

The `strtok()` implementation is presented below – you can read the lab handout or my recap notes for some friendly documentation! :)

```

1  char *musl_strtok(char *s,          16
    const char *delimiters) {          17      p = s + strcspn(s,
2      static char *p = NULL;          18      delimiters);
3                                      19      if (p[0] != '\0') {
4      if (s == NULL) {                20          p[0] = '\0';
5          s = p;                      21          p++;
6          if (s == NULL) {            22      } else {
7              return NULL;           23          p = NULL;
8          }                          24      }
9      }                              25      return s;
10                                     26  }
11  s += strspn(s,
    delimiters);
12  if (*s == '\0') {
13      p = NULL;
14      return p;
15  }

```

 Warning: Solution spoilers on next page! :)

 **Exercise:** Given the example below, draw how the `char*` pointers `s` and `p` move around during one call to `strtok(s, delimiters)`

`s`  "--red-green---blue"

`delimiters`  "--"

`p`  ??

-	-	r	e	d	-	g	r	e	e	n	-	-	-	b	l	u	e	\0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----


s

Ben Short Story: When I enrolled in CS107 for the first time, `strtok()` made me cry  and I dropped the course right after Lab 2 / seeing it lmao. I am now a TA somehow (thanks Jerry!)

Solution to strtok exercise - see the lab slides for more on how strspn and strcspn contribute to pointer movement!

-	-	r	e	d	-	g	r	e	e	n	-	-	-	b	l	u	e	\0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

s  **s**  "--red-green---blue"
p  NULL delimiters  "--"
(before calling strtok)

-	-	r	e	d	\0	g	r	e	e	n	-	-	-	b	l	u	e	\0
---	---	---	---	---	----	---	---	---	---	---	---	---	---	---	---	---	---	----

s  **s**  "red"
p  **p**  "green---blue"

(at the end of first call to strtok)

-	-	r	e	d	\0	g	r	e	e	n	\0	-	-	b	l	u	e	\0
---	---	---	---	---	----	---	---	---	---	---	----	---	---	---	---	---	---	----

s  "green"
p  "--blue" **s**  **p** 

(at the end of second call to strtok)

-	-	r	e	d	\0	g	r	e	e	n	\0	-	-	b	l	u	e	\0
---	---	---	---	---	----	---	---	---	---	---	----	---	---	---	---	---	---	----

s  "blue"
p  NULL (reset back) **s** 

(at the end of third and last call to strtok)