

## Lab Program 10

For this and all future labs, I strongly encourage you to begin your programs with a comment header similar to the following:

```
/*  
Programmer: First & Last Name  
Class: CSCE 1030 Lab  
Date: Today's Date  
Assignment: Lab 10  
cspXX.csci.unt.edu  
*/
```

You are welcome to include more information if you like. This week's assignment we will start our look at strings and user defined functions. Please avoid “**magic numbers**” when possible and have clean and clear indentions. **I would highly suggest you take advantage of the started code that I have provided at the end of assignment.** Name your file accordingly: **LastnameProg10.c.**

The program should:

1. Prompt the user the menu that is provided in the sample code.
2. Determine if the user's value is valid.
3. Depending on the user's selection ask them for one or two string values. Keep in mind that option 5 will need an additional value.
4. Fill in the necessary code in the functions as described in the example run.

Example:

```
XXXXXXXXXXXXXXXXXXXXX  
Welcome to the String Menu  
Please select on of the following:  
String Length      = 1  
String Compare     = 2  
String Concatenate = 3  
String Copy        = 4  
Character at       = 5  
Exit               = 99  
XXXXXXXXXXXXXXXXXXXXX  
1  
Please enter a string value  
Hello  
String length is: 5  
  
XXXXXXXXXXXXXXXXXXXXX  
Welcome to the String Menu  
Please select on of the following:  
String Length      = 1  
String Compare     = 2
```

```
String Concatenate = 3
String Copy        = 4
Character at       = 5
Exit               = 99
XXXXXXXXXXXXXXXXXXXX
2
Please enter a string value
Hello
Please enter a second string value
There
Strings: Hello and There are not equal
```

```
XXXXXXXXXXXXXXXXXXXX
Welcome to the String Menu
Please select on of the following:
String Length      = 1
String Compare     = 2
String Concatenate = 3
String Copy        = 4
Character at       = 5
Exit              = 99
XXXXXXXXXXXXXXXXXXXX
3
Please enter a string value
Hello
Please enter a second string value
There
The resulting string is: Hello There
```

```
XXXXXXXXXXXXXXXXXXXX
Welcome to the String Menu
Please select on of the following:
String Length      = 1
String Compare     = 2
String Concatenate = 3
String Copy        = 4
Character at       = 5
Exit              = 99
XXXXXXXXXXXXXXXXXXXX
4
Please enter a string value
Hello
Please enter a second string value
There
Source String contains: Hello
Destination String contains: There
Destination String now contains: Hello
```

```
XXXXXXXXXXXXXXXXXXXX
```

```
Welcome to the String Menu
Please select on of the following:
String Length      = 1
String Compare     = 2
String Concatenate = 3
String Copy        = 4
Character at       = 5
Exit              = 99
```

XXXXXXXXXXXXXXXXXXXX

```
5
Please enter a string value
Hello
Please enter a position value
4
In the string: Hello
Character: o is at position 4
```

XXXXXXXXXXXXXXXXXXXX

```
Welcome to the String Menu
Please select on of the following:
String Length      = 1
String Compare     = 2
String Concatenate = 3
String Copy        = 4
Character at       = 5
Exit              = 99
```

XXXXXXXXXXXXXXXXXXXX

```
6
Invalid Operation, try again
```

XXXXXXXXXXXXXXXXXXXX

```
Welcome to the String Menu
Please select on of the following:
String Length      = 1
String Compare     = 2
String Concatenate = 3
String Copy        = 4
Character at       = 5
Exit              = 99
```

XXXXXXXXXXXXXXXXXXXX

```
99
Good, bye
```

## Sample Code

```
/* Programmer Name:
   Class: CSCE 1030 Lab
   Date: Today's Date
   Assignment: Lab 10
   cspXX.csci.unt.edu
*/

#include <stdio.h>
#include <string.h>

#define MAXSTRINGLENGTH 100
#define CROSSBAR printf("XXXXXXXXXXXXXXXXXXXX \n");

void StringLength(char * TheString)
{
    int length = 0;

    return;
}

void StringCompare (char * String1, char * String2)
{
    int compare;

    return;
}

void StringConcatenate(char * String1, char * String2)
{
    int stringSize = MAXSTRINGLENGTH * 2 +1;
    char result[stringSize];

    return;
}

void StringCopy(char * SourceString, char * DestinationString)
{
    return;
}

void CharAtPosition(char * TheString, int position)
{
    return;
}
```

```
int main()
{
    enum OPERATION {STRLENGTH = 1, STRCOMPARE =2, STRCONCAT = 3,
                   STRCOPY = 4, CHARATPOS = 5, EXIT = 99};

    int position, userChoice;
    char string1[MAXSTRINGLENGTH + 1];
    char string2[MAXSTRINGLENGTH + 1];

    do{

        CROSSBAR;
        printf("Welcome to the String Menu\n");
        printf("Please select on of the following: \n");
        printf("String Length      = 1\n");
        printf("String Compare      = 2\n");
        printf("String Concatenate = 3\n");
        printf("String Copy          = 4\n");
        printf("Character at        = 5\n");
        printf("Exit                = 99\n");
        CROSSBAR;

    }while();

    return 0;
}
```