

Re: String to Octal

Source: http://coding.derkeiler.com/Archive/C_CPP/comp.lang.c/2006-02/msg02939.html

- *From:* Martin Ambuhl <mambuhl@xxxxxxxxxxxxxx>
 - *Date:* Tue, 21 Feb 2006 05:26:27 GMT
-

fuch6921@xxxxxxxxxxxxxx wrote:

I want to read in an Octal number argument and have it stored as an octal number. For instance the user will type: `./a.out 777` and it will store the octal number `777`. But `atoi` does this as an integer, and `sscanf` gives me 0.

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

int main(void)
{
char *src[] = { "309", "511", "777", "1ff", "1411" }, *endp;
size_t i, n = sizeof src / sizeof *src;
unsigned long x;
printf(" Note: when * endp = '\\0', it is printed as '$\\n\\n');
for (i = 0; i < n; i++) {
printf(" The input string is \"%s\\n\"", src[i]);
x = strtoul(src[i], &endp, 8);
printf("read as octal, *endp='%c',\\n"
" value: %#lo (oct), %lu (dec), %#lx (hex)\\n",
*endp ? *endp : '$', x, x, x);
x = strtoul(src[i], &endp, 10);
printf("read as decimal, *endp='%c',\\n"
" value: %#lo (oct), %lu (dec), %#lx (hex)\\n",
*endp ? *endp : '$', x, x, x);
x = strtoul(src[i], &endp, 16);
printf("read as hex, *endp='%c',\\n"
" value: %#lo (oct), %lu (dec), %#lx (hex)\\n\\n",
*endp ? *endp : '$', x, x, x);
}
return 0;
}
```

Note: when `* endp = '\\0'`, it is printed as '\$'

The input string is "309"

Re: String to Octal

read as octal, *endp='9',
value: 030 (oct), 24 (dec), 0x18 (hex)
read as decimal, *endp='\$',
value: 0465 (oct), 309 (dec), 0x135 (hex)
read as hex, *endp='\$',
value: 01411 (oct), 777 (dec), 0x309 (hex)

The input string is "511"
read as octal, *endp='\$',
value: 0511 (oct), 329 (dec), 0x149 (hex)
read as decimal, *endp='\$',
value: 0777 (oct), 511 (dec), 0x1ff (hex)
read as hex, *endp='\$',
value: 02421 (oct), 1297 (dec), 0x511 (hex)

The input string is "777"
read as octal, *endp='\$',
value: 0777 (oct), 511 (dec), 0x1ff (hex)
read as decimal, *endp='\$',
value: 01411 (oct), 777 (dec), 0x309 (hex)
read as hex, *endp='\$',
value: 03567 (oct), 1911 (dec), 0x777 (hex)

The input string is "1ff"
read as octal, *endp='f',
value: 01 (oct), 1 (dec), 0x1 (hex)
read as decimal, *endp='f',
value: 01 (oct), 1 (dec), 0x1 (hex)
read as hex, *endp='\$',
value: 0777 (oct), 511 (dec), 0x1ff (hex)

The input string is "1411"
read as octal, *endp='\$',
value: 01411 (oct), 777 (dec), 0x309 (hex)
read as decimal, *endp='\$',
value: 02603 (oct), 1411 (dec), 0x583 (hex)
read as hex, *endp='\$',
value: 012021 (oct), 5137 (dec), 0x1411 (hex)

.