

CSE-404: Artificial Intelligence Sessional
Task – 2: Travelling Salesman Problem
(Local Search Algorithm)

Problem Statement:

Given a list of cities and the distances between each pair of cities, what is the shortest possible route that visits each city exactly once and returns to the origin city?

You are required to write a program to find the shortest possible route using First Choice Hill Climbing with the heuristics. Run your algorithm with different values of the parameter σ . Each time you will run the algorithm 10 times, compute some statistics and present them as shown in the table. You must prepare the result and show it in soft copy at the time of evaluation.

PROBLEM INSTANCE	SIGMA	AVG COUNT	AVG COST	MIN COST

Marks Distribution:

Submission	First Choice Hill Climbing	Heuristics	Completeness	Report	+ UI (Bonus)	Total
10	30	20	20	20	20	(100+20)

Submission:

1. Put all necessary file in a single Folder. Name it: cse404<SectionA1/B1/A2/B2>_task2_<Your Roll Number>
2. Put the folder in a zip file. Name it the same as that of folder.
3. Email the zip file in this email: submission.cse.mist@gmail.com . **The subject of the email must be same as the name of your folder.**
4. **Deadline: 01 April, 2018 11:59PM.**