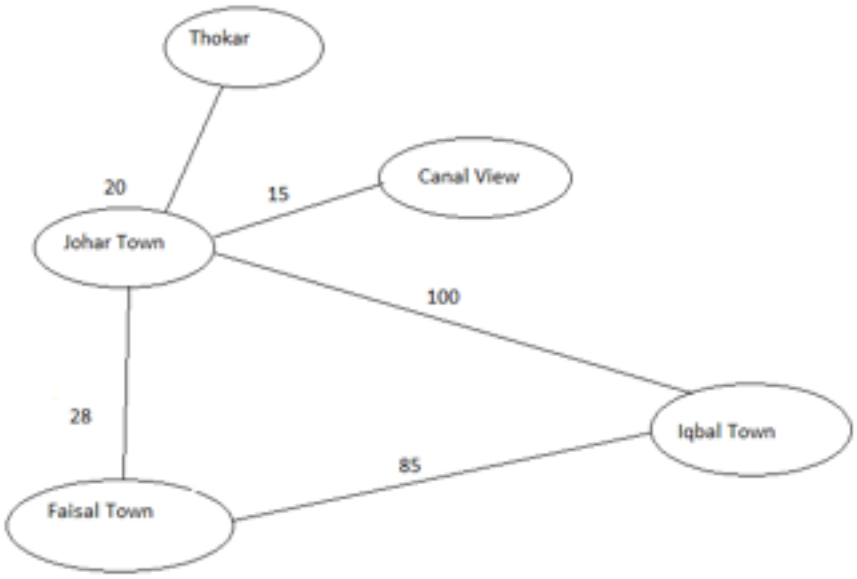
Problem 2: Transportation Planner

Input file: Problem2.txt

A transportation planner is interested in knowing the maximum distance one must travel to get between any two points in a country (that is, the maximum of all the shortest distances between pairs of cities) and wants you to develop a program to do so. For example, consider this simple road system, where all roads are bidirectional.



The maximum distance would be that between Thokar and Iqbal Town: 120 units.

Input:

The input to your program will consist of one or more sets of data in free format. Each set starts with an integer, *N*, indicating the number of road segments between cities. There then follow two city names (containing no embedded blanks) followed by a positive integer distance. Each line will contain one pair. After a set of data there is a blank line. There is at

most one road between any pair of cities and no road from a city directly to itself. There will be no more than 100 cities. The last set is followed by the integer 0 after the blank line.

Ouput:

For each set, output the maximum distance in the format shown in the example.

Sample Input:

5
Thokar Johar_Town 20
Johar_Town Faisal_Town 28
Johar_Town Canal_View 15
Faisal_Town Iqbal_Town 85
Johar_Town Iqbal_Town 100

1
A B 10

0

Sample Output:

Set #1: 120 units
Set #2: 10 units