You are to write a MIPS assembly language program that will do the following:

1. Write these two programs.

   (a) Write a program in MIPS assembly language that finds the location of a desired character in a test-string. The null terminated text-string starts at address \texttt{str}. The program should ask “Enter the character:”. The output is either the position of the first occurrence of the character, or should output “Not found”.

   (b) Then modify the above program so that it will output the number of times the character occurs in the program, in addition to the address of the first occurrence. You will hand in the final version of the program.

2. Include ‘header block’ with a title, your name, a purpose statement, and how your program uses any registers. (See the examples in the notes.) Include a comment on each line of your program.

\textbf{NOTE:} For this assignment, you can assume that the input character is a printable alphanumeric text character.

\textbf{EXAMPLE RUN:} Assume that the string being searched is:

\texttt{Peter Piper picked a peck of pickled peppers.}

Then a run of the program might look like:

\texttt{Enter the character: p}
\texttt{First occurrence at: 9}
\texttt{Total occurrences: 7}