9 Feb Assignment

1. create a child class car from the vehicle class created in Qu 1, which will inherit the Vehicle class. Create a method named Seating_Capacity which takes capacity as an argument and returns the name of the vehicle & its seating capacity.

```
class Vehicle:
    def __init__(name_of_vehicle, capacity):
        self.name_of_vehicle = name_of_vehicle
        self.capacity = capacity

class car(Vehicle):
    pass

child_class_car = car("School car", 8)
print(isinstance(childclass, Vehicle))
    True.
```

2. What is multiple inheritance? write a python code to demonstrate multiple inheritance.

When a class is derived from more than one base class it is called multiple inheritance.

```
Class Base1: Body of the class
class Base2: Body of the class
class derived(Base1, Base2): Body of the class
```

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Q.3 Create a vehicle class with an init method having instance variables as name_of_vehicle, max_speed & average_of_vehicle.

```
class Vehicle:
    def __init__(self, name, max_speed, mileage):
        self.name = name
        self.name_speed = max_speed
        self.mileage = mileage
```

Q. 4 What are getter & setter in python? Create a class & create a getter & a setter method in this class?

→ In Python, getters and setters are not the same as those in other object oriented programming languages. Basically, the main purpose of using getters & setters in object-oriented programs is to ensure data encapsulation.

```
class Geeks:
    def __init__(self):
        self._age = 0

    def get_age(self):
        print("getter method called")
        return self._age
```

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```
def set_age(self,a):
print("setter method called")
    self._age =a

def del_age(self):
    del self._age

age = property(get_age, set_age, del_ag)
mark = Creeps()

mark.age = 10
print(mark.age)
```

2.5 What is Method overiding in python? write a python code to ~~pubprogramming~~ demonstrate method overriding.

→ Method overriding is an ability of any object-oriented programming language that allows a subclass or child class to provide a specific implementation of a method that is already provided by one of its super classes or parent classes.

→ When a method in a subclass has the same name, same parameters or signature & same return type (or sub-type) as a method in its super class, then the method in the subclass is said to override the method in the super class.

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Ex:-
```
class parent():
    def __init__(self):
        self.value = "Inside Parent"
    def show(self):
        print(self.value)

class child(Parent):
    def __init__(self):
        self.value = "Inside child"
    def show(self):
        print(self.value)
```