

IT5002 Computer Systems and Applications

Tutorial 8

Question 1.

Explain the difference between internal fragmentation and external fragmentation. Give examples of each.

Question 2.

Consider the following segment table:

Segment	Base	Length
0	219	600
1	2300	14
2	1327	580
3	1952	96

What are the physical addresses for the following logical addresses?

- (a) (0,430)
- (b) (1,10)
- (c) (2,500)
- (d) (3,400)

Which of these addresses, if accessed, would result in a segmentation violation?

Question 3.

Assume there is a 1,024KB segment where memory is allocated using the buddy system. Describe the configuration of the system as the following allocation requests are served:

- (a) Request 240 bytes
- (b) Request 120 bytes
- (c) Request 60 bytes
- (d) Request 130 bytes

Next, explain the configuration of the system as the blocks allocated first, third, and fourth are released.