CP11-12

The problems in this problem set cover lectures C11 and C12

1.
   a. Define a recursive binary search algorithm.

   b. Implement your algorithm as an Ada95 program.

   c. What is the recurrence equation that represents the computation time of your
      algorithm?

   d. What is the Big-O complexity of your algorithm? Show all the steps in the
      computation based on your algorithm.

Turn in a hard copy of your algorithm, recurrence equation, and Big-O analysis,
and code listing, and an electronic copy of your code.

2. What is the Big-O complexity of:
   a. Heapify function
   b. Build_Heap function
   c. Heap_Sort

Show all the steps in the computation of the Big-O complexity.

Note: the code for heap_sort, build_heap and heapify was shown in lecture C11 and has
been distributed via email.