

CS 431 Programming Languages Lab

Prolog Assignment # 3

Due Date: Friday, 14th November 2014, Midnight

Problem 1: Assam State Travel Planner

The aim is to build a simple system that will help to plan travel routes in the state of Assam. The system is expected to have a menu with the following options:

1. Plan your journey between two places.
2. Plan your journey between two places via another place.

Sample Input-Output:

- Option 1 of the Menu is selected.

Input: source, destination, day of travel

Output: the routes along with modes, day of travel, start-time, arrival time.

For example, if source is IIT Guest house and the destination is Majuli island, and the day is Sunday then a possible output could be:

Plans	Modes	Times	Locations
Plan 1	Bus	Leave 8:00 AM	IIT Guest house bus stop
		Arrive 9:00 AM	ISBT Guwahati
	Bus	Leave 9:30 AM	ISBT Guwahati
		Arrive 4:30 PM	Jorhat Bus station
	Bus	Leave 4: 45 PM	Jorhat Bus station
		Arrive 5: 00 PM	Nimatighat
	Ferry	Leave 5: 10 PM	Nimatighat
		Arrive 5: 20 PM	Majuli
Plan 2	Bus	Leave 8:00 AM	IIT Guest house bus stop
		Arrive 9:00 AM	Railway Station Guwahati

Train	Leave 9:30 AM	Railway Station Guwahati
	Arrive 5:30 PM	Railway Station Jorhat
Bus	Leave 5: 45 PM	Railway Station Jorhat
	Arrive 5: 00 PM	Jorhat Bus Station
Bus	Leave 5: 15 PM	Jorhat Bus station
	Arrive 5: 30 PM	Nimatighat
Ferry	Leave 5: 10 PM	Nimatighat
	Arrive 5: 20 PM	Majuli

- Option 2 of the Menu is selected.

Input: source, via, destination, day of travel.

Output: the routes along with modes, day of travel, start-time, arrival time.

Example Input: IIT Guest house, Dibrugarh, Majuli, Sunday

Output:

Plans	Modes	Times	Locations
Plan 1	Taxi	Leave 6:00 AM	IIT Guest house
		Arrive 6:45 AM	Railway Station Guwahati
	Train	Leave 7:00 AM	Railway Station Guwahati
		Arrive 4:00 PM	Railway Station Dibrugarh
	Bus	Leave 4:45 PM	Railway Station Dibrugarh
		Arrive 5: 00 PM	Dibrugarh Bus Station
	(Next day)		
	Bus	Leave 7: 00 AM	Dibrugarh Bus station
		Arrive 10: 00 AM	Jorhat Bus Station
	Bus	Leave 10: 15 AM	Jorhat Bus station
		Arrive 10: 30 AM	Nimatighat
	Ferry	Leave 10: 45 PM	Nimatighat
		Arrive 10: 55 PM	Majuli

Problem 2: Simulated Student Counselor

The aim is to make a simulated student counselor that carries a sensible conversation based on key words in the input. A typical dialogue might be (the simulated student counselor replies are shown in boldface):

What is your name?

I am Rahul Sharma.

So Rahul tell me your problem.

Too much work in too little time.

How do you spend time?

Worrying and then sleeping.

Please continue.

Also, talking to my best friend over phone.

Tell me something about your friend.

No, I don't want to.

Sorry, what you don't want?

⋮

In this dialogue, the keywords are `Name`, `time`, `friend`, and `don't want`. The response **Please continue** is generated if no keyword is encountered.