using namespace std;

#include <iostream>

#include <vector>

//--------------------------------------------

// CS311 HW2P1 Binary Search

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// Compiler: g++

// --------------------------------------------

int binarySearch(int L[], int x, int first, int last)

{

int middle = (first+last)/2;

if (x == L[middle])

return middle; // found x at location middle

else if (first == last) //if we ca't find it, return -1

return -1;

else if (x < L[middle])

last = middle - 1;

else if (x > L[middle])

first = middle + 1;

return binarySearch(L, x, first, last); // recursive call

}

int main() {

int n = 10;

int myList[10] = {1, 3, 5, 7, 9, 11, 13, 15, 17, 19};

int myfirst = 0;

int mylast = n-1;

int findthis;

cout << "Enter number you are looking for: ";

cin >> findthis;

int resultloc = binarySearch(myList, findthis, myfirst, mylast);

if (resultloc == -1) //if we don't find it, let the user know

cout << "Find " << findthis << " fails." << endl;

else //else, tell where we found it

cout << "Found " << findthis << " in position " << resultloc+1 << endl;

}