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|  | **Faculty of Industry and Energy Technology** |

**Decision Support System using C #. Net**

A capstone project submitted to faculty of Industry and Energy Technology, New Cairo Technological University, In partial fulfillment of the requirements for the Degree of Higher Diploma

**Information and Communications Technology**

**Submitted by**

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**Approval Sheet**

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**This capstone project has been approved by the examining committee:**

**Score:------------------**

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**DEDICATION**

*Dedicated to My Wonderful Mother for Her Love and Measureless Support from The Heaven.*

# ACKNOWLEDGMENT

First of all, I thank my *" God* " for helping me to achieve this work and giving me the ability to finish this thesis in that satisfactory form*.*

I would like to express my sincere appreciation to my supervisors: ***Dr.*** ***Ghada Maher and Eng. Roula Mohamed****.* I am very grateful for their strong effort, continuous support, and encouragement during the research study in this capstone project. They really influenced my way of thinking and developing the research ideas adopted in this thesis. Really, I can’t find the appropriate words to thank them. I am very grateful for their strong effort, continuous support, and encouragement during the research study in this capstone project.

I can’t forget my dearest ***Prof. Adly Tag Eldeen***, Head of Information and Communications Technology Department, the man who learn me not only how to make scientific research but also more diverse things in my practical life.

I would like also to express my deepest thanks *all the members* of my colleges for their cooperation during the period I spend with them

to prepare this work.

I am extremely grateful to *my* *family especially my father, mother*.

*Capstone Project Team*

# ABSTRACT

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| قواعد كتابة الملخص  .1حوالي 200 كلمة  .2يجب أن يتضمن الهدف من العمل والمشكلة العلمية  .3المنهجية المستخدمة لحل المشكلة العلمية  .4عرض أهم النتائج التي تم التوصل إليها  .5خلاصة تتضمن أهمية هذه النتائج |

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# LIST OF ABBREVIATIONS

|  |  |
| --- | --- |
| **Referenced Terms** | **Abbreviation** |
| Adaptive-Particle Swarm Optimization | A-PSO |
| Ant Colony Optimization | ACO |
| Artificial Bee Colony | ABC |
| Analytical Hierarchy Process | AHP |
| Analytical Hierarchy Process (AHP) and Multi-Objective Genetic Approach | AHP-MGA |
|  |  |
|  |  |

# NOMENCLATURES

|  |  |
| --- | --- |
| **Nomenclature** | **Referenced Terms** |
|  | Active activities at time |
|  | Make-span of project |

**CHAPTER I**

**INTRODUCTION**

# CHAPTER 1

## INTRODUCTION

This chapter provides an overview of the thesis's context, problem statement, capstone objective, capstone methodology, and the significance of thesis. Finally, the organization of this capstone project.

### **1 Overview**

Duck’s row is a website that provides a full recommendation to where they could hang out at according to their budget.

Figure ‎1‑1 Information systems.

### **2 Problem Statement**

Nowadays most of the teenagers have trouble at picking the best place where they want to go when they’re hanging out and most of the time it result to cancelling all the plans

### **3 Capstone Project Objective**

The main objective of our project is that the website provides a full recommendations to the users according to their budget to make sure they have a great and fun time

### **4 Capstone Project Methodology**

The methodology of this research is summarized as follows:

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### **5 Significance of Proposed Capstone Project**

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### **6 Capstone Project Organization**

This thesis is organized as follows. Chapter 2 provides a literature review that investigates the available models and approaches that developed to solve the ---------------Problem. Chapter 3 introduces --------------

**CHAPTER 2**

**Literature Review**

# CHAPTER 2

## LITERATURE REVIEW

### **1 Introduction**

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### **2 Information Systems**

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### **3 Decision Support System**

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### **4 Solution Approaches**

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### **5 C # programming language**

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### **7 Conclusion**

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**CHAPTER 3**

**Multi-Criteria Decision Making**

# CHAPTER 3

## Multi-Criteria Decision Making.

### **1 Introduction**

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### **2 Problem Formulation**

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### 3 **The Applied Approach**

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### **4 Code of Capstone Project**

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**CHAPTER 4**

**REAL WORLD APPLICATION**

# CHAPTER 4

## 6 REAL WORLD APPLICATION

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**CHAPTER 5**

**Conclusion and**

**Future Work**

# CHAPTER 5

## CONCLUSION AND FUTURE WORK

### **1 Conclusions**

In this chapter, we summarize the general conclusions of capstone project.

In this thesis, we have addressed the problem of planning a hangout with friends or alone, taking into account the user's budget and preferences. We have proposed a method for solving this problem as a combinatorial optimization problem with constraints. Our method takes into account the following factors:

* The amount of money the user has available
* The places the user would like to visit
* The distance between the places the user would like to visit
* The number of people the user is with

We have implemented our method as a website, which allows users to enter their preferences and budget and then receive a list of recommendations for hangouts that meet their criteria. We have evaluated our website with a user study and found that it is effective in helping users plan hangouts that meet their needs.

### **2 Future Work**

### Many different adaptations, tests, and experiments have been left for the future due to lack of time (i.e. the experiments with real data are usually very time consuming, requiring even days to finish a single run). Future work concerns the deeper analysis of particular mechanisms and new proposals to try different methods. There are a number of ways in which our website could be improved in the future. For example, we could:

### Improve the accuracy of our recommendations by incorporating more data about the places we recommend.

### Allow users to specify more detailed preferences, such as the type of food they would like to eat or the activities they would like to do.

### Integrate with transportation apps to provide users with more information about how to get to the places they are planning to visit.

### We believe that our website has the potential to be a valuable tool for people who are looking for ways to plan hangouts that meet their needs. We are excited to continue working on improving our website and making it even more useful for users.

**Bibliography**

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