ES 112.02/04 Homework #7

Fall 2003-2004

Copying a Substring

Your task in this homework is to write a function that copies a substring of a given string into another string. The problem is perhaps best illustrated with an example. Suppose the string you have is:

```
Faculty of Engineering and Architecture
```

and you want to copy just the word Engineering into another string. Your job is to write a C function with the following prototype:

```
void substrcpy(char *target, const char *src,
               int startIndex, int length);
```

The function obviously returns nothing. The first argument, target, is where the substring will be copied into. The second argument, src, is the string from which a substring will be taken. The third argument, startIndex, is the index of the first character to be copied within src. The last argument, length, indicates how many characters should be copied.

Also, note that after copying, you have to make sure the string in target is properly null-terminated. Also, the function should never copy characters beyond the end of src.

The function you write should work properly with (and be submitted together with) the following code:

```
#include <stdio.h>

void substrcpy(char *target, const char *src,
               int startIndex, int length);

main()
{

  char string[] = "Faculty of Engineering and Architecture";
  char copy1[20];
  char copy2[20];

  substrcpy(copy1, string, 11, 11);
  substrcpy(copy2, string, 27, 12);

  printf("%s and %s", copy1, copy2);

  return 0;

}
```

And when run, should produce the following output:

```
Engineering and Architecture
```