

## QUESTION 7

a) Develop a python program that uses class Student which prompts the user to enter marks in three subjects and calculates total marks, percentage and displays the score card details. [Hint: Use list to store the marks in three subjects and total marks. Use `_init_()` method to initialize name, USN and the lists to store marks and total, Use `getMarks()` method to read marks into the list, and `display()` method to display the score card details.]

```
from functools import reduce

class Student:
    def _init_(self, name, USN):
        self.name = name
        self.USN = USN
        self.list = []

    def getMarks(self) -> None:
        print("Enter the marks of the student: ")
        for i in range(0, 3):
            self.list.append(int(input()))

    def display(self):
        max_marks = int(input("enter max marks"))
        TotalMarks = reduce(lambda a, b: a + b, self.list)
        percentage = (TotalMarks / max_marks) * 100
        print("Name:", self.name)
        print("USN", self.USN)
        print("Marks: ", *self.list, sep="\n")
        print("max marks", max_marks)
        print("obtained marks", TotalMarks)
```

```
print("percentage obtained", percentage)
print("Enter the details of student 1")
name = input("Enter the name: ")
USN = input("Enter the usn: ")
s1 = Student(name, USN)
s1.getMarks()
print("\n")
s1.display()
```

OUTPUT-

Enter the details of student 1

Enter the name: Haadi

Enter the usn: 1ms22ii11

Enter the marks of the student:

89

90

91

enter max marks300

Name: Haadi

USN 1ms22ii11

Marks:

89

90

91

max marks 300

obtained marks 270

percentage obtained 90.0

b) Create a class called time. Its three members all type int should be called hours, minutes and seconds. Write a python program that prompts the user to enter a time values separately. The Program should then store the time in the object and finally printout the total no of seconds represented by this value. Use appropriate member functions.

```
class Time:
    def __init__(self, hours=0, minutes=0, seconds=0):
        self.hours = hours
        self.minutes = minutes
        self.seconds = seconds
    def to_seconds(self):
        return self.hours * 3600 + self.minutes * 60 + self.seconds

time = Time(hours=int(input("Enter the hours: ")),
            minutes=int(input("Enter the minutes: ")),
            seconds=int(input("Enter the seconds: ")))
print("Total seconds:", time.to_seconds())
```

OUTPUT-

Enter the hours: 5

Enter the minutes: 10

Enter the seconds: 20

Total seconds: 18620