CS 420

Assignment 6

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1.)

8kb/4 = 2048

Size of largest file = 68 Tb

2.)

a.)

* Contiguous – divide logical address by 512 with the quotient being added to the starting file address to get the physical block number and the remainder is the deplacement
* Linked – divide the logical address by 511 with the quotient being plus 1 down the linked list and the remainder plus 1 is the displacement
* Indexed – divide the logical address by 512 the physical address is the quotient and the displacement is the remainder

b.)

* 1
* 4
* 2

3.)

a.)

Seek order: 143, 86, 1470, 913, 1774, 948, 1509, 1022, 1750, 130

seek distance is 7081

b.)

Seek order: 143, 130, 86, 913, 948, 1022, 1470, 1509, 1750, 1774

Seek distance is 1745

c.)

Seek order: 143, 913, 948, 1022, 1470, 1509, 1750, 1774, 4999, 130, 86

Seek distance is 9769

d.)

Seek order: 143, 913, 948, 1022, 1470, 1509, 1750, 1774, 130, 86

Seek distance is 3319

e.)

Seek order: 143, 913, 948, 1022, 1470, 1509, 1750, 1774, 4999, 86, 130

Seek distance is 9813

f.)

Seek order: 143, 913, 948, 1022, 1470, 1509, 1750, 1774, 86, 130

Seek distance is 3363

4.)

Time to read sector: 14 ms

5.)

500 \* 7200 \* 1/60 = 60000 bytes per second

6.)