COSC 1560 – Computer Programming II

Assignment 3
Deadline February 14, 2022

1) As used in Assignment 2, the file "StudentNames.txt", available on the course webpage, currently containing 10 people's names in the following format:

   Smith, John

   Enhance the program developed in Assignment 2 by implementing the following additional functions:

   a. int binarySearchNames(const string names[], int numNames, const string& name);
      Return the array index if the name, passed as the third argument, is found in the array. If the name is not found then return -1.
      Use the 'binary search' algorithm to implement this function.

   b. void selectionSort(string names[], int numNames);
      Sort the names in ascending order using the selection sort algorithm.

   c. void selectionSortDescending(string names[], int numNames);
      Sort the names in descending order using the selection sort algorithm.

2) Write a separate program to implement the following requirements:

   a. Declare three integer variables, n1, n2, n3 and initialize them to 10, 25, and 50 respectively.
   b. Declare two integer pointer variables, p1 and p2, and initialize them to point to n1 and n2 respectively.
   c. **By using p1**, multiply the value of n1 by 2 (*the new value of n1 should then be 10*2 = 20*).
   d. **By using p1 and p2**, print out the sum of n1 and n2.
   e. Assign p1 to point to n3.
   f. **By using p1 and p2**, print out the sum of n2 and n3.

THE DEPARTMENT STANDARDS FOR "STYLE GUIDELINES" SHOULD BE FOLLOWED IN ALL CODE.