

## strOverWrite

Write a C function `strOverWrite()` that takes in two strings `s1` and `s2`, and an integer `pos` as parameters, inserts `s1` into `s2` at the position specified by `pos`, while overwriting the part of `s1` that corresponds to the insertion. The function should ensure the overwrite operation does not change the size of `s1`. If the operation is successful, the function should return the number of characters that were overwritten. For example, if `s1` = "this text is short", `s2` = "long" and `pos` = 13, the resulting `s1` would be "this text is longt", and the function returns a value of 4. In this function, there is no need to check input errors.

A sample program template is given below:

```
#include <stdio.h>
#include <string.h>
int strOverWrite(char *s1, char *s2, int pos);
int main()
{
    char s1[40], s2[40], *p;
    int pos, total;

    printf("Enter string 1: \n");
    fgets(s1, 80, stdin);
    if (p=strchr(s1, '\n')) *p = '\0';
    printf("Enter string 2: \n");
    fgets(s2, 80, stdin);
    if (p=strchr(s2, '\n')) *p = '\0';
    printf("Enter position: \n");
    scanf("%d", &pos);
    total = strOverWrite(s1, s2, pos);
    printf("strOverWrite(): %s %d\n", s1, total);
    return 0;
}

int strOverWrite(char *s1, char *s2, int pos)
{
    /* Write your code here */
}
```

```
#include <stdio.h>
#include <string.h>
int strOverWrite(char *s1, char *s2, int pos);
int main()
{
    char s1[40], s2[40], *p;
    int pos, total;

    printf("Enter string 1: \n");
    fgets(s1, 80, stdin);
    if (p=strchr(s1, '\n')) *p = '\0';
    printf("Enter string 2: \n");
    fgets(s2, 80, stdin);
    if (p=strchr(s2, '\n')) *p = '\0';
    printf("Enter position: \n");
    scanf("%d", &pos);
    total = strOverWrite(s1, s2, pos);
    printf("strOverWrite(): %s %d\n", s1, total);
    return 0;
}

int strOverWrite(char *s1, char *s2, int pos)
{
    int i;
    int j=0;
    int len1, len2;

    len1 = strlen(s1);
    len2 = strlen(s2);

    for(i=0; i<len1; i++)
    {
        if((pos+i)<len1 && i<len2)
        {
            s1[pos+i] = s2[j];
            j++;
        }
    }
    return j;
}
```

Some sample input and output sessions are given below:

### (1) Test Case 1:

```
Enter string 1:
this text is short
Enter string 2:
long
Enter position:
6
strOverWrite(): this tlongis short 4
```

### (2) Test Case 2:

```
Enter your choice:
1
Enter string 1:
this text is short
Enter string 2:
long
Enter position:
```

```
total);
return 0;
}

int strOverWrite(char *s1, char *s2, int pos)
{
    int i;
    int j=0;
    int len1, len2;

    len1 = strlen(s1);
    len2 = strlen(s2);

    for(i=0; i<len1; i++)
    {
        if((pos+i)<len1 && i<len2)
        {
            s1[pos+i] = s2[j];
            j++;
        }
    }
    return j;
}
```

```
13  
strOverWrite(): this text is longt 4
```

(3) Test Case 3:

```
Enter string 1:  
this text is short  
Enter string 2:  
longg  
Enter position:  
13  
strOverWrite(): this text is longg 5
```

(4) Test Case 4:

```
Enter string 1:  
this text is short  
Enter string 2:  
longgt  
Enter position:  
13  
strOverWrite(): this text is longg 5
```