BLM2541
Programming Languages
Assignment - 1
(Due 16/10/2017 – 23:59h)

Write a C program which simulates the shopping queue in a hyper market. Suppose that a hypermarket has N cash points. They open one more cash-point if and only if there are more than X customers on each line in front of cash points. At start point, they only have one open cash-point. At each iteration C ($1<=C<=10$, should be randomized) person comes to the cash point and L($1<=L<=5$, should be randomized) person leaves the cash points. The system should simulate this operation by only using one single array with dynamic memory allocation techniques. Each cell represents one cash-point.

- The program should display the number of customer waiting on the line at each iteration.
- The program should open or close cash points if necessary. You can change the upper limit of the given parameters to show both cases.
- Your program should report the average number of customers waiting on each cash point.

You should also report;
- The hardware specification of your computer (CPU, RAM)
- The compiler
- The development environment

Note: Use reasonable variable and function names.

<u>ATTENTION</u>
Do not forget to read the document "ASSIGNMENT RULES", located in my website.