

# A BUS NETWORK

## CHALLENGE DESCRIPTION:

You have just moved to a new city where the main transport facility is a bus. You have noticed that for each bus route, it takes a bus 7 minutes to ride between the adjacent stops, and it takes 12 minutes for you to change a bus. To use your time more efficiently, write a program that determines how to get from point A to point B in the least amount of time using a following list of bus routes.

The bus route R1 a list of bus stops ID represented in the same order as they appear on the route. You can change a bus only at the stop with the same ID.

For example:

R1=[1,2,3,4]; R2=[5,6,4]; R3=[9,6,7]; R4=[12,1,2,3,11,16,15,14,10,7]

To get from point 1 to point 7, you can start from the bus route R1, and ride to the stop with ID=4, change the route R1 to the route R2 to reach the stop with ID=6, then change R2 to R3 to arrive at the stop with ID=7, or you can simply take the bus route R4, occupy a seat, relax, and ride straight to a stop with ID=7. Your task is to determine the fastest possible route.

## INPUT SAMPLE:

Your program should accept a path to a filename as its first argument. Each line in the file is one test case. Each test case contains the points A and B in brackets and a list of routes separated by a semicolon.

For example:

(2,4); R1=[1,2,3,11,12,4]; R2=[5,6,4]; R3=[1,6,7]; R4=[5,6,4]; R5=[8,6,3]  
(1,7); R1=[1,2,3,4]; R2=[5,6,4]; R3=[9,6,7]; R4=[12,1,2,3,11,16,15,14,10,13,7]  
(3,299); R1=[1,2,3,4]; R2=[6,7,19,12,4]; R3=[11,14,16,6]; R4=[24,299,42,6]  
(3,4); R1=[1,2,3]; R2=[6,7,19,12,4]; R3=[11,14,16,6]

## OUTPUT SAMPLE:

For each test case print out the minimum time in minutes needed to get from point A to point B using the given bus routes or print out "None" if there is no connection between these two points.

For example:

28  
59  
73  
None

Constraints:  
The number of routes is in a range from 3 to 150.  
The IDs are in a range from 0 to 300.  
The length of a route is in a range from 10 to 35 stops.