

UNIVERSITI TEKNOLOGI MARA

MSP660

**CREATING A SINGLE-DAY TRAVEL ITINERARY FOR
MULTIPLE TOURISM DESTINATIONS IN KUALA LUMPUR
USING INTEGER LINEAR PROGRAMMING OF
TRAVELLING SALESMAN PROBLEM**

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IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	iv
LIST OF FIGURES	iv
ABSTRACT	v
CHAPTER 1	1
INTRODUCTION	1
1.1 Motivation.....	1
1.2 Problem Statement	3
1.3 Objectives	3
1.4 Significant and Benefit of Study	4
1.5 Scope and Limitation of Study.....	4
1.6 Definition of Terms and Abbreviation.....	5
CHAPTER 2	7
BACKGROUND THEORY AND LITERATURE REVIEW	7
2.1 Background Theory	7
2.2 Literature Review/ Related Research.....	8
2.2.1 Optimization of Tourist Travel Plan by MTZ-TSP	8
2.2.2 Definition and Theory: Travelling Salesman Problem	9
2.2.3 Solving the Travelling Salesman Problem.....	9
2.2.4 Application of Travelling Salesman Problem.....	10
2.2.5 Implementation TSP approach by MTZ Model.....	11
2.2.6 Tourism Route Optimization of HGA into TVP.....	13
2.2.7 Optimalization Travel Route on Neural Network for Efficient Tourism	13
	13
METHODOLOGY AND IMPLEMENTATION	15
3.1 Implementations Procedures	16
Step 4: Create a graph network for these tourist destinations.	21
CHAPTER 4	26
RESULTS AND DISCUSSION	26
CHAPTER 5	28
CONCLUSIONS AND RECOMMENDATIONS	28
REFERENCES	29
APPENDIX A	31
APPENDIX B	32

LIST OF TABLES

Table 1: The total ratings of 15 touristic destinations from seven travel websites.....	16
Table 2: Top Ranking of Popular Tourism Places from five websites which are Yelp, Trip, Klook, Pelago and Viator.....	17
Table 3: The weightage of ranking tourist destinations from seven tourism website..	19
Table 4: The weightage of selected tourist places from seven tourism websites	20
Table 5: The rank tourist places and proximity of the tourist destination (in minutes)	21
Table 6: The location and proximity of the chosen tourist destinations	22
Table 7: The visit sequence of the nodes	24
Table 8: The travel times between start and subsequent nodes	25
Table 9: The designated tourist destinations by average mean model.....	26

LIST OF FIGURES

Figure 1: Total Tourist Arrivals in Malaysia, by months (source: Tourism Malaysia Website, 2023)	2
Figure 2: The flowchart of the procedure of creating travel itinerary with visit sequence using TSP.	15
Figure 3: Network between selected tourist attractions	21
Figure 4: Solution of the CPLEX Optimization.....	24
Figure 5: Suggested collection route for the area of study, i.e., Kuala Lumpur	27

ABSTRACT

This study presents a novel approach for creating a single-day travel itinerary with an optimal visit sequence for multiple tourism destinations in Kuala Lumpur. Leveraging the principles of integer linear programming and the traveling salesman problem (TSP), the research aims to address the challenge of efficiently organizing visits to various tourist attractions within a constrained time frame. The objectives encompass the identification of key tourism destinations based on visitors' preferences, the determination of the shortest travel times between these destinations using an integer linear programming model, and the establishment of a comprehensive travel itinerary with a specific visiting sequence. The methodology involves the utilization of the MTZ-TSP method and its integration into CPLEX to derive the best sequence for allocating time at each tourism destination. The findings of this research endeavor to offer a systematic and optimized approach for crafting travel itineraries, thereby enhancing the overall tourism experience in Kuala Lumpur.