CS3600

Worksheet 06 - Memory Management

1. Memory contains 6 holes with their sizes shown in the table.

Hole	A	B	C	D	E	F
Size	40	90	150	130	80	100

A sequence of requests for 3 blocks have arrived with sizes 20, 10, and 60. Select the hole allocated to each request by the **first-fit** allocation strategy.

the first two blocks (10 and 20) enter the first hole (A). The third block enters B.

2. Memory contains 6 holes with their sizes shown in the table.

Hole	A	B	C	D	E	F
Size	70	90	60	40	80	100

A sequence of requests for 3 blocks have arrived with sizes 30, 20, and 50. Select the hole allocated to each request by the **next-fit** allocation strategy.

30 enters A. 20 enters B. 50 enters C.

3. Memory contains 6 holes with their sizes shown in the table.

Hole	A	B	C	D	E	F
Size	40	120	130	30	140	100

A sequence of requests for 3 blocks have arrived with sizes 50, 10, and 80. Select the hole allocated to each request by the **best-fit** allocation strategy.

50 enters F. 10 enters D. 80 enters B.

4. Memory contains 6 holes with their sizes shown in the table.

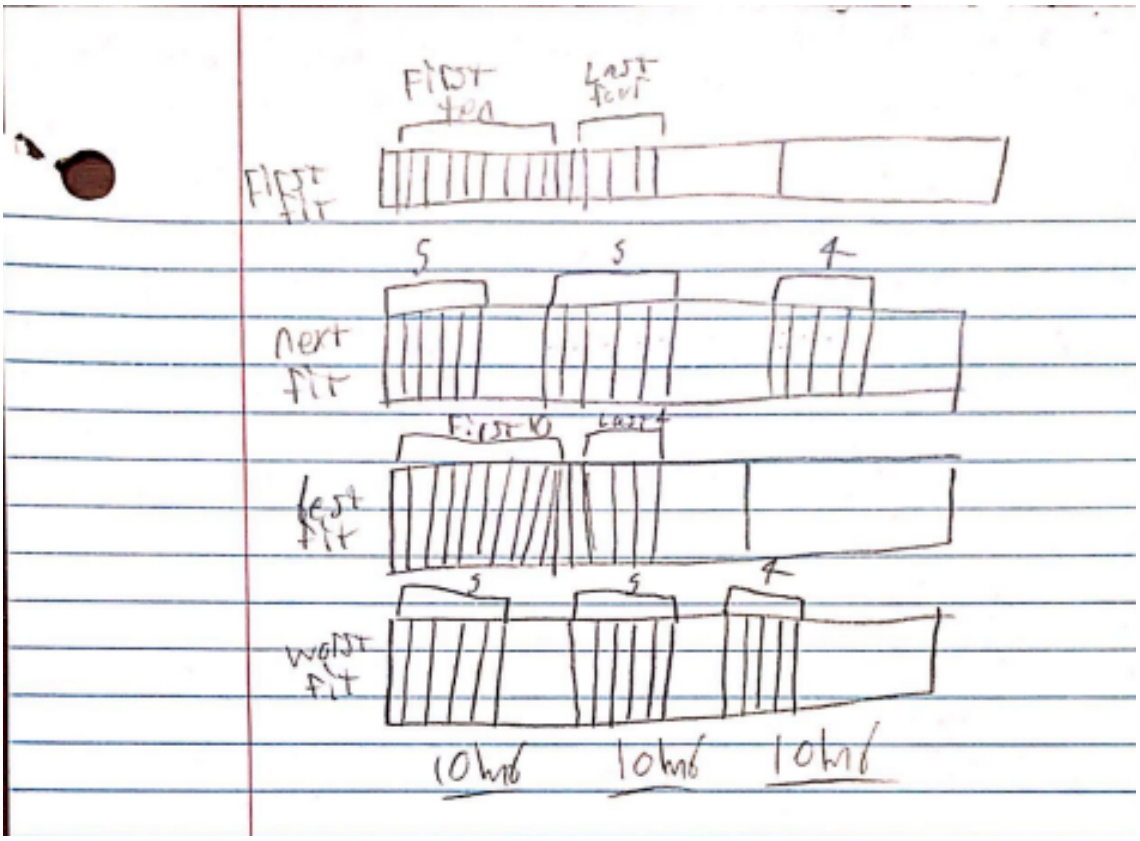
Hole	A	B	C	D	E	F
Size	80	150	70	30	40	140

A sequence of requests for 3 blocks have arrived with sizes 90, 50, and 20. Select the hole allocated to each request by the **worst-fit** allocation strategy.

90 enters B. 50 enters F. 20 enters F.

5. The 50% rule implies that ____1____ of all memory partitions are holes.

6. Memory contains 3 holes of 10 MB each. A sequence of 14 requests for 1 MB each is to be processed. For each of the four memory allocation methods, determine the sizes of the remaining holes after all 14 requests have been satisfied.



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7. Memory size is 18 MB. Hole size = block size = 1 KB. The 50% rule holds.

   (a)Determine the total number of holes.
   9 holes because 18/2 is 9.
   (b) Determine the total number of occupied blocks.

   9,216 kb

   (c) Determine the amount of space occupied by holes in MB.

   9 MB