ARCHANA KUMARI **ASSIGNMENT - 4**
ECE
408

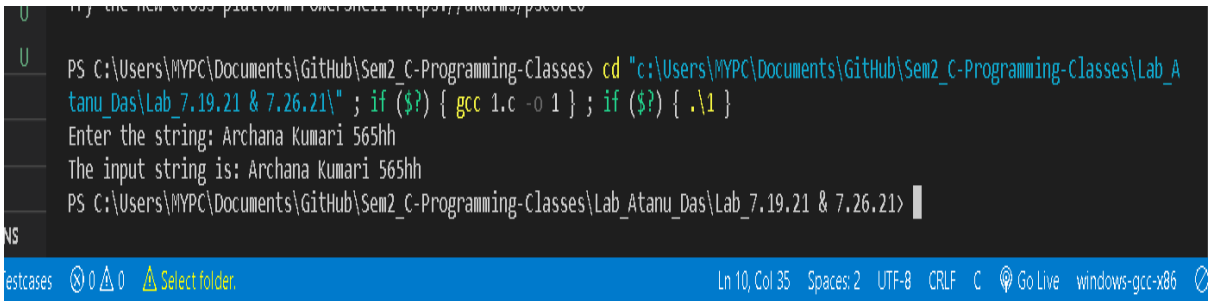
```c
//1. Write a program to print a string.

#include <stdio.h>

int main() {

  char s[100];
  printf("Enter the string: ");
 // gets(s);
  scanf("%[^\n]", s);
  printf("The input string is: ");
  puts(s);

return 0;
}
```



ARCHANA KUMARI **ASSIGNMENT - 4**
ECE
408

```c
//2 Write a C program to find the length of a string:
/*
           a) using strlen function
           b) without using strlen function
           c) using a character pointer.
*/

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

int main() {

  char str[20];
  int i = 0, length = 0, count = 0;
  printf("Enter a string: ");
  scanf("%[^\n]", str);

  char *p = str;

  for(; str[i]; ++i)
      ++length;

   while(*p != '\0') {
     ++count;
      ++p;
   }

   printf(" The length of string(using strlen): %d", strlen(str));        //a
   printf("\n The length of string(without using strlen): %d", length);   //b
   printf("\n The length of string(using character pointer): %d", count); //c

return 0;
}
```

```
Enter a string: Archana Kumari 99p
 The length of string(using strlen): 18
 The length of string(without using strlen): 18
 The length of string(using character pointer): 18
--------------------------------
Process exited after 10.19 seconds with return value 0
Press any key to continue . . .
```

ARCHANA KUMARI **ASSIGNMENT - 4**
ECE
408

```c
//3. Write a c program to concatenate 2 strings :
   d) using strcat  ,
   e) without strcat

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

int main() {

   char str1[20], str2[20], str3[50];
   int i = 0, j = 0;

   printf("Enter string_1: ");
   scanf("%s", &str1);
   printf("Enter string_2: ");
   scanf("%s", &str2);

   for(; str1[i]; ++i, ++j)
      str3[j] = str1[i];

   for(i = 0; str2[i]; ++i, ++j)
      str3[j] = str2[i];

  str3[j] = '\0';

  printf("Concatenated String(Using strcat)        : %s", strcat(str1, str2));
  printf("\nConcatenated String(without using strcat): %s", str3);

return 0;
}
```

```
PS C:\Users\MYPC\Documents\GitHub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21> cd "c:\Users\MYPC\Documents\Git
Hub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21\" ; if ($?) { gcc 3.c -o 3 } ; if ($?) { .\3 }
Enter string_1: Archana
Enter string_2: _Kumari
Concatenated String(Using strcat)       : Archana_Kumari
Concatenated String(without using strcat): Archana_Kumari
PS C:\Users\MYPC\Documents\GitHub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21>
```

ARCHANA KUMARI **ASSIGNMENT - 4**
ECE
408

```c
//4) Write a C program to reverse a string.
#include <stdio.h>

int main() {

  char str1[20], str2[20];
  int i = 0, j = 0, len = 0;

  printf("Enter string: ");
  //gets(str1);
  scanf("%[^\n]", &str1);

  while(str1[i++] != '\0')
     ++len;

   for(i = len - 1; i >= 0; --i)
      str2[j++] = str1[i];
   str2[j] = '\0';

  printf("Reversed String: %s", str2);

return 0;
}
```

```
Enter string: Archana Kumari
Reversed String: iramuK anahcrA
------------------------------
Process exited after 6.652 seconds with return value 0
Press any key to continue . . .
```

ARCHANA KUMARI **ASSIGNMENT - 4**

ECE

408

```c
//5.) check palindrome

#include <stdio.h>

int main() {
 char str[200];
  int i = 0, count = 0;

 printf("Enter a string: ");
 gets(str);

 for(;str[i] != '\0'; ++i) {
   ++count;
 }

 //checking if the (first++) and (last--) characters are equal.
 for(i = 0 ; i <= (int)count/2; ++i) {
   if(str[i] != str[count - i -1])
      break;
 }

 if(i > (int)count/2)
   printf("Yes!! It's a palindromic string.\n");
 else
   printf("OOPS!! It's not a palindromic string.\n");
return 0;
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

Enter a string: ArchanahcrA
Yes!! It's a palindromic string.
PS C:\Users\MYPC\Documents\GitHub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21> cd "c:\Users\MYPC\Documents\Git
Hub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21\" ; if ($?) { gcc 5.c -o 5 } ; if ($?) { .\5 }
Enter a string: Archana
OOPS!! It's not a palindromic string.
PS C:\Users\MYPC\Documents\GitHub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21> cd "c:\Users\MYPC\Documents\Git
Hub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21\" ; if ($?) { gcc 5.c -o 5 } ; if ($?) { .\5 }
Enter a string: pop pop
Yes!! It's a palindromic string.
PS C:\Users\MYPC\Documents\GitHub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21>
```

ARCHANA KUMARI **ASSIGNMENT - 4**
ECE
408

```c
//6.) Write a C program to copy source string to destination string.

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

char* Strcpy(char* addTo, char* addFrom) {
   if(addTo == NULL)
      return NULL;

   char* ptr = addTo;
   while(*addFrom)
      *addTo++ = *addFrom++;

   *addTo = '\0';
   return ptr;
}

int main() {

  char str1[100], str2[100];
  printf("Enter string_1: ");
  gets(str1);
  printf("Enter string_2: ");
  gets(str2);

  printf("strcpy output(using strcpy)         = %p\n", strcpy(str1, str2));
  printf("strcpy output(without using strcpy) = %p\n", Strcpy(str1, str2));

  return 0;
}
```

```
Enter string_1: Archana
Enter string_2: Kumari
strcpy output(using strcpy)         = 000000000062FDB0
strcpy output(without using strcpy) = 000000000062FDB0

--------------------------------
Process exited after 6.988 seconds with return value 0
Press any key to continue . . .
```

ARCHANA KUMARI **ASSIGNMENT - 4**

ECE

408

```c
//7.) Write a C program to implement strcmp with using string.h
#include <stdio.h>
#include <string.h>

int Strcmp(char* s1, char* s2) {
    int i;
    for (i = 0; s1[i] && s2[i]; ++i) {
       if(s1[i] == s2[i])
           continue;
       else if(s1[i] > s2[i])
           return 1;
       else
           return -1;
    }
    return 0;
}
int main() {

  char str1[100], str2[100];
  printf("Enter string_1: ");
  gets(str1);
  printf("Enter string_2: ");
  gets(str2);

  printf("strcmp output(using strcmp function)        = %d\n", strcmp(str1,str2));
  printf("strcmp output(without using strcmp funtion) = %d\n", Strcmp(str1,str2));
  return 0;
}
```

```
Enter string_1: good
Enter string_2: bad
strcmp output(using strcmp function)       = 1
strcmp output(without using strcmp funtion) = 1
PS C:\Users\MYPC\Documents\GitHub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21> cd "c:\Users\MYPC\Documents\Git
Hub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21\" ; if ($?) { gcc 7.c -o 7 } ; if ($?) { .\7 }
Enter string_1: hello world
Enter string_2: hello world
strcmp output(using strcmp function)       = 0
strcmp output(without using strcmp funtion) = 0
PS C:\Users\MYPC\Documents\GitHub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21>
1.16.5  ⊗ 0 ⚠ 0  Select folder.  Live Share   Ln 32, Col 1  Spaces: 4  UTF-8  CRLF  C  Go Live  windows-gcc-x86
```

```
Hub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21\" ; if ($?) { gcc 7.c -o 7 } ; if ($?) { .\7 }
Enter string_1: good
Enter string_2: bad
strcmp output(using strcmp function)       = 1
strcmp output(without using strcmp funtion) = 1
PS C:\Users\MYPC\Documents\GitHub\Sem2_C-Programming-Classes\Lab_Atanu_Das\Lab_7.19.21 & 7.26.21>
o 1.16.5  ⊗ 0 ⚠ 0  Select folder.  Live Share   Ln 32, Col 1  Spaces: 4  UTF-8  CRLF  C  Go Live  windows-gcc-x86  Prettier
```