

CS 150
ASSIGNMENT 5: SEARCHING

Create a new Python script file that you will name *yourname_homework5.py*. Save this file in a folder on your computer where you will keep all your homework assignments. Write some Python code inside this file that I will be able to run on my computer without errors.

When finished, upload your file in Google Classroom using the Homework 5 assignment link. Don't forget to add comments at the beginning of each task and throughout your code for clarity.

TASKS

1. If you are not done with your binary and sequential search, please finish writing your programs (If stuck, check out the slides on the classroom).
2. Show that binary search is faster than sequential search by timing the two programs you wrote for sequential and binary search. You can fill a list with a large number of integers (More than 100,000 elements). Then add code for timing the execution of the search functions. For timing you can use the time library by using the command **import time** at the beginning of the program and use **time.perf_counter()** to get the current time in seconds.
3. * Write a binary search program for an integer item in an ordered list using recursion.