For problem 1:  
initially I was thinking too hard about the .data section, but eventually I got to looking at the .text section – the array overflow opportunity was allows for you to overwrite into the buffer just beyond what is intended… what I gather is one of the values is modified based on an algorithm involving the global\_magic and the initial ID buffer, - I’m just not sure how to determine a viable combination, I’m confident I spent a lot of time overthinking it, and while I have not produced the intended results I do think I’m on the right track

