CptS 121 – Program Design and Development
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Take-Home Quiz 8 (15 pts) – Recursion & More Pointers
NOTE: Please submit your hard copy solution in lab this week

1. (7 pts) Write a function called `recursive_string_length ()` that accepts a *pointer* to a string as a parameter, recursively *counts* the number of characters in the string (excluding the null character), and returns the *integer* count. For example, the count for "CptS121" is 7. You may not use any functions from <string.h>.

```
int recursive_string_length(char* string)
{
 if (*string == '\0')
 {
  return 0;
 }
 else {
  return 1 + recursive_string_length(++string);
 }
}
```

2. (8 pts) Write a function `recursive_string_copy()` which accepts a *pointer* to a source string and a *pointer* to a destination string as parameters, recursively *copies* from the source to destination (including the null character), and returns nothing. You may not use any functions from <string.h>. Hint: each recursive step requires that you pass in the address of the next character to copy from the source and the address of the next destination character location.

```
void recursive_string_copy(const char* source, char* destination)
{
 while (*source != '\0')
 {
  *destination = *source;
  recursive_string_copy(++source, ++destination);
 }
}
```