

```

1 #include <stdio.h>
2 #include <string.h>
3
4 // char *strtok(char *str, const char *delim);
5 // Returns a pointer to the next token in str, delimited by delim.
6 // First call: pass the string. Subsequent calls: pass NULL.
7 // Replaces delim with '\0' returns pointer into original string.
8
9 int main() {
10 char str[] = "Joe Politz,jpolitz@ucsd.edu,Instructor";
11 printf("str%p: %p \"%s\"\n", &str, str, str);
12
13 char* a = strtok(str, ",");
14 char* b = strtok(NULL, ",");
15 char* c = strtok(NULL, ",");
16 char* d = strtok(NULL, ",");
17
18 printf("a%p: %p \"%s\"\n", &a, a, a);
19 printf("b%p: %p \"%s\"\n", &b, b, b);
20 printf("c%p: %p \"%s\"\n", &c, c, c);
21 printf("d%p: %p\n", &d, d);
22
23 printf("\nstr after strtok:\n");
24 for (int i = 0; i < 39; i++) {
25     if (i % 8 == 0) printf("%p:", &str[i]);
26     if (str[i]) printf(" '%c'", str[i]);
27     else printf(" NUL");
28     if (i % 8 == 7) printf("\n");
29 }
30 printf("\n");
31 }

```

Variable/Role

Address

Data

0/8 1/9 2/A 3/B 4/C 5/D 6/E 7/F

0x...00

0x...08

0x...10

0x...18

0x...20

0x...28

0x...30

0x...38

0x...40

0x...48

0x...50

0x...58

0x...60

0x...68

0x...70

0x...78

0x...80

0x...88

0x...90

0x...98

0x...A0

0x...A8

0x...B0

0x...B8

0x...C0

0x...C8

0x...D0

0x...D8

0x...E0

0x...E8

0x...F0

0x...F8

```

$ gcc strtok.c -o strtok
$ ./strtok
str0x16b7b6e51: 0x16b7b6e51 "Joe Politz,jpolitz@ucsd.edu,Instructor"
a0x16b7b6e40: 0x16b7b6e51 "Joe Politz"
b0x16b7b6e38: 0x16b7b6e5c "jpolitz@ucsd.edu"
c0x16b7b6e30: 0x16b7b6e6d "Instructor"
d0x16b7b6e28: 0x0

str after strtok:
0x16b7b6e51: 'J' 'o' 'e' ' ' 'P' 'o' 'l' 'i'
0x16b7b6e59: 't' 'z' NUL 'j' 'p' 'o' 'l' 'i'
0x16b7b6e61: 't' 'z' '@' 'u' 'c' 's' 'd' ' '
0x16b7b6e69: 'e' 'd' 'u' NUL 'I' 'n' 's' 't'
0x16b7b6e71: 'r' 'u' 'c' 't' 'o' 'r' NUL

```