Linux Developer assignment

This assignment is given to you as a potential candidate for the Linux Developer position at Deep Instinct.

Its purpose is to determine your proficiency and ease of work writing a Kernel Device Driver, and working with C and C++ in a Linux environment.

The exercise goes as follows:

Create the two following binaries

1. **A Kernel Device Driver**
2. **A User Mode Application**

The kernel device, once installed, should be able to receive a user mode request with a buffer of chars of variable size. The kernel device should receive said buffer, and sort its chars by order, sending the user mode application the sorted buffer.

e.g., the user mode application could send the kernel device the buffers:

[0x0a, ‘D’, ‘e’, ‘e’, ‘p’, ‘ ‘, ‘l’, ‘n’, ‘s’, ‘t’, ‘i’, ‘n’, ‘c’, ‘t’, 0x0a]

And the received buffer will be

[0x0a, 0x0a, ' ', 'D', 'l', 'c', 'e', 'e', 'i', 'n', 'n', 'p', 's', 't', 't']

You must implement both the Kernel Driver and the User Mode Application, present your work both as code and demonstrate that it works as expected.

Feel free to contact us at any point during the assignment for design questions, guidance, and clarifications.

Good luck!