Hands-on 2

1. Recall the naming layers of the UNIX FS (v6), and answer the questions below:

   - Q1: Is file name a part of a file? Data or metadata?

     metadata
   - Q2: What is the actual content of a directory? Size?

     filenames and corresponding inode numbers

2. Record the OPEN/READ/CREATION implementation in lec03, and answer the questions below:

   - Q1: How many read and write in a OPEN?

     5 reads and 0 write.
   - Q2: How many read and write in a READ?

     6 reads and 3 writes.
   - Q3: How many read and write in a CREATION?

     6 reads and 4 writes.

3. Can you give a design to optimize the READ operation?

   Put next reading block information in bar.data. This way, read operation would be only needed 4 times.

4. Can you give a design to optimize the CREATION operation?

Change bit map to contain the address of free blocks rather than bits. This way one can directly read and write free block.

Upload **[your student id]-handson2.pdf** file to
ftp://SJTU.Ticholas.Huang:public@public.sjtu.edu.cn/upload/cse/Handson-2/
before the deadline.