Data structures and Algorithms
Assignment #3

1. Introduction
   The objective of Assignment#3 is to implement the following data structures and algorithms:
   Heap, Hash, and Sorting Algorithms using provided templates.

   - Provided templates:
     - heap/Heap.h
     - hash/XHashMap.h
     - sorting/StraightInsertionSort
     - sorting/ShellSort.h
     - sorting/StraightSelectionSort.h
     - sorting/BubbleSort.h
     - sorting/SLinkedListSE.h
     - sorting/DLinkedListSE.h
   - Requirements:
     - Your are required to complete the classes defined in the files specified above.
     - Where to fill the code?
       - At "**YOUR CODE HERE**"

2. Guidelines
   - (1) Attend the lecture (online). Instructors will explain how to implements those classes.
   - (2) Use short functions in the files with "Demo" in theirs names located in
     "dsacpp/include/heap", "dsacpp/include/hash" and "dsacpp/include/sorting" to practice
     some functions defined in those classes.
   - (3) Run the tests created for those classes, located in dsacpp/include/test to enforce that
     your implementation working correctly.
     - Add the tests to file "dsa_main_test.cpp" + compile + run
3. How to submit
   - Submit ONLY one zip file containing all the files specified above, placing those in folder
     "heap", "hash", and "sorting" accordingly, i.e., the same format as the zip file provided
     by the instructor.
   - Deadline: **July 08, 2021; 17h00**

References:
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