CS 31 Homework 1: C Arrays

Due at the start of class Thursday, Sept. 16, 2021

Names and Roles:

Question 1

Given the following C code snippet, list the VALUE and TYPE of each expression below.

```
int x = 3, i, myarray[10];
float f = 3.4;
for(i=0; i < 10; i++) {
   myarray[i] = i % x;
}</pre>
```

Code snippet	VALUE	TYPE
1. x + f	 	
2. myarray[4]		
3. myarray[4] > myarray[3]	 	
4. myarray	 	

Question 2

Trace through the following C code, and draw the stack at the execution point indicated in mystery, and show the output produced by a complete run of the program. (Assume stdio.h has been included.)

```
void print_array(int a[], int s) {
                                                     // YOUR STACK DRAWING
 int i;
 for(i=0; i < s; i++) {
   printf("%d:%d, ", i, a[i]);
 printf("\n");
int mystery(int a[], int s, int y){
 int i, val;
 val = 0;
 for(i = 0; i < s; i++) {
     if(a[i] > y) {
       val++;
       a[i] = a[i] - y;
     }
 }
 // DRAW THE STACK WHEN EXECUTION GETS HERE
 return val;
}
/**********************************
int main() {
 int i, myarray[10], num;
 for(i=0; i < 10; i++) {
    myarray[i] = i;
 printf("Before:\n");
 print_array(myarray, 10);
 num = mystery(myarray, 7, 3);
 printf("After: num = %d\n", num);
 print_array(myarray, 10);
                                                       // PROGRAM OUTPUT
}
```