

- 1) Write a python program that prompts the user for a list of numbers and prints out the maximum and minimum of the numbers at the end when the user enters “done”.
(Hint: Store the numbers entered by user in a list and use the max() and min() functions to compute the maximum and minimum numbers after the loop completes.) (1)

Expected Output:

```
Enter a number: 6
Enter a number: 2
Enter a number: 9
Enter a number: 3
Enter a number: 5
Enter a number: done
Maximum: 9.0
Minimum: 2.0
```

- 2) Write a Python program to find the second largest number in a list. (1)
- 3) Write a Python code to generate first ‘n’ Fibonacci numbers. Store the generated Fibonacci numbers in a list and display it. (2)

Expected input and output:

```
Enter n: 6
[0, 1, 1, 2, 3, 5]
```

- 4) Write a Python program to get a string made of the last two characters and the first two from a given a string. If the string length is less than 2, return instead of the empty string. (2)
- Expected input and output:

```
Input: "Python class"
Output: "ssPy"
```

- 5) Suppose the input is a string –

“You have received first email from abc@gmail.com, You have received second email from def@gmail.com, You have received third email from pqr@gmail.com, You have received fourth email from qwerty@gmail.com, You have received fifth email from spam@gmail.com”

Now write a Python program for the following tasks:

- 1- Display the list of email ids (No comma or quotes should get attached to the email ids)
- 2- Display the email id with maximum length
- 3- Check whether you have received the email from daiict@gmail.com, if not then add into the list
- 4- Also delete the spam email id from the list of email ids
- 5- Display the index (position) of pqr@gmail.com in the list

(NOTE: Explore all functions available with the list data-structure from the python documentation. In one of the above tasks, you may require to use a function, which we haven’t discussed.) (5)

- 6) Suppose the input is a string –

“You have received first email from abc@gmail.com, You have received second email from def@gmail.com, You have received third email from pqr@gmail.com, You have received fourth email from qwerty@gmail.com, You have received fifth email from spam@gmail.com”

Now write a Python program for the following tasks:

- 1- Display the list of unique words in the above input
- 2- Display the count of each unique word. Don't maintain separate variables for holding the counts. Use a list to store these counts.
- 3- A bigram is defined as a collection of two consecutive words, for example: You have, have received, ... Display the list of unique bigrams in the above text and their counts. (HINT: You may use the split function and nested for loops to do the task) (4)