HOMEWORK 0

0 points

DUE DATE: September 8th 11:59pm.

Problem

This is Homework 0. It is not worth any points. However, all students are required to submit this work in order earn any credit for the next homework. Students must practice uploading their program using Handin and executing their code using Black Server.

Following note is a reminder for the Rest of the semester:

Your code must compile and run on Black server for any homework that requires programming. Any homework that does not compile and run on Black Server is graded as 0. Regardless of how quick the "fix" is.

Your job is really easy. You will be writing a simple **linear search** algorithm using C++ 11 for determining whether **an unsorted array** (i.e., an array with positive element values that are in no particular order) contains a specified search key. Dot not sort the array.

With your requirements document you are given:

1. LinearSearch.h
2. main.cpp
3. makefile And
4. an inputfile

Please do not modify: **main.cpp, make and inputfile**

Part 1

Complete the linearSearch method listed in the LinearSearch.h. Save your work.

```
 1⊖ /*
 2   * LinearSearch.h
 3   *
 4   *  Created on: Today
 5   *      Author: onsayse
 6   */
 7⊖ #ifndef LINEARSEARCH_H_
 8  #define LINEARSEARCH_H_
 9  #include <vector>
10  using namespace std;
18⊕ bool linearSearch(vector<Comparable> &items, const int key)▯
28
29
30  #endif /* LINEARSEARCH_H_ */
```

Part 2

Test your code using main.cpp, main method will not work until you implement linearSearch method. Please do not modify the main file.

Make sure that your code compiles and run on Black Server (C++ 11).

For testing your code you will need to use the make file. This file simply compiles your code. Here are the steps on how to use the make file:

```
[onsayse:~/CSE331_F16/HOMEWORK/HW0]$ cat Makefile
CPPFLAGS=-std=c++11 -g -O3

search: main.o
        g++ main.o -o search

main.o: main.cpp LinearSearch.h
        g++ $(CPPFLAGS) -c main.cpp
[onsayse:~/CSE331_F16/HOMEWORK/HW0]$ make
g++ main.o -o search
[onsayse:~/CSE331_F16/HOMEWORK/HW0]$ ls -l
total 1312
-rw-------@ 1 onsayse  staff  126153 Jul 15 15:10 HW0_Requirements.docx
-rw-r--r--  1 onsayse  staff     589 Jul 15 15:09 LinearSearch.h
-rw-r--r--  1 onsayse  staff     138 Jul 15 18:20 Makefile
-rwxr-xr-x@ 1 onsayse  staff  133142 Sep  8  2015 input.in
-rwxr-xr-x@ 1 onsayse  staff  133142 Sep  8  2015 input.txt
-rw-r--r--  1 onsayse  staff    2146 Jul 15 14:51 main.cpp
-rw-r--r--  1 onsayse  staff  189640 Jul 15 15:16 main.o
-rwxr-xr-x  1 onsayse  staff   31108 Jul 15 17:22 run
-rwxr-xr-x  1 onsayse  staff   31108 Jul 15 18:20 search
-rw-------@ 1 onsayse  staff     162 Jul 15 12:15 ~$0_Requirements.docx
[onsayse:~/CSE331_F16/HOMEWORK/HW0]$ ./search
test value 15680
The key value --> 129920 was not found!
Size of the vector : 20000
Linear Search method  took 21616 nanoseconds
[onsayse:~/CSE331_F16/HOMEWORK/HW0]$ ▯
```

Make file contains very few simple commands to compile and to create an executable of your code. I named my executable **search**. I run the make command, then the ./search to run my code.

<u>Homework Deliverables</u>

The following files must be submitted via Handin no later than September 8th 2016 by 11:59pm

1. **LinearSearch**.h (**0 points**)