Assignment 10 || User Defined String function

Arjun Patel – FRN_006

Q1) mystrcpy

```c
#include<stdio.h>

char* mystrcpy(char* str, char* str2){
    char* temp = str2;
    while(*str != '\0'){
        *temp = *str;
        str++;
        temp++;
    }
    *temp = '\0';
    return str2;
}

int main(){
    char str[50] = "Arjun Patel";
    char str2[50];
    printf("%s \n", str);
    printf(" str 2 --> %s \n", mystrcpy(str, str2));
    printf("%s", str2);
    return 0;
}
```

```
Arjun Patel
 str 2 --> Arjun Patel
Arjun Patel
```

Q2) mystrlen

```c
#include<stdio.h>

int mystrlen(char* str){
    int count=0;
    while(str[count++] != '\0');
    return count-1;
}

int main(){
```

```
    char str[50];
    printf("Enter a string upto 50 chars:\n");
    scanf("%s", str);
    // fgets(str, sizeof(str), stdin);

    printf("Length is %d\n", mystrlen(str));
    return 0;
}
```

```
Enter a string upto 50 chars:
Firstbit
Length is 8
```

Q3) mystrcmp

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

int mystrcmp(char* str, char* str2){
    int len1 = strlen(str);
    int len2 = strlen(str2);
    if(len1>len2) return 1;
    else if(len2>len1) return -1;
    else {
        for (int i = 0; i < len1;  i++)
        {
            if(str[i]>str2[i]) return 1;
            if(str2[i]>str[i]) return -1;
        }
        return 0;
    }
}

int main(){
    char str[50], str2[50];
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);
    printf("Enter a string 2 upto 50 chars:\n");
    scanf("%s", str2);

    // mystrcmp(str, str2);
    int res = mystrcmp(str, str2);
    if(res==0)
```

```
        printf("Both strings are same.\n");
    else if(res==1) printf("Str is greater than str2\n");
    else printf("Str2 is greater than str\n");
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
firstbit
Enter a string 2 upto 50 chars:
firstbot
Str2 is greater than str
```

Q) mystrcat

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

char *mystrcat(char *str, char *str2)
{
    // int len1 = strlen(str);
    // int len2 = strlen(str2);
    // int i;
    // for (i = len1; i < len1+len2; i++)
    //     str[i] = str2[i-len1];
    // str[i] = '\0';
    char *temp = str;
    str = str + strlen(str);
    while (*str2 != '\0')
    {
        *str = *str2;
        str2++;
        str++;
    }
    *str = '\0';
    // printf("%s \n", str);
    return temp;
}

int main()
{
    char str[50], str2[50];
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);
    printf("Enter a string 2 upto 50 chars:\n");
    scanf("%s", str2);
```

```
    printf("%s \n", mystrcat(str, str2));
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
firstbit
Enter a string 2 upto 50 chars:
.com
firstbit.com
```

Q) mystrncpy

```
#include<stdio.h>

char* mystrncpy(char* str2, char* str, int n){
    for (int i = 0; i < n; i++) str2[i] = str[i];
    return str2;
}

int main(){
    char str[50], str2[50];
    int n;
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);

    printf("Enter value of n upto which u want to copy string\n");
    scanf("%d", &n);

    printf("%s", mystrncpy(str2, str, n));
    // mystrncpy(dest, src, n);
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
myfirstbit.com
Enter value of n upto which u want to copy string
7
myfirst
```

Q)mystrupper

```c
#include<stdio.h>

void mystrupr(char* str){
    while(*str != '\0'){
        if(*str >= 'a' && *str <= 'z') *str -= 32;
        str++;
    }
}

int main(){
    char str[50];
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);

    mystrupr(str);
    printf("%s", str);
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
firstbit.com
FIRSTBIT.COM
```

Q) mystrlwr

```c
#include<stdio.h>

void mystrupr(char* str){
    while(*str != '\0'){
        if(*str >= 'A' && *str <= 'Z') *str += 32;
        str++;
    }
}

int main(){
    char str[50];
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);

    mystrupr(str);
    printf("%s", str);
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
MYfiRstBIT.cOM
myfirstbit.com
```

Q) mystrrev

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

char* mystrrev(char *str)
{
    int len = strlen(str);
    for (int i = 0; i < len/2; i++)
    {
        char temp  = str[i];
        str[i] = str[len-i-1];
        str[len-i-1] = temp;
    }
    return str;
}

int main()
{
    char str[50];
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);

    printf("%s", mystrrev(str));
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
oahktiucsiboipiahc
chaipiobiscuitkhao
```

Q) mtstrstr

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

char *mystrstr(char *str, char *substr)
{
    int len = strlen(str), lensbstr = strlen(substr), count = 0;
    for (int i = 0; i < len; i++)
    {
        if ((len-i)>=lensbstr && str[i] == substr[0])
        {
            // printf("Enteres in if condtion\n");
            for (int j = 0; j < lensbstr; j++)
            {
                // printf("Enter inner for loop\n");
                if (str[i+j] == substr[j])
                {
                    count++;
```

```
                    // printf("%c   %c\n", str[i+j], substr[j]);
                    // printf("count --> %d\n", count);
                }
            }
            if(count==lensbstr) return &str[i];
            // printf("Out of inner loop count-> %d\n, address-> %u \n",
count, &str[i]);
        }
    }
    return 0;
}

int main()
{
    char str[50], substr[50];
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);
    printf("Enter sunstring u want to find in string 1:\n");
    scanf("%s", substr);

    char *ptr = mystrstr(str, substr);
    // mystrstr(src, substring)
    // it will return address of 1st char of substr, if substr present
    ptr ? printf("%s sunstring found from index %d to index %d in %s\n",
substr, ptr - str, ptr-str+strlen(substr)-1, str) : printf("Sunstring not
found!\n");
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
firstbitsolutions
Enter sunstring u want to find in string 1:
bit
bit sunstring found from index 5 to index 7 in firstbitsolutions
```

Q) mystrchr

```
#include<stdio.h>

char* mystrchr(char* str, char ch){
    while(*str != '\0'){
        if(*str==ch) return str;
        str++;
    }
    return 0;
}
```

```c
int main(){
    char str[20], ch;
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);
    printf("Enter char u want to find in string 1:\n");
    fflush(stdin);
    scanf("%c", &ch);

    char* ptr = mystrchr(str, ch);
    if(ptr)  printf("%c is at index %d", ch, ptr-str);
    else printf("Not Found");
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
arjunpatel
Enter char u want to find in string 1:
p
p is at index 5
```

Q)mystrrchr

```c
#include<stdio.h>

char* mystrchr(char* str, char ch){
    while(*str != '\0'){
        if(*str==ch) return str;
        str++;
    }
    return 0;
}

int main(){
    char str[20], ch;
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);
    printf("Enter char u want to find in string 1:\n");
    fflush(stdin);
    scanf("%c", &ch);

    char* ptr = mystrchr(str, ch);
    if(ptr)  printf("%c is at index %d", ch, ptr-str);
    else printf("Not Found");
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
arjunpatel
Enter char u want to find in string 1:
e
e is at index 8
```

Q)mystrncmp

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

int mystrncmp(char* str1, char* str2, int n){
    for (int i = 0; i < n; i++)
    {
        if(str1[i]>str2[i]) return 1;
        if(str2[i]>str1[i]) return -1;
    }
    return 0;
}

int main(){
    char str[50];
    printf("Enter String 1\n");
    scanf("%s", str);

    char str2[50];
    printf("Enter String 2\n");
    scanf("%s", str2);

    int n;
    printf("Upto How many char u want to check\n");
    scanf("%d", &n);

    printf("%d \n", mystrncmp(str, str2, n));
    return 0;
}
```

```
Enter String 1
abcd458345
Enter String 2
abcdsdfk
Upto How many char u want to check
4
0
```

Q) mystrnstr

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

char *mystrstr(char *str, char *substr, int n)
{
    int len = strlen(str), count = 0;
    for (int i = 0; i < len; i++)
    {
        //if remainig char are less than substr, than not found
        if((len-i)< n) return 0;

        if ((len-i)>=n && str[i] == substr[0])
        {
            // printf("Enteres in if condtion\n");
            for (int j = 0; j < n; j++)
            {
```

```
                // printf("Enter inner for loop\n");
                if (str[i+j] == substr[j])
                {
                    count++;
                    // printf("%c   %c\n", str[i+j], substr[j]);
                    // printf("count --> %d\n", count);
                }
            }
            if(count==n) return &str[i];
            // printf("Out of inner loop count-> %d\n, address-> %u \n", count, &str[i]);
        }
    }
    return 0;
}

int main()
{
    char str[50], substr[50];
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);
    printf("Enter sunstring u want to find in string 1:\n");
    scanf("%s", substr);

    int n;
    printf("Enter n upto which u want to check\n");
    scanf("%d", &n);

    char *ptr = mystrstr(str, substr, n);
    // mystrstr(src, substring)
    // it will return address of 1st char of substr, if substr present
    ptr ? printf("Substring upto n char found from index %d to index %d in %s\n", ptr - str,
ptr-str+n, str) : printf("Sunstring not found!\n");
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
Arjunpatel
Enter sunstring u want to find in string 1:
patel
Enter n upto which u want to check
3
Substring upto n char found from index 5 to index 8 in Arjunpatel
```

Q) mystrncat

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

char *mystrcat(char *str, char *str2, int n)
{
    int len1 = strlen(str);
    int len2 = strlen(str2);
    int i;
    for (i = len1; i < len1 + n; i++)
        str[i] = str2[i-len1];
    str[i] = '\0';
    // char *temp = str;
```

```
    // str = str + strlen(str);
    // while (*str2 != '\0')
    // {
    //     *str = *str2;
    //     str2++;
    //     str++;
    // }
    // *str = '\0';
    // printf("%s \n", str);
    return str;
}

int main()
{
    char str[50], str2[50];
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);
    printf("Enter a string 2 upto 50 chars:\n");
    scanf("%s", str2);

    int n;
    printf("Enter value of n\n");
    scanf("%d", &n);
    printf("%s \n", mystrcat(str, str2, n));
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
rishi
Enter a string 2 upto 50 chars:
awasthi
Enter value of n
2
rishiaw
```

Q) strcasecmp

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

int mystrcasecmp(char* str, char* str2){
    // while(*str2 != '\0'){
    //     printf("minus value %d\n", *str - *str2);
    //     if(*str - *str2 !=0 && *str - *str2 != 32 && *str - *str2 !=-32){
    //         return 0;
    //     }
    //     str++;
    //     str2++;
    // }
    for(int i=0; i<strlen(str); i++){
        if(str[i]-str2[i] != 0 && str[i]-str2[i] != 32 && str[i]-str2[i] != -32){
            return 0;
        }
    }
```

```
    return 1;
}

int main(){
    char str[50], str2[50];
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);
    printf("Enter a string 2 upto 50 chars:\n");
    scanf("%s", str2);

    int res = mystrcasecmp(str, str2);
    printf("%d \n", res);
    res ? printf("Same\n") : printf("Not Same\n");
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
Arjun
Enter a string 2 upto 50 chars:
arJUN
1
Same
```

Q) mystrcasencmp

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

int mystrcasecmp(char* str, char* str2, int n){
    // while(*str2 != '\0'){
    //     printf("minus value %d\n", *str - *str2);
    //     if(*str - *str2 !=0 && *str - *str2 != 32 && *str - *str2 !=-32){
    //         return 0;
    //     }
    //     str++;
    //     str2++;
    // }
    for(int i=0; i<n; i++){
        if(str[i]-str2[i] != 0 && str[i]-str2[i] != 32 && str[i]-str2[i] != -32){
            return 0;
        }
    }
    return 1;
}

int main(){
    char str[50], str2[50];
    printf("Enter a string 1 upto 50 chars:\n");
    scanf("%s", str);
```

```c
    printf("Enter a string 2 upto 50 chars:\n");
    scanf("%s", str2);

    int n;
    printf("Enter the value of n\n");
    scanf("%d", &n);

    int res = mystrcasecmp(str, str2, n);
    printf("%d \n", res);
    res ? printf("Same\n") : printf("Not Same\n");
    return 0;
}
```

```
Enter a string 1 upto 50 chars:
aRjun
Enter a string 2 upto 50 chars:
ARJ456
Enter the value of n
3
1
Same
```

------END------