BİL 102 – Computer Programming
HW 01
Last Submission Date: Mar. 09, 2012 – 13:00

1. Write a program that evaluates the following function for some user supplied z and n=1, 2, .. 10.

$$f(z,n) = \sqrt{z\frac{1-(n+1)z^n+nz^{n+1}}{(1-z)^2}+e^{-zn}}$$

Your implementation should ask the "z" value from the user, then compute and output f(z, 1), f(z, 2), …,f(z, 10). **Do not use loops or user defined functions** (using library functions is permitted)**.** Send your implementation file with the proper name.

2. Write a program that determines total cost of some houses for a period of 5 years. Your implementation will read initial costs, annual fuel costs and tax rates from an input text file, 'input.txt', compute the total cost for five years by adding annual fuel costs and taxes to the initial costs for each year and output the initial costs, annual fuel costs, tax rates and total costs to a text file, 'output.txt'. The input file (you can obtain by using any text editor) will have 3 columns and 5 rows as in table 1. The output file will include headings and extend the data set one more column, which represents the total cost, as shown in table 2.
In the implementation, at least one user defined function will be used, which will write one row of actual data to the output file. Note that writing headings must be considered separately. **Do not use loops.**

<Initial House Cost>[*1]	<Annual Fuel Cost>[*1]	<Tax Rate>[*1]
60,000	2,000	0.02
65,000	2,500	0.02
80,000	1,500	0.022
100,000	2,000	0.025
50,000	3,000	0.02

Table 1: A sample input dataset: input file includes the numeric part only.

[*1]: Input file will not include this string part.

Initial House Cost	Annual Fuel Cost	Tax Rate	Total Cost
60,000	2,000	0.02	76000
65,000	2,500	0.02	84000
80,000	1,500	0.022	96300
100,000	2,000	0.025	122500
50,000	3,000	0.02	70000

Table 2: A sample output dataset

Send your implementation file, 'input.txt' and 'output.txt'.

General:

1. Obey honor code principles.
2. Obey coding convention.
3. Your submission should include the following files:

   HW01_<student number>_part1.c

   HW01_<student number>_part2.c
   input.txt
   output.txt

4. Deliver the printout of your code until 3 days later then the last submission date.