

Short-term Hands-on Supplementary Course on C Programming



SESSION 6: Strings

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Time: 6:30 - 8:00 PM

Date: June 4th, 2022

Location: Online



Agenda

1. Administrative Instructions
2. Strings as character arrays
 - a. Declaration
 - b. Initialization
3. Operations on Strings
 - a. Copying strings
 - b. Case-conversion
 - c. Concatenating strings
4. “string.h” — Library for Strings
5. Tutorial: Reverse a String
6. Next Session

Administrative Instructions

- Please fill out the feedback form - will be shared in the chat
- Join us on Microsoft Teams,
Team Code: **rzlaicv**

GITHUB REPOSITORY! 

How Strings Are Stored

Index	0	1	2	3	4	5
Variable	H	e	l	l	o	\0
Address	0x23451	0x23452	0x23453	0x23454	0x23455	0x23456

Declaration & Initialization

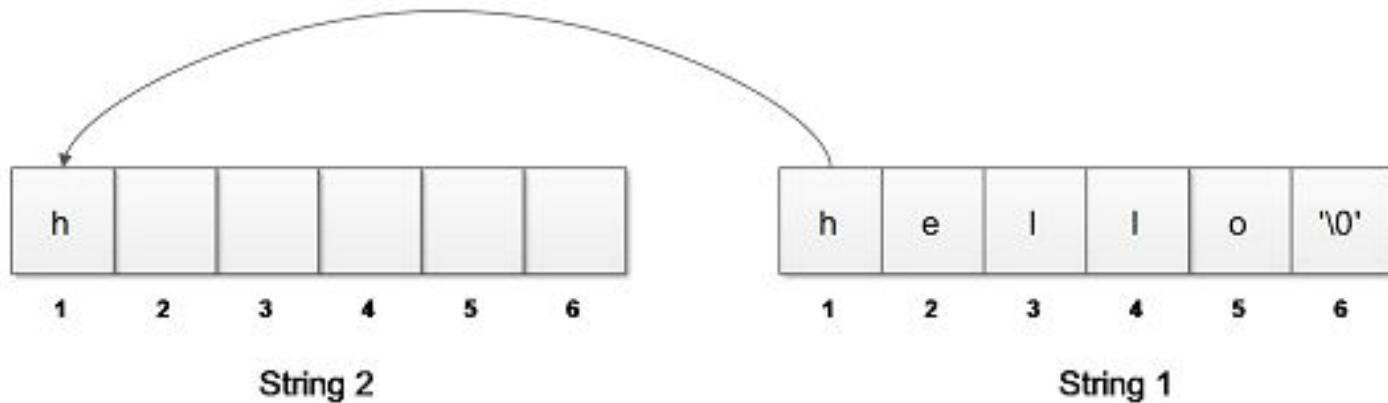
```
// Double quotes denote 'string literals'|
char str1[] = "hello";

// Size is 6 - Note the 'null' character at the end
char str2[] = { 'h', 'e', 'l', 'l', 'o', '\0' };

// Specify the size - Excess initialized to '\0'!
char str3[10] = { 'h', 'e', 'y' };

```

Copy Strings



Copy the contents of one string to another

The `<string.h>` Library

String Library Functions

`#include <string.h>`

Name	Description
<i>strlen</i>	return the length of string not counting <code>\0</code>
<i>strcpy</i>	copies string from source to dest
<i>strncpy</i>	copies n chars from source to dest
<i>strcat</i>	appends string from source to end of dest
<i>strncat</i>	appends n chars from source to end of dest
<i>strcmp</i>	compares two strings alphabetically
<i>strncmp</i>	compares the first n chars of two strings
<i>strstr</i>	finds a string inside another
<i>strtok</i>	breaks string into tokens using delimiters

[See the documentation](#)

Reverse a String - 1



Reversed:

Naively reverse a string

Reverse a String - 2

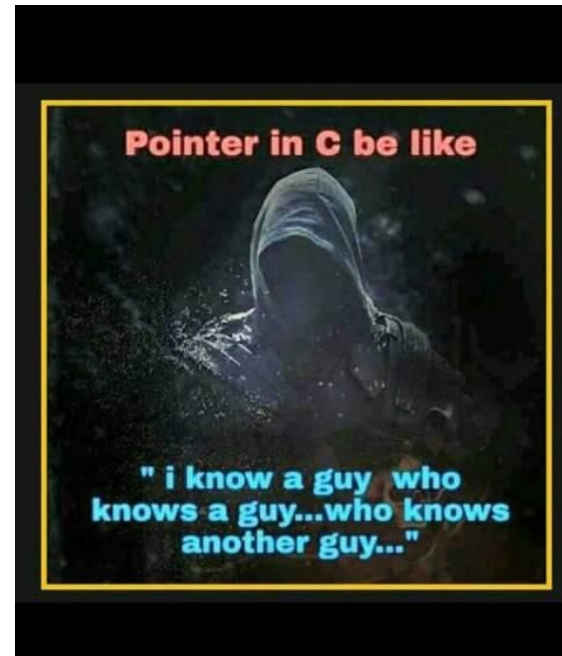
J	o	h	n	S	m	i	t	h
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Input

Only need to traverse half the string!

Next Session

POINTERS!!!



Any Questions