Assignment 11

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11.1

a. It's easy for the implementation of the allocation, but it may result in more internal fragmentation,

b. It's complicated for allocation, and there might be more external fragmentation.

c. It achieves intermediate complexity and flexibility compared with the former two schemes.

11.3 .

a. Yes. We can search the entire directory structure, find the empty spaces and link them into a new free-space list.

b. 4.

c. Store the pointer on the disk.

11.6

a. Assume X is the start address of the file, L is the logical address, Y is the physical block number translated from logical address, and Z is the block offset.

   (a) Contiguous. Y=$L/512$, Z=$L\%512$. Load the block with address $X + Y$ into memory. Z is the offset.

   (b) Linked. Y=$L/511$, Z=$L\%511$. Load the block with address X, then chase down the list by $Y + 1$ elements. Z is the offset.

   (c) Indexed. Y=$L/512$, Z=$L\%512$. Load the block with address X, then the Yth line is the target physical block number. Z is the offset.

b. (a) Contiguous. 1.

   (b) Linked. 4.

   (c) Indexed. 2.