

## Pass by address

Here is an example of a very simple usage.

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

void swap(
                ) {

}

int main(int argc, char** argv) {
    int a = 1;
    int b = 2;
    printf("a=%d, b=%d\n", a, b); // output: a=1, b=2

    swap(
        );

    printf("a=%d, b=%d\n", a, b); // output: a=2, b=1

    return EXIT_SUCCESS;
}
```

Fill in the contents of the stack and heap just before swap returns.

Stack (simplified)					
addr.	type*	name*	value	uf	part
212		<i>somewhere in bash</i>			return addr.
204	char**	argv	→ {"/.foo"}		parameters
200	int	argc	1		
<i>bash / load system</i>					

Note: type and name are not actually stored in memory. They are listed here only for our understanding.  
 Assume `sizeof(int) == 4`, `sizeof(char) == 1`, and `sizeof(void*) == 8`.