Exam 2 review exercises:

Problem 1: Suppose there is a text file named `internetUse.txt` in the Current Directory that contains information about the population (millions), number of internet users (millions), and average daily internet use (hours) for a set of countries, structured as follows:

```
Country    Population IntUsers   AvgUse
China        1350       591        4.5
India        1221       152        4.9
USA           317       254        5.2
Indonesia     254        38       5.5
Brazil        201        99       6.0
...
```

Write a script that reads in the contents of the above file and writes out a new file that contains the country names and the total number of hours per day that the country's internet users spend using the internet (i.e. the product of `IntUsers` and `AvgUse` in the above file):

```
China       2660.0
India        745.0
USA         1321.0
Indonesia    209.0
Brazil       594.0
...
```

Problem 2: Assume that a cell array named `words` is defined in the MATLAB workspace that contains the following words of the international phonetic alphabet:

```
words = {'Alpha' 'Bravo' 'Charlie' 'Delta' 'Echo' 'Fox Trot' 'Gold' ...
         'Hotel' 'India' 'Juliett' 'Kilo' 'Lima' 'Mike' 'November' ...
         'Oscar' 'Papa' 'Quebec' 'Romeo' 'Sierra' 'Tango' 'Uniform' ...
         'Victor' 'Whiskey' 'X-ray' 'Yankee' 'Zulu'}
```

Write a function named `translatePhonetic` that has two inputs, a string and the above `words` cell array. This function should return a string that contains the words in the phonetic alphabet corresponding to the characters of the input string, as shown in the following example:

```
>> newName = translatePhonetic('Sohie', words)
newName =
Sierra Oscar Hotel India Echo
```

(see solutions to these two problems on the next page)

Solutions to Exercises:

Problem 1:

```
fid = fopen('internetUse.txt');
info = textscan(fid, '%s %u %u %f', 'headerlines', 1);
fclose(fid)

fid = fopen('internetTotalUse.txt', 'w');
for i = 1:length(info{1})
    fprintf(fid, '%-10s %8.1f \n', info{1}{i}, info{3}(i)*info{4}(i));
end
fclose(fid)
```

Problem 2:

```
function newstring = translatePhonetic (string, words)
newstring = '';
for letter = string
    for i = 1:length(words)
         if (lower(letter) == lower(words{i}(1)))
             newstring = [newstring ' ' words{i}];
         end
    end
end
```