

Programming Exercise:-

1) Given a list of five integers, find the minimum and maximum sum using exactly three of the five integers. **5 Marks**

List = [10,12,1,3,7]

2) Given a list containing scores of a batsman in a tournament, determine the number of times he breaks his record for highest and lowest score in the tournament. **5 Marks**

Sample input :- list1 = [10, 5 , 20 , 20 , 4 , 5 , 2 , 25 , 1]
output : [2,4]

he breaks his record for highest run in 3rd & 8th game

he breaks his record for lowest run in 2nd ,5th , 7th & 9th game

3) A **SPECIAL STRING** has the following properties:

5 Marks

- It is a concatenation of one or more *words* consisting of English letters.
- All letters in the first word are *lowercase*.
- For each of the subsequent words, the first letter is *uppercase* and the rest of the letters are *lowercase*.

Given a special string, find the number of words in it.

Sample input : pgdaiAtCdacPatna

Output : 4

4) From the given CSV file, perform the following operations:

10 Marks

- Read the data in a dataframe.
- Find the row having the maximum temperature.

- Find the mean,max,min,standard deviation,25 percentile,50 percentile,75 percentile for Temperature column.
- Replace the missing values in '**WindSpeedMPH**' column with the mean value.

- 5) Two numbers are friends if they leave the same remainder **10 Marks**
when divided by 5.

Strength of a number is defined as the total number of friends it has.
Given a list of positive integers, find the total strength of the list.

Sample input : list1 = [6 ,11 ,16 ,7 ,12]
output = 8

Explanation : 6,11 & 16 are friends because they leave 1 as remainder when divided by 5. Hence their strength = 2

similarly, 7 & 12 are friends with strength = 1
so total strength = $2*3 + 1*2 = 8$

- 6) Write a python function to print the even factors of a given number. **5 Marks**