**File Format Description**

**Drake, Jeffrey, and Joseph**

The Long-Distance Mode of our system uses only one file: LongDistStationsText.txt. This file has two parts: first, a list of bus stations and gas stations, and second, a list of connections between these stations. Each station or connection is stored on its own line. A blank line separates the two parts of the file, and another blank line ends the file (though this second blank line can be omitted and the interface will still read the file correctly).

Part 1: List of Stations

In the first part of the file, each line represents a bus station or gas station and can be converted into a BusStation object or a GasStation object. There are four columns, separated by the string “, ”. The first, second, and fourth columns represent three attributes: latitude, longitude, and name, respectively. The third column is either of the two words City and Gas and indicates whether the station is a bus station (which, on a long-distance scale, corresponds to a single city) or a gas station, respectively.

Station 1

|  |  |  |  |
| --- | --- | --- | --- |
| Latitude | Longitude | City or Gas | Name |

Station 2

|  |  |  |  |
| --- | --- | --- | --- |
| Latitude | Longitude | City or Gas | Name |

**.**

**.**

**.**

Station n

|  |  |  |  |
| --- | --- | --- | --- |
| Latitude | Longitude | City or Gas | Name |

*Latitude:* A double-precision floating-point number, the number of degrees (-90 to 90) north of

the Equator

*Longitude:* A double-precision floating-point number, the number of degrees (-180 to 180) east of

the Prime Meridian

*Name:* A string representing the name of the station. It cannot contain the substring “, ”. It

should not contain any comma, even a comma not followed by a space, though if it does then the interface may include that comma in the name.

Part 2: List of Connections

In the second part of the file, each line represents a connection between two stations. Each station is represented by the line number (starting at 0) at which it occurs in the first part of the file. Each line in the second part consists of two line numbers separated by a single space. So, for example, the line

0 11

connects the zeroth station to the eleventh station. Either zero or one connection exists between any two stations, so, for example, a connection between 2 and 7 eliminates the need for a connection between 7 and 2.

By convention, the smaller line number in a line precedes the larger, and lines are ordered in ascending order first by smaller line number and then by larger line number, so, for example, the lines

2 7

3 5

3 6

follow convention, whereas the lines

3 6

7 2

3 5

do not. The interface can read the file even if it does not follow this convention, but the interface follows this convention when writing to the file.

Connection 1

|  |  |
| --- | --- |
| First line number | Second line number |

Connection 2

|  |  |
| --- | --- |
| First line number | Second line number |

**.**

**.**

**.**

Connection n

|  |  |
| --- | --- |
| First line number | Second line number |

*First line number:* An integer, the line number (starting at 0) of a station in the first part of the file

*Second line number:* An integer, the line number (starting at 0) of another station in the first part of

the file