Problem -1

```
class Student(object):
    def __init__(self, n, r, a, g, b, s):
        self.name = n
        self.reg = r
        self.age = a
        self.gender = g
        self.branch = b
        self.sem = s
    def print_details(self):
        print("Name of student = ", self.name)
        print("Reg no. of student = ", self.reg)
        print("Age of student = ", self.age)
        print("Gender of student = ", self.gender)
        print("Branch of student = ", self.branch)
        print("Semester of student = ", self.sem)
class StudentResultInfo(Student):
    def __init__(self,n, r, a, g, b, s, tm, per, gr):
        self.total_marks = tm
        self.percentage = per
        self.grade = gr
        Student.__init__(self, n, r, a, g, b, s)
    def print_info(self):
        print("Total grade of the student: ", self.tm)
        print("Percentage of student: ", self.per)
        print("Grades of student: ", self.gr)

Object = StudentResultInfo('Rajesh', 78, 19, 'Male', 2019, '5th', 485, 80.83, 'A')
Object.print_details()
Object.print_info
```

```
Name of student =  Rajesh
Reg no. of student =  78
Age of student =  19
Gender of student =  Male
Branch of student =  2019
Semester of student =  5th
<bound method StudentResultInfo.print_info of <__main__.StudentResultInfo object at 0
```

Problem-2

```
class PDFs:
  def __init__(self, creator, description, size):
    self.creator = creator
    self.description = description
    self.size = size

  def displayInfo(self):
    print("Created by:",self.creator)
    print("Description:", self.description)
```

```
      print("File size (in KBs):", self.size)

    def sizeLimit(self):
      if self.size > 256:
        print("Size exceeds threshold.\n")
      else:
        print("Size is within the threshold.\n")

  class Pictures(PDFs):
    def __init__(self, creator, description, size, dimension):
      super().__init__(creator, description, size)
      self.dimension = dimension

    def displayPicInfo(self):
      self.displayInfo()
      print("Dimensions (in pixels):", self.dimension)

    def dimensionLimit(self):
      if self.dimension>2000:
        print(" high dimension!\n")
      else:
        print(" dimensions are fine.\n")

  pdf1 = PDFs("Hem", "xyz", 109)
  pdf1.displayInfo()
  pdf1.sizeLimit()
  print()
  img = Pictures("ang", "abcd", 43265, 2134)
  img.displayPicInfo()
  img.dimensionLimit()
```

```
 Created by: Hem
 Description: xyz
 File size (in KBs): 109
 Size is within the threshold.


 Created by: ang
 Description: abcd
 File size (in KBs): 43265
 Dimensions (in pixels): 2134
  high dimension!
```

Problem -3

```
class Vehicle:
    def __init__(self, n, m, c=50):
        self.name = n
        self.mileage = m
        self.capacity = c

    def print_details(self):
        print(f"Vehicle Name: {self.name}")
        print(f"Mileage: {self.mileage}")
```

```
            print(f"Capacity: {self.capacity}")

        def fare(self):
            return self.capacity * 100


    class Bus(Vehicle):

        def fare(self):
            total_fare = 1.1 * Vehicle.fare(self)
            return total_fare

        def print_details(self):
            Vehicle.print_details(self)

    obj = Bus("Ram-pyari", 18, 50)
    obj.print_details()
    print(f"Total fare = {obj.fare()}")
```

```
Vehicle Name: Ram-pyari
Mileage: 18
Capacity: 50
Total fare = 5500.0
```

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