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正確:

```
#include<stdio.h>
#include<stdlib.h>
char *my_strcpy(char * , const char * );
int main()
{
  char src[] = "cs23!";
  char dst[]="Hello hello";
  char *curdst;
  int len=0;
  printf("src address %p and first char %c \n", (void *)&src, src[0]);
  printf("dst address %p and first char %c \n", (void *)&dst, dst[0]);
  // compute where NULL character is '\0' ASCII 0
  while(src[++len]);
  // print out the char arrays and various addresses.
  printf("src array %s and last element %d\n", src, atoi(&src[len]));
  printf("dst array %s and last element %c\n", dst, dst[len]);
  // do the copy
  curdst= my_strcpy(dst, src);
  // check to see if the NULL char is copied too.
  printf("dst array %s and last element %d\n", dst, atoi(&dst[len]));
  return 0;
}
char *my_strcpy(char *s1, const char *s2) {
  register char *d = s1;
  // print the pointer variables address and their contents, and first char
  printf("s2 address %p, its contents is a pointer %p to
          first char %c \n", (void *)&s2, (void *)s2, *s2);
  printf("s1 address %p, its contents is a pointer %p to first
          char %c \n", (void *)&s1, (void *)s1, *s1);
  while ((*d++ = *s2++));
  return(s1);
}
```

錯誤:

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

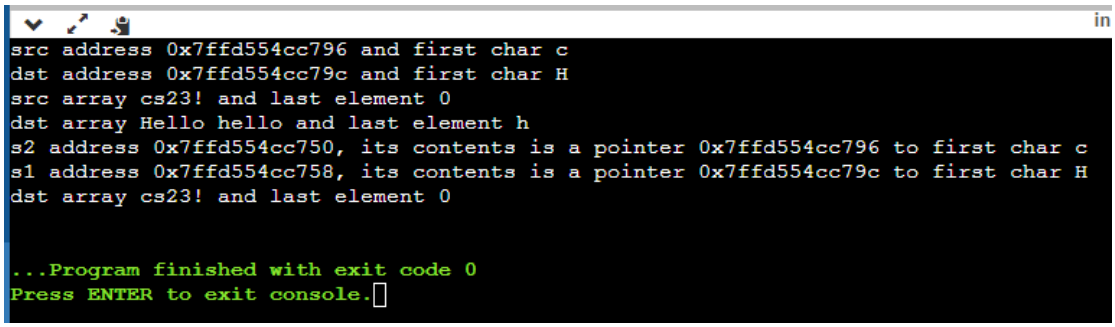
```
char *my_strcpy(char * , const char * );
int main()
{
  char src[] = "cs23!";
  char dst[]="Hello hello";
  char *curdst;
  int len=0;
  printf("src address %p and first char %c \n", (void *)&src, src[0]);
  printf("dst address %p and first char %c \n", (void *)&dst, dst[0]);
  // compute where NULL character is '\0' ASCII 0
  while(src[len++]);
  // print out the char arrays and various addresses.
  printf("src array %s and last element %d\n", src, atoi(&src[len]));
  printf("dst array %s and last element %c\n", dst, dst[len]);
  // do the copy
  curdst= my_strcpy(dst, src);
  // check to see if the NULL char is copied too.
  printf("dst array %s and last element %d\n", dst, atoi(&dst[len]));
  return 0;
}
char *my_strcpy(char *s1, const char *s2) {
  register char *d = s1;
  // print the pointer variables address and their contents, and first char
  printf("s2 address %p, its contents is a pointer %p to
          first char %c \n", (void *)&s2, (void *)s2, *s2);
  printf("s1 address %p, its contents is a pointer %p to first
          char %c \n", (void *)&s1, (void *)s1, *s1);
  while ((*d++ = *s2++));
  return(s1);
}
```

正確的執行結果:

```
src address 0x7ffc194869d6 and first char c
dst address 0x7ffc194869dc and first char H
src array cs23! and last element 0
dst array Hello hello and last element
s2 address 0x7ffc19486990, its contents is a pointer 0x7ffc194869d6 to first char c
s1 address 0x7ffc19486998, its contents is a pointer 0x7ffc194869dc to first char H
dst array cs23! and last element 0


...Program finished with exit code 0
Press ENTER to exit console.
```

錯誤的執行結果:



Bug 是在 while(src[len++]);，應該改成 while(src[++len]);。 Len++表示先做再加，這樣導致當字串跑到'/0'值時，會再多加 1，會多跑一次才 跳出迴圈。 修正為++len 時，就是先加再做了，此時便不會產生跑到'/0'還會多跑一次才跳出迴圈。