



HABIB UNIVERSITY

Data Structures & Algorithms

CS/CE 102/171 Spring 2023

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Binary Search

Student 1: _____

Consider the list of characters in your full name (all in upper case letters). Search for the middle letter of your first name in your last name using Binary Search, and return the index at which it was found. Handle the case when a character cannot be found in the list.

For example, given complete name is:

- **STEVE ROGERS**

The middle letter of the given first name is “**E**”. Using Binary Search, the algorithm should look for “**E**” in the given last name, i.e. “**ROGERS**”, and return its index. In this specific example, the answer will be 0 as “**E**” appears at index 0 in the sorted last name, i.e. “**EGORRS**”

Please show the output based on your name, for which you must state your complete name so it can be compared for the final result.

If there are even number of letters in your first name, there will be two middle letters. In that case choose the first letter, i.e. the floor value

If the middle letter appears multiple times in the last name, it should return the index of the first match

Assume name is taken as input with only first and last names (no middle name or extra family name). Irrespective of the input, all the letters should be in upper case