race

United International University
DSA-1 Lab Final
Section C - Total marks: 10 + 10

1. You are given a string **S** consisting of lowercase English letters. You need to determine whether or not it's possible to rearrange the letters of S in such a way that it forms a **palindrome**. A palindrome is a word that is spelled the same way forwards and backwards. For example, **"racecar"** is a palindrome.

Sample Input	**Sample Output**
helloleh	Not palindrome
racecar	Palindrome

2. You are given a **directed graph G** represented as an **adjacency list** and two vertices, **start and end**. Your task is to find whether there exists a path from start to end using **either BFS or DFS.**
   The first line of the input will be two integers **n** and **m** representing the number of vertices and edges of the graph respectively. The following m lines will represent the m directed edges. After that, the next line will contain two integers **p** and **q** representing the start and the end vertex for which you will find a path. The last line will contain the word **"BFS"** or **"DFS"** to determine which algorithm you are going to use for finding the path.

Sample Input	**Sample Output**
5 5 //n and m 0 1 0 2 1 3 2 3 3 4 0 4 //p and q DFS	True // No need to output these Explanation: Because there exists a path from 0 to 4. Path: 0 -> 1 -> 2 -> 3 -> 4