

Problem 1

What is a false fragmentation? And how to solve this phenomenon? Please list at least two ways and make a simple introduction about them.

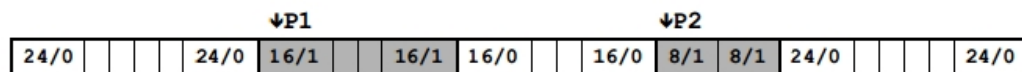
Problem 2

Implement a find best fit function for the example allocator.

```
static void *find_best_fit (size_t asize)
```

Problem 3:

The figure simulates the initial status of memory at a certain time. Allocated blocks are shaded, and free blocks are blank (each block represents 4 bytes). The allocator maintains double-word alignment. Given the execution sequence of memory allocation operations (malloc() or free()) from 1 to 4. Please answer the following questions.



1: P3 = malloc(4);

2: free(P1);

2: P4 = malloc(10);

4: P5 = malloc(9);

1. Assume first-fit algorithm is used to find free blocks and coalesce immediately.

Please draw the status of memory and mark with variables after the 2nd and 4th operation is executed.

2. Compute the total number of bytes of the internal fragments.