Department of Information Systems and Technologies

CTIS 152 – Algorithms and Data Structures

Spring 2024 – 2025

EXTRA QUESTION # 06

Write a C program that reads the flower names from the **"flowers.txt"** file into a string array with the **maximum size 30**. Then the program reads a flower name to search from the user, and searches it through the flower list by using the **binary search** algorithm. (The list of the flowers in the file is given in ascending order). If the searched flower is found, an appropriate message will be displayed as in the example run. The program stops searching for flowers when the user enters "**end**" as a flower name.

Write the following functions: **`readFromFile, display, binarySearch`**

Example Run:

```
The List of Flowers
-------------------
African Lily
Begonia
Daffodil
Daisy
Evening Primrose
Forget-Me-Nots
Fresia
Gardenia
Hibiscus
Hydrangea
Iris
Jasmine
Lavender
Lilac
Lily
Magnolia
Orchid
Petunia
Rose
Sunflower
Tulip

Enter a flower name to search (or end to stop searching): African Lily
African Lily found on the index 0 in the list

Enter a flower name to search (or end to stop searching): Gardenia
Gardenia found on the index 7 in the list

Enter a flower name to search (or end to stop searching): Tulip
Tulip found on the index 20 in the list

Enter a flower name to search (or end to stop searching): Lily of Valley
Lily of Valley could not be found!

Enter a flower name to search (or end to stop searching): end
```

flowers.txt

```
African Lily
Begonia
Daffodil
Daisy
Evening Primrose
Forget-Me-Nots
Fresia
Gardenia
Hibiscus
Hydrangea
Iris
Jasmine
Lavender
Lilac
Lily
Magnolia
Orchid
Petunia
Rose
Sunflower
Tulip
```