Problem – Basic Array Processing

1. You are to create a function that reads in a list of 10 student first names, last names and GPA into and array.

   Once completed, call another function to display the arrays.

   Create a third function to display the arrays in reverse order.

Data file

JOHN JONES 3.50

BETTY CROCKER 4.0

SAM SMITH 3.5

JOE DOE 2.75

MIKE MORE 3.0

JAVIER BAEZ 3.35

ANTHONY RIZZO 4.0

DAVID ROSS 3.90

JOE MADDON 2.80

THEO EPSTIEN 4.0

input	process	Output
Read from a file named students.txt. Each line has a student's first name, last name, and GPA. Example: JOHN JONES 3.50	Read each student's data into three arrays: first name, last name, and GPA. Display all students in the order they appear in the file. Then display all students again in reverse order.	A list of all students with their GPAs in normal order. A second list showing the same data in reverse order.

2. Read the data file below into arrays using a function. Use another function to display the arrays. Add a loop to the program that asks for a city and then displays the city and population for the value entered. If city not found, display a not found message. See below. Use a sequential search for the city.

Example:

Enter city name, ctl+z to stop: Chicago

Chicago has a population of 4000000

Enter city name, ctl_z to stop: Denver

Denver has a population of 2500000

Enter city name, ctl_z to stop: Rockford

Rockford not found

Enter city name, ctl_z to stop: ctl+z

Goodbye. Have a nice day.

Data File

Chicago 4000000

Denver 2500000

Milwaukee 3000000

Detroit 2200000

Oklahoma 1250000

Dallas 2100000

Houston 1750000

Indianapolis 1400000

input	process	output
Read from a file named cities.txt. Each line has a city name and its population. User types in a city name to search for.	Read all city names and populations into two arrays. When the user enters a city name, search through the array to find it. If found, display the population. If not found, show a "not found" message. Continue asking until the user stops by pressing Ctrl+Z.	The city name and its population (if found). A message saying the city was not found (if not in the file). A final message: "Goodbye. Have a nice day

3. Make an array of 10 employees (first name, last name, salary). Read the data file below and load it into the arrays. Use a function to display the arrays. Repeatedly ask the use for a last name. Use a function to perform a sequential search on the array last name. If the last name is found display first name, last name and salary. If the last name is not found. Display last name and message "not found".

Empldata.txt

John Jones 55000.00

Frank Smith 75000.00

Mark Smith 45000.00

Dave Roberts 80000.00

Sally Davis 90000.00

Tom Hanks 100000.00

Betty Crocker 98000.00

Sue Klein 78000.00

Joe Maddon 65000.00

Kris Bryant 70000.00

input	process	output
Read from a file named Empldata.txt. Each line has an employee's first name, last name, and salary. User enters a last name to search for.	Load the employee data into three arrays: first name, last name, and salary. Display all employee data from the file. Ask the user to type a last name. Use a sequential search to find the last name in the array. If the name is found, display the employee's first name, last name, and salary. If not found, display the last name and the message "not found." Repeat until the user stops by pressing Ctrl+Z.	List of all employees (first name, last name, and salary). For each search: Either display the employee's full info if found. Or display "not found" if not in the file.