CSCE 330 Fall 2004
QUIZ 14
Assigned Thursday, 04-10-21

These questions refer to heap management.

1. In the following paragraph, use *compaction* and *coalescence* to replace *mystery1* and *mystery2* correctly.

   Mystery1 is the process by which adjacent gaps in the free list are turned into a single gap, larger than each of the original gaps, while *mystery2* is the process by which all gaps in the free list are reclaimed and the size of the heap is reduced by the total size of all of the original gaps.

   Answer: *mystery1* is coalescence; *mystery2* is compaction.

2. Which one of coalescence and compaction takes more time?

   Answer: compaction takes more time.

3. True or false: the lifetime of a variable in the heap does not depend on the unit in which the declaration of the variable appears, but lasts as long as the variable is accessible, i.e., as long as it is referred to by some pointer variable.

   Answer: true.