1. (30 points) Name:

   CS 315 - Programming Languages
   Fall 2021-2022
   Section 3
   Quiz 2

2. (35 points) Consider the following lex specification:

   %option main
   %
   a+b? printf ("x");
   a*b? printf ("y");
   . printf ("z");

   Give an example input so that the scanner will produce: yx
   
   ba

   Give an example input so that the scanner will produce z
   
   c

3. (35 points) Consider the following lex specification:

   %option main
   %
   [+][-][0-6]+   printf("%s", yytext);
   while|do|endif|if|else   printf("<RESERVED>");
   .   printf("<A>");
   .   ;

   What will be the output if we supply the following input to the compiled executable?

   if this text is 69 then while doing this you can take PI as 3.14 else 22/7
   
   <RESERVED>6<RESERVED><RESERVED>3<A>14<RESERVED>22