

be input to your program as a command line argument, this means you will need to allocate the array for the buffer dynamically.

Resources

Here is the device controller simulator, you are not allowed to modify these files in any way.

[device-controller.h](#) 

[device-controller-simulator.c](#) 

Here is the starting point for your code. Following this template, your solution should not be more than about 60 lines of code.

[echo-driver.c](#) 

Requirements

Your submission must include:

1. A makefile that compiles the code with just the command make. It must be tested on the pyrite.cs.iastate.edu server.
2. The completed echo-driver.c file (see resources below).
3. An example (text or screen capture) of you using a breakpoint in gdb while running your program.
4. An example (text or screen capture) of you running valgrind on your program. The valgrind report should show no memory leaks.
Although memory is automatically freed when a program exits, for the purpose of this problem we will consider any memory not explicitly freed by the program as a memory leak.

Example Output

The output should be the following:

```
$ ./echo-driver 8
Hello, World!
Hello, World!
Hello, WodH, d!
HlWld!
Helo,Wo
l, Wol!el Wor!
llW!He
```

```
$ ./echo-driver 16
Hello, World!
Hello, World!
Hello, World!
Hello, d!
HlWld!
Helo,Wo
l, Wol!el Wor
$ ./echo-driver 32
Hello, World!
Hello, World!
Hello, World!
Hello, World!
Hello, World!
Hello, Wor
```