Data Structures and Algorithms Lab

13. Graph Algorithms

Subject Code: 17ECSP201 **Lab No:** 13 **Semester:** III

Date: Nov, 2017 **Batch:** MSM

Question: The Sendoff Party

Objective: Usage of appropriate data structures and algorithms in implementing a graph/search problem

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BVBCET Transformed to KLE TECH and the last batch will be graduating this academic year. Several departments have been merged under 'school' banner and this will be the last year of their independent existence. Hence, the final sendoff party is arranged by several departments in the campus. The Vice chancellor has been invited to all the parties which are scheduled on the same day. Help him to come out with an optimal plan to visit and attend all the parties. The departments hosting party are indicated in ★

Following is the minutes that will be spent across the departments, as collected by the PA of VC. For Example: If you visit from ISE to IT, 60 minutes are spent. If you have to comeback from IT to ISE, one more 60 minutes burst will be spent.

Location 01	Location 02	Cost
ISE	IT	60
ISE	Robotics	100
Civil	Mech	80
Robotics	Archi	30
Auto	ISE	70
Civil	LSWA	50
LSWA	EE	40
EE	MECH	80
MECH	Archi	20
Archi	ISE	140
ISE	LSWA	250
EE	ISE	90
EE	Robotics	50
EE	Auto	60
Auto	ISE	70

The question is on finding the best visit such that all the parties are covered in the single run. VC has decided to start the party from LSWA. Select a suitable algorithm and implement the much needed procedure. Give VC the proper order of visit along with the total cost (minutes) that will be incurred. A manual as well as the automated solution will be appreciated!

P.S. Sometimes it's the simple problems that come with the most complex computer solution!

**** Happy Coding ****