Objectives - Fri 2/7/2020

- ☐ Call stack
- ☐ Pass-by-address
- ☐ swap(...) function

Stack

addr	type*	name*	value	part	fn
200	int	argc	1	args	main(...)
204	char**	argv	→ {"./foo"}		
212	void*			ret addr	
220	int	a	5	locals	
224	int	b	7		
228	int*	a_n1	220	args	swap(...)
236	int*	a_n2	224		
244	void*			ret addr	
252	int	temp	5	locals	
256					

This memory form diagram shows the state of the stack while executing swap_right.c, just before line 7 (i.e., after `int temp = *a_n1;` and before `*a_n1 = *a_n2;`).

The heap segment and data segment are not used.

The swap_right.c example was used in Prof. Quinn's lecture on 2/7/2020.

Heap

addr	value	🔒
400		

Data segment

addr	type*	value
600		

Type and name are not actually stored in memory or executable. Addresses shown are fictional. Assume `sizeof(int)==4`, `sizeof(char)==1`, `sizeof(void*)==8`.