// =======================

// Included: HW 5d, 5e, 5f

// =======================

// HW 5d

// =======================

// Christian Falucho

// CMPR 121

// =======================

#include <iostream>

#include <string>

using namespace std;

/\*================ FUNCTION PROTOTYPE ===================\*/

void showEvens(int, int);

/\*================ FUNCTION PROTOTYPE ===================\*/

/\*

===========================================================

=== MAIN FUNCTION BEGINS ===

===========================================================

\*/

int main(){

int minNum = 1; // Minimum value

int maxNum = 20; // Maximum value

return 0;

}

/\*

===========================================================

=== MAIN FUNCTION ENDS ===

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\*/

/\*

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=== CODE OUTPUT ===

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=== CODE OUTPUT ===

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=== HELPER FUNCTION BEGINS ===

===========================================================

\*/

void showEvens(int minNum, int maxNum){

if (minNum <= (maxNum / 2))

{

cout << 2 \* minNum << " ";

showEvens(minNum + 1, maxNum);

}

}

/\*

===========================================================

=== HELPER FUNCTION ENDS ===

===========================================================

\*/

// =======================

// Included: HW 5d, 5e, 5f

// =======================

// HW 5e

// =======================

// Christian Falucho

// CMPR 121

// =======================

#include <iostream>

#include <string>

using namespace std;

/\*================ FUNCTION PROTOTYPE ==========================\*/

void showOdds(int, int);

/\*================ FUNCTION PROTOTYPE ==========================\*/

/\*

===========================================================

=== MAIN FUNCTION BEGINS ===

===========================================================

\*/

int main(){

int minNum = 1; // Minimum value

int maxNum = 20; // Maximum value

cout << "Here are all odd numbers from "<< maxNum <<

" to " << minNum << ":" << endl << endl;

showOdds(minNum, maxNum);

return 0;

}

/\*

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=== MAIN FUNCTION ENDS ===

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=== CODE OUTPUT BEGINS ===

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=== CODE OUTPUT ENDS ===

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/\*

===========================================================

=== HELPER FUNCTION BEGINS ===

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\*/

void showOdds(int minNum, int oddNum){

int maxNum = oddNum - 1;

if (oddNum > minNum)

{

cout << oddNum - 1 << " ";

showOdds(minNum, maxNum - 1);

}

}/\*

===========================================================

=== HELPER FUNCTION ENDS ===

===========================================================

\*/

// =======================

// Included: HW 5d, 5e, 5f

// =======================

// HW 5f

// =======================

// Christian Falucho

// CMPR 121

// =======================

#include <iostream>

#include <string>

using namespace std;

/\*================ FUNCTION PROTOTYPE ==========================\*/

int countVowels(char[], int, int);

/\*================ FUNCTION PROTOTYPE ==========================\*/

/\*

===========================================================

=== MAIN FUNCTION BEGINS ===

===========================================================

\*/

int main(){

int index = 0; // Index to increment through array

int numVowels = 0; // Hold the value of vowels

char statement[SIZE] = "\0"; // Character array to hold

statement

cout << "Enter a statement: \n";

cin.getline(statement, SIZE);

numVowels = countVowels(statement, index, SIZE);

cout << endl;

cout << "There are " << numVowels << " vowels in the statement.";

return 0;

}

/\*

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=== MAIN FUNCTION ENDS ===

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/\*

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=== CODE OUTPUT BEGINS ===

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=== CODE OUTPUT ENDS ===

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\*/

/\*

===========================================================

=== HELPER FUNCTION BEGINS ===

===========================================================

\*/

int countVowels(char arr[],int index, int SIZE){

// convert all characters to lowercase

for (int i = 0; i < SIZE; i++)

{

arr[i] = tolower(arr[i]);

}

// Base case if index equals null

if (arr[index] == '\0')

{

return 0;

}

// If arr[index] equals A,E,I,O,U

// return 1 and call function again

else if (arr[index] == tolower('a') || arr[index] == 'e' ||

arr[index] == 'i' || arr[index] == 'o' ||

arr[index] == 'u')

{

return 1 + countVowels(arr, index + 1, SIZE);

}

// Else, move to the next index

else{

return countVowels(arr, index + 1, SIZE);

}

}

/\*

===========================================================

=== HELPER FUNCTION ENDS ===

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\*/