Laboratory Midterm Exam

Name: Jayvee N Mapote Student Number:2020161610

Course/Section:A11 Professor: Kenneth Kim Castro

1.

Problem: Create a program that accepts 10 positive or negative integers then displays the integers in the order they were entered, ascending, and descending order. Additionally, the average, the highest, the lowest of all inputs is shown at the end of output.

Code:

```
def InputNum():

    num = [int(input('Enter a Number: ')) for i in range(10)]
    a = sorted(num)
    b = sorted(num, reverse=True)
    c = sum(num)/len(num)
    d = max(num)
    e = min(num)
    print('\nInput Order: %s\nAscending Order: %s\nDescending Order: %s\nAverage: %s\nHighest: %s\nLowest: %s'
    %(str(num),str(a),str(b),str(c),str(d),str(e)))
```

Output:

```
Input Order: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
Ascending Order: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
Descending Order: [10, 9, 8, 7, 6, 5, 4, 3, 2, 1]
Average: 5.5
Highest: 10
Lowest: 1
```

2.

Problem: Create a program that accepts 5 String inputs. These string inputs may consist of more than 1 word. Afterwards, the list shows all elements it contains in the same order as it was inputted, in alphabetical order, and in reverse order.

Code:

```
def InputWord():

    a = [str(input('Enter a String: ')) for i in range(5)]
    b = sorted(a)
    c = sorted(a, reverse=True)
    print('\nInput Order: %s\nAlphabetical order: %s\nReverse order: %s' %(str(a),str(b),str(c)))
```

Output:

```
Input Order: ['was', 'abes', 'Posju', 'SWEA', 'kwua']
Alphabetical order: ['Posju', 'SWEA', 'abes', 'kwua', 'was']
Reverse order: ['was', 'kwua', 'abes', 'SWEA', 'Posju']
```

3.

Code:

[Bellow]

Output:

```
Student Name: Kenneth Kim P. Castro
Student Number: 2014109002
Program: COE


CourseCode      Units   Grades
CS002P           2.00    1.00
HUM016           3.00    1.25
MATH023          3.00    1.50
PHY022           3.00    1.50
PHY022L          1.00    1.00
SS016            3.00    1.00


Total Units: 15
General Weighted Average: 1.25
Lister Status: President's Lister
```

```python
def Grading_System():

    Course_code = []
    Course_grade = []
    Course_unit = []
    i = 0
    x = 0
    z=0
    Name = str(input("Enter your name: "))
    Student_number = str(input("Enter your Student Number: "))
    Program = str(input("Enter your Program: "))
    Units = int(input("Enter your Units enrolled: "))
    if Units >= 12 and Units <=18:
        print()
    else:
        print("Wrong Input!")
        Grading_System()
    while i <= 0:
        Course_code.append(str(input("Enter your Course Code: ")))
        Course_grade.append(float(input("Enter your Course Grade: ")))
        Course_unit.append(int(input("Enter your Units: ")))
        if Course_unit[z] >5:
            print("Wrong Input")
            Grading_System()
            z+1
        i = int(input("Enter 1 if you're done else type 0: "))
        y = len(Course_grade)
        z = 0
    while z < y:
        x += (Course_grade[z]*Course_unit[z])
        z+=1
    z=0
    for loop in range(y):
        if Course_grade[z] < 5:
            a = 1
        else:
            a = 0
        z+=1
    Course_unit = ['%.2f' % elem for elem in Course_unit]
    Course_grade = ['%.2f' % elem for elem in Course_grade]
    gwa = x/Units
    print("\n\n\nStudent Name: " + Name)
    print("Student Number: " + Student_number)
    print("Program: " + Program)
    print("\n")
    z=0
    print("CourseCode\tUnits\tGrades")
    for k in range(y):
        print(str(Course_code[z])+"\t\t",str(Course_unit[z])+"\t",str(Course_grade[z]))
        z+=1
    print("\n")
    print("Total Units: " + str(Units))
    if gwa <= 1.50 and a == 1:
        print("General Weighted Average: " + str(gwa))
        print("Lister Status: President's Lister")
    elif gwa <= 1.75 and a == 1:
        print("General Weighted Average: " + str(gwa))
        print("Lister Status: Dean's Lister")
    elif gwa > 1.75 and a == 1:
        print("General Weighted Average: " + str(gwa))
        print("Lister Status: Parent's Lister")
```