wheel)


print(two.wheel)
```

1. Instance method

2. Class method

3. Static method

INSTANCE METHOD

```python
class student:

  school = "abc school"

  def __init__(self, name, id):

    self.name = name

    self.id = id

  def details(self):

    return f"student name: {self.name}, student id: {self.id}"


obj = student("john",12)

print(obj.details())
```

CLASS METHOD

```python
class student:

    school = "abc school"

    def __init__(self, name,id):

        self.name = name

        self.id = id


    def details(self):

        return f"student name: {self.name}, age:{self.id}"

    @classmethod

    def schoolname(cls):

        return cls.school


obj = student("John",14)

print(obj.details())

print(student.schoolname())
```

STATIC METHOD

```python
class student:

  school = "abc school"

  def __init__(self, name,id):

    self.name = name

    self.id = id



  def details(self):

    return f"student name: {self.name}, age:{self.id}"

  @staticmethod

  def info():

   return ("This is information about students")


obj = student("John",14)

print(student.info())
```

INHERITANCE

```python
class one:

  def first(self):

    return "this is first"

  def second(self):

    return "this is second"


class two(one):

  def third(self):

    return "this is third"

  def fourth(self):

    return "this is fourth"


obj2 = two()
```

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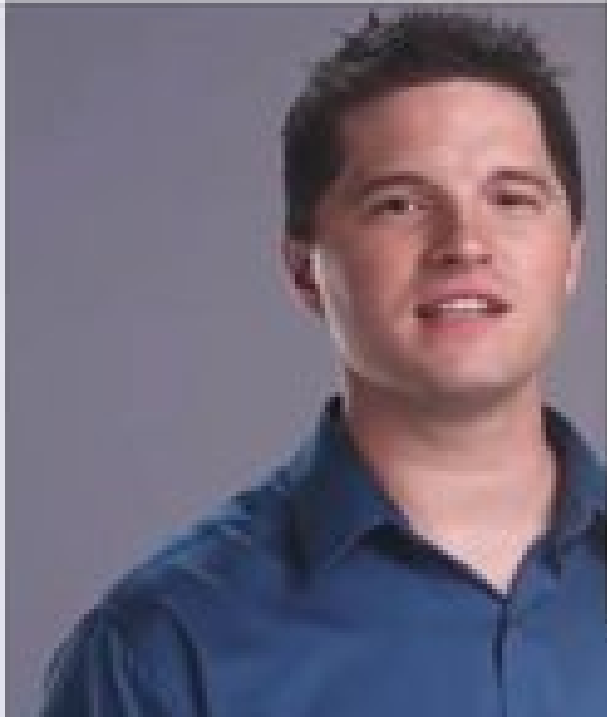
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Shantanu Shinde

ASSIGNMENT

1

ROMAN NUMERALS TO INTEGER

Roman numerals to integer

Roman numerals from user input should be converted into integer

values as output

Rules:

1. If the Larger value is written first followed by smaller

    value, then add those values.

        eg: III = 3, XII = 12

2. If smaller is written first followed by larger value, then

    subtract those values
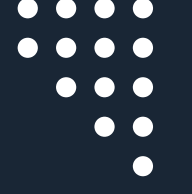
        eg: IV = 4 , CD = 400

I	1
V	5
X	10
L	50
C	100
D	500
M	1000

TEST CASES

```
                                  Test cases

1.  input = "MCMXCIX"      --->   output = 1999

2.  input = "DCCC"         --->   output = 800

3.  input = "DCLXXIII"     --->   output = 673

4.  input = "MMMDCCXXIV"   --->   output = 3724

5.  input = "MMMCMXCIX"    --->   output = 3999
```

THANKS FOR WATCHING