10.8: The following operations are performed on a stack:

PUSH A, PUSH B, POP, PUSH C, PUSH D, POP, PUSH E, POP, POP, PUSH F

a. What does the stack contain after the PUSH F?

The stack contains A and F from lowest to highest.

b. At which point does the stack contain the most elements? Without removing the elements left on the stack from the previous operations, we perform:

PUSH G, PUSH H, PUSH I, PUSH J, POP, PUSH K, POP, POP, POP, PUSH L, POP, POP, PUSH M.

The stack contains the most elements after the PUSH J or the PUSH K.

c. What does the stack contain now?

The stack contains A, F, and M from lowest to highest.

10.9: The input stream of a stack is a list of all the elements we pushed onto the stack, in the order that we pushed them. The input stream from Exercise 10.8 was ABCDEFGHIJKLM The output stream is a list of all the elements that are popped off the stack, in the order that they are popped off.

a. What is the output stream from Exercise 10.8? Hint: BDE ...

The output stream is BDECJKIHLG

10.11: In the example of Section 10.2.3, what are the contents of locations xO1F1 and x01F2? They are part of a larger structure. Provide a name for that structure. (Hint: See Table A.3.)

Location x01F1 contains x6200 and location x01F2 contains x6300.

The structure that they are a part of is the Interrupt Vector Table

10.24: Suppose the keyboard interrupt vector is x34 and the keyboard interrupt service routine starts at location x1000. What can you infer about the contents of any memory location from the above statement?

The contents of any data register being used will be copied to some preestablished memory location from the above statement.

Separate Exercise:

The program that was written is the program that was supposed to be written for the second exercise in the homework 6 questions. While the program is running, the user types in the console and the letters that are typed are only displayed after the third letter is typed because of the interrupt.