University of Massachusetts Dartmouth
Department of Electrical and Computer Engineering

ECE 161 Due: see http://ece161.viall.org
Lab 5 Name: buildwords.cpp

Write and test the function:

```
int buildwords(char tiles[], int numtiles, char words[][14]);
```

Where:

`tiles[]` – list of the available letters. A max of 6 letters are available.
`numtiles` – the number of tiles that are available.
`words[][14]` – this is the list of all the valid words that can be made from the given letters (tiles)
The function should return the number of words found.

You must combine several pieces of code that you have created in previous labs. You have the choice of using a "brute force" method or a "cute" method. In the "brute force" method you would use 2 nested `for`s for the 2 letter words, 3 nested `for`s for the 3 letter words, ... , 6 nested `for`s for the 6 letter words.

In the "cute" version, you would only have 6 nested `for`s and somehow get the 2, 3, 4, and 5 letter words from that as well. You may use whichever method you wish.

The main program should look something akin to:

```
#include <stdio.h>

char w[210000][14];     // the dictionary

void main(void)
{
      char tiles[10];
      int numfound, i;
      char words[10000][14];  // words made from tiles
      // use a function to read the sowpods list into w
      do
      {
            printf("Enter the 6 letters you have: ");
            gets(tiles);
            if (strlen(tiles) != 6)
                  printf("Read the instructions bonehead!\n");
      } while (strlen(tiles) != 6);
      numfound=buildwords(tiles, 6, words);
      for (i=0; i<numfound; i++)
            printf("%s\n",words[i]);
}
```