

Homework 9: Searching

This program will require the accompanying file `input.txt` to be in the same directory as the `hw9.py` file.

Put all of your code for the problems below in one file named: `hw9-yourlastname.py`

1. (10 points) Complete the function `def search_list(List, value)` which searches through the list `List` for the item `value` by brute force; that is, by examining elements of the list `List` one item at a time until `value` is found. The function should return either an integer `i` for which `List[i] == value`, or -1 if `value` is not in the list. **Do not** use any list methods or built-in library functions; you must write an explicit loop to examine the elements of the list one at a time.
2. (20 points) Complete the function `def bsearch_list(List, value)` which searches through the sorted list `List` for the item `value` using a binary search. The function should return either an integer `i` for which `List[i] == value`, or -1 if `value` is not in the list. Again, do not use any list methods or built-in library functions; you must code the binary search yourself.