Data Structure and Object-Oriented Programming

Assignment 01   Due: 3rd Dec, 2018

Write your own class for complex numbers, with helper functions as follows:

1 – Add

2 – Sub

3 – Multiply

4 – Divide

Do add the exception logic where necessary for example in divide.

Define another class (singly) Linked List that can handle complex ADTs defined above and support following functions:

1 – Insert at end

2 – Delete at a given position

3 – value at position

4 – insert after a given position

5 – print the list

You should upload your code on github. Please upload only the code not your project files.

In the main file you should create a linked list and store the following numbers

1 – 4 + 5j

2 – 3 – 3j

3 – 4 + 3j

Then delete add the first two number and store in the list. Sub 1 and 3 and store at last. Mul 2 and 3 and store at last. Divide 1 and 3 and delete the element at 4 and and at an element at last. Print the list after each step.

You should have a read me file along with the source code, and the output after each step.