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'''class Employee:
    # class variables
    company_name = 'ABC Company'

    # constructor to initialize the object
    def __init__(self, name, salary):
        # instance variables
        self.name = name
        self.salary = salary

    # instance method
    def show(self):
        print('Employee:', self.name, self.salary, self.company_name)

# create first object
emp1 = Employee("Harry", 12000)
emp1.show()

# create second object
emp2 = Employee("Emma", 10000)
emp2.show()'''

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class student:                                     #class name and initialization

    def __init__(self, name, percentage):          #creating a constructor of object
        self.name=name                            #instance variables
        self.percentage= percentage               #instance variables

    def show(self):                                #instance method
        print("Name is:", self.name, "and Percentage is", self.percentage)

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stud= student("Jessa", 80)                         #object of class
stud.show()

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stud2= student("Yi", 90)                           #object of class
stud2.show()

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#Define a class

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'''class Person:
    def __init__(self, name, sex, profession):
        # data members (instance variables)
        self.name = name
        self.sex = sex
        self.profession = profession

    # Behavior (instance methods)
    def show(self):
        print('Name:', self.name, 'Sex:', self.sex, 'Profession:',
self.profession)

    # Behavior (instance methods)
    def work(self):

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        print(self.name, 'working as a', self.profession)'''

#The complete example:

'''class Person:
    def __init__(self, name, sex, profession):
        # data members (instance variables)
        self.name = name
        self.sex = sex
        self.profession = profession

    # Behavior (instance methods)
    def show(self):
        print('Name:', self.name, 'Sex:', self.sex, 'Profession:',
self.profession)

    # Behavior (instance methods)
    def work(self):
        print(self.name, 'working as a', self.profession)

# create object of a class
jessa = Person('Jessa', 'Female', 'Software Engineer')

# call methods
jessa.show()
jessa.work()'''

#Access of attributes and variables at class and instance level

'''class Student:
    # class variables
    school_name = 'ABC School'

    # constructor
    def __init__(self, name, age):
        # instance variables
        self.name = name
        self.age = age

s1 = Student("Harry", 12)
# access instance variables
print('Student:', s1.name, s1.age)

# access class variable
print('School name:', Student.school_name)

# Modify instance variables
s1.name = 'Jessa'
s1.age = 14
print('Student:', s1.name, s1.age)

# Modify class variables
Student.school_name = 'XYZ School'

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print('School name:', Student.school_name)'''

#Define and call an instance method and class method

# class methods demo
'''class Student:
    # class variable
    school_name = 'ABC School'

    # constructor
    def __init__(self, name, age):
        # instance variables
        self.name = name
        self.age = age

    # instance method
    def show(self):
        # access instance variables and class variables
        print('Student:', self.name, self.age, Student.school_name)

    # instance method
    def change_age(self, new_age):
        # modify instance variable
        self.age = new_age

    # class method
    @classmethod
    def modify_school_name(cls, new_name):
        # modify class variable
        cls.school_name = new_name

s1 = Student("Harry", 12)

# call instance methods
s1.show()
s1.change_age(14)

# call class method
Student.modify_school_name('XYZ School')
# call instance methods
s1.show()'''

#Modify Object Properties

'''class Fruit:
    def __init__(self, name, color):
        self.name = name
        self.color = color

    def show(self):
        print("Fruit is", self.name, "and Color is", self.color)

# creating object of the class
obj = Fruit("Apple", "red")

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# Modifying Object Properties
obj.name = "strawberry"

# calling the instance method using the object obj
obj.show()
# Output Fruit is strawberry and Color is red'''

#Delete object properties

'''class Fruit:
    def __init__(self, name, color):
        self.name = name
        self.color = color

    def show(self):
        print("Fruit is", self.name, "and Color is", self.color)

# creating object of the class
obj = Fruit("Apple", "red")

# Deleting Object Properties
del obj.name

# Accessing object properties after deleting
print(obj.name)'''
# Output: AttributeError: 'Fruit' object has no attribute 'name'

#Delete object

'''class Employee:
    depatment = "IT"

    def show(self):
        print("Department is ", self.depatment)

emp = Employee()
emp.show()

# delete object
del emp

# Accessing after delete object
emp.show()
# Output : NameError: name 'emp' is not defined'''

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