Assignment 3

CIS 345

Summer 2018

Due Date: August 5 (Sunday), 11:59 pm

Full Marks: 20 points

Answer all questions with explanations:

1) Systems that support sequential files always have an operation to rewind files. Do systems that support random –access files need this, too?
2) Some operating systems provide a system call **rename** to give a file a new name. Is there any difference at all between using this call to rename a file and just copying the file to a new file with the new name, followed by deleting the old one?
3) Contiguous allocation of files leads to disk fragmentation, as mentioned in the text, because some space in the last disk block will be wasted in files whose length is not an integral number of blocks. Is this internal fragmentation or external fragmentation? Make an analogy with something discussed in the previous chapter (Chapter 3: Memory Management).
4) Describe the effects of a corrupted data block for a given file for: (a) contiguous, (b) linked, and (c) indexed (or table based).
5) Name one advantage of hard links over symbolic links and one advantage of symbolic links over hard links.
6) Describe the difference between physical dump and logical dump.
7) Indirect block can hold 128 disk addresses and 10 direct addresses. If each block is 1 KB, what is the size of the largest file?