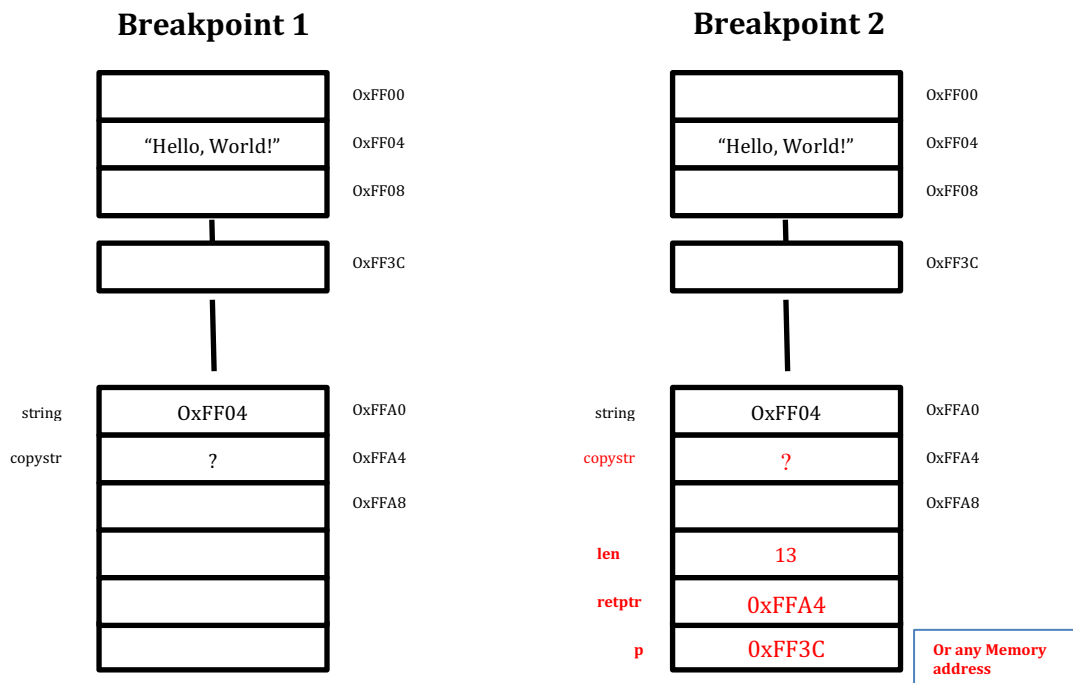
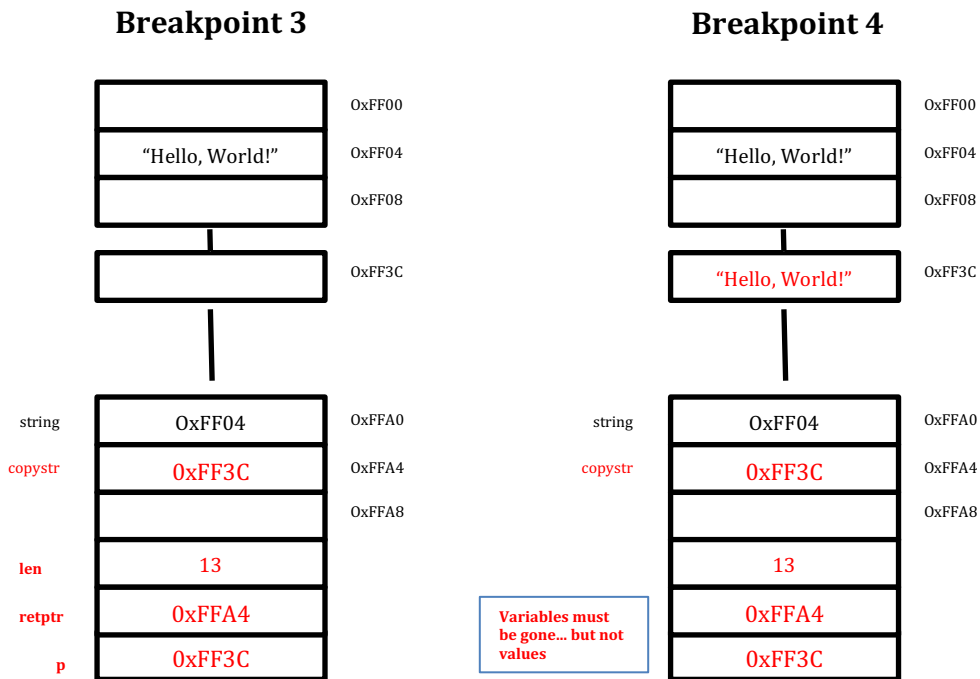


CIS 308 Exam 2 (50 points)
(PLEASE: write clearly and in printing – not cursive)

Name: _____

5. **(15 Points)** Consider the code given in List 1. Complete the memory states, that is, write in the appropriate memory map, the variables and values for the breakpoints 2, 3, and 4 in the code (Breakpoint 1 is given as example). Assume that malloc() in the function allocstr() will allocate the requested memory. Remember what happens to variables allocated in the stack when you return from a function.





List 1
<pre> char* string = "Hello, world!"; char* copystr; //Breakpoint 1 if(allocstr(strlen(string), &copystr)) strcpy(copystr, string); //Breakpoint 4 else printf(stderr, "out of memory\n"); int allocstr(int len, char **retptr) { char *p = malloc(len + 1);/* +1 for \0 */ //Breakpoint 2 if(p == NULL) return 0; *retptr = p; //Breakpoint 3 return 1; } </pre>