The Block I/O Layer - A

Objective: In this lab you explore the Block I/O Layer scheduler called NOOP (no operation) by examining its implementation source files. Answer the questions below.

File(s) for this lab:

1. Load into an editor (gedit) the implementation file of the noop I/O scheduler located in block/noop-iosched.c under the /Student/src/CentOS/BUILD/kernel folder.

2. Note the user of an "elevator" structure. Load into an editor (gedit) the include for elevator.h located under /include/linux/elevator.h and the implementation file located under /block/elevator.c.

3. What function does the NOOP scheduler use to "install" itself within the kernel as a block I/O scheduler?

4. What function "uninstalls" the NOOP block I/O scheduler?

5. What kernel data structure is used by NOOP to manage the I/O requests?

6. What is the role of function noop_merged_requests() ?

7. Which hardware device would NOOP perform well on given that there is no seek penalty? Would it outperform the other I/O schedulers? Explain.