

**CSC3320 System Level Programming**  
**Lab Assignment 10 - Post-Lab**

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**Lab # 10** – Out of Lab Assignment Report

**Part 1:**

**Write a function about string copy, the strcpy prototype "char\* strcpy (char\* strDest, const char\* strSrc);". Here strDest is destination string, strSrc is source string.**

**1)Write the function strcpy, don't call C string library.**

```
char *strcpy(char *strDest, const char *strSrc){  
  
    char *output = strDest;  
  
    while(*strSrc != '\0')  
    {  
        *strDest = *strSrc;  
        strDest++;  
        strSrc++;  
    }  
  
    *strDest = '\0';  
  
    return output;  
  
}
```

**2) Here strcpy can copy strSrc to strDest, but why we use char\* as the return value of strcpy?**

We use char\* as the return value of strcpy because when we copy a string i.e. when we copy the strSrc to another string, we get a new string which we name it as strDest and so we return a char pointer strDest to point to the new output string as strings actually don't exist in C language. We can use this new string in other places where needed as we can't use assignment operator to copy strings.

Part 2:

Questions:

1) Attach the source code of your C program into the answer sheet.

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

int main(){
char word[20],smallest_word[20],largest_word[20];
int count = 1;

do
{
    printf("Enter word: ");
    scanf("%s",&word);

    if(strlen(word)>21)
        break;

    if (count || (strcmp(word, largest_word) > 0))
        strcpy(largest_word, word);

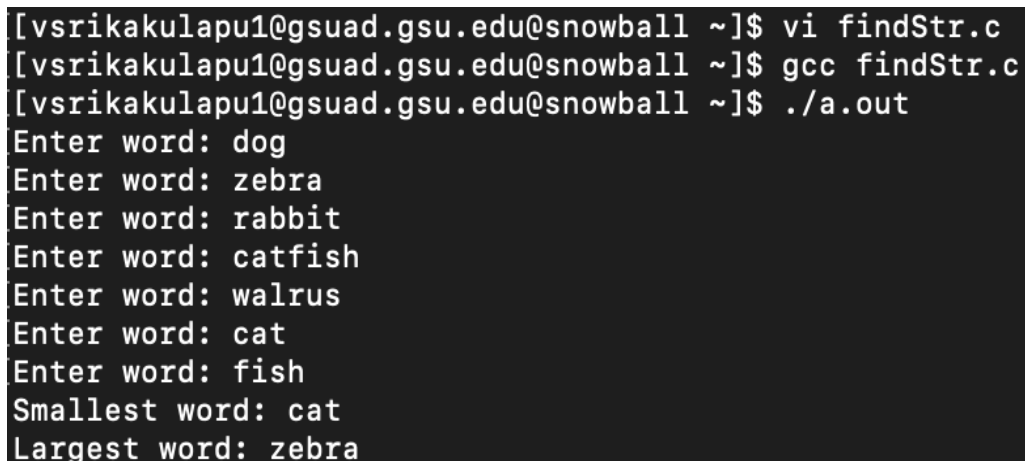
    if (count || (strcmp(word, smallest_word) < 0))
        strcpy(smallest_word, word);

    count = 0;
} while(strlen(word)!=4);

printf("Smallest word: %s\n",smallest_word);
printf("Largest word: %s\n",largest_word);

return 0;
}
```

1) Run the C program, attach a screenshot of the output in the answer sheet.



```
[vsrikakulapu1@gsuad.gsu.edu@snowball ~]$ vi findStr.c
[vsrikakulapu1@gsuad.gsu.edu@snowball ~]$ gcc findStr.c
[vsrikakulapu1@gsuad.gsu.edu@snowball ~]$ ./a.out
Enter word: dog
Enter word: zebra
Enter word: rabbit
Enter word: catfish
Enter word: walrus
Enter word: cat
Enter word: fish
Smallest word: cat
Largest word: zebra
```