## Task 1

Description – Write a two-way linked list, write a program to calculate the mean and standard deviation of a set of n real numbers.

Design:

* Realization with two classes – one auxiliary, containing the logic for a list node (element of a generic type, previous and next node) and second main class containing list logic (add and remove element from beginning and end of list, retrieve size of list, helping/testing functions to iterate over list)
* Use list to store data and utility function to retrieve mean(average) value
* Write separate utility to calculate standard deviation by passing list and average value
* Language of a choice – Typescript (javascript typed superset) over nodejs runtime engine with chai as testing framework

Planned time:

* Ptime coding – 4 hours
* Ptime testing – 1 hours
* Total – 5 hours

Actual time:

* Atime coding – 1 hours
* Atime testing – 2 hours
* Total – 3 hours

Defects found: 0

Test Results:

Two way binded list test

✓ should be empty

✓ should init properly

✓ should have two two-way binded elements, starting with the unshifted one

✓ should pop the last element

✓ should shift the first element

✓ should fail on pop or shift empty list

Error, no such element

Error, no such element

Mean and standard deviation

✓ should pass Estimated Proxy size values

✓ should pass Development Hours values