

HIGHER TECHNICAL INSTITUTE

COURSE IN COMPUTER STUDIES

DIPLOMA PROJECT

CITY NAVIGATOR

CS/333

HADJIMANOLIS GEORGE  
FRANGOULIDOU NIOVIE

8 JUNE 2005

HIGHER TECHNICAL INSTITUTE  
COMPUTER STUDIES DEPARTMENT

DIPLOMA PROJECT

City Navigator

CS/333

George Hadjimanolis

Niovie Frangoulidou

JUNE 2005

HIGHER TECHNICAL INSTITUTE	PROJECT NO
	3580

# City Navigator

Project Number: CS/333

Project Reported by: George Hadjimanolis

Niovie Frangoulidou

Higher Technical Institute

Diploma Project

This project is submitted in partial fulfillment for the requirements for the award of the diploma in Computer Studies

Project Supervisor: Mrs. Eliza Loizou

B.Sc, MA in Computer Science

External Assessors: Mr. Andreas Chrisafis

Laiki Popular Bank

HIGHER TECHNICAL INSTITUTE	PROJECT NO
	3580

## CONTENTS

Acknowledgements	vi
Introduction	vii
Summary	viii

### CHAPTER 1 – Investigation Phase

1.1	Initial Investigation – Activity 1	10
1.1.1	Introduction	10
1.1.2	Information About the Organization	12
1.1.3	Information About the Work	19
1.1.4	Information About the People	23
1.1.5	Information About the Work Environment	24
1.2	Feasibility Study – Activity 2	26
1.2.1	Introduction	26
1.2.2	Technical Feasibility	26
1.2.3	Human Factors	28
1.2.4	Operational Feasibility	28
1.2.5	Schedule Feasibility	29
1.2.6	Conclusion	30

### CHAPTER 2 – Analysis and General Design Phase

2.1	Existing System Review – Activity 3	32
2.1.1	Introduction	32
2.1.2	Review of the existing system	32
2.2	New System Requirements – Activity 4	33
2.2.1	Overview Narrative	33
2.2.2	Processing	33
2.2.3	Data Dictionary	34
2.2.4	Inputs to the system	34
2.2.5	Outputs of the System	35
2.2.6	User Interface with the System	35
2.2.7	Conclusion	36

2.3	New System Design – Activity 5	37
2.3.1	Introduction	37
2.3.2	New System Design Specification Document	37
2.4	Installation and Implementation Planning – Activity 6	
2.4.1	Introduction	40
2.4.2	Preliminary Detailed Design and Implementation plan	41
2.4.3	Preliminary system test Plan	42
2.4.4	User training Outline	42
2.4.5	Preliminary Installation Plan	42

### CHAPTER 3 – Detailed Design and Implementation Phase

3.1	Technical Design – Activity 7	44
3.1.1	Introduction	44
3.1.2	Detailed Design Specification	44
3.1.2.1	Application Software Design	44
3.1.2.2	Backup Requirements	45
3.1.2.3	Recovery Procedures	45
3.1.2.4	Logging Requirements	45
3.1.2.5	Interface	46
3.2	Test Specifications and Planning – Activity 8	47
3.2.1	Introduction	47
3.2.2	Program Test Specification	47
3.2.2.1	Unit Testing	48
3.2.2.2	Integration Testing	48
3.2.2.3	Function Testing	48
3.2.2.4	System Testing	49
3.2.2.5	Acceptance Testing	49
3.3	Programming and Testing – Activity 9	50
3.3.1	Introduction	50
3.3.2	Process of Programming and Testing	50

3.4	User Training – Activity 10	51
3.4.1	Introduction	51
3.4.2	User Training	51
3.4.3	User Manual	51
<b><u>CHAPTER 4 – Installation Phase</u></b>		
4.1	System Installation – Activity 12	53
4.1.1	Introduction	53
<b><u>CHAPTER 5 – Review Phase</u></b>		
5.1	System Development Recap – Activity 13	55
5.1.1	Introduction	55
5.2	Post Implementation – Activity 14	56
5.2.1	Introduction	56
5.2.2	Post Implementation Review Report	56
5.3	Conclusion	57
 <b><u>APPENDICES</u></b>		
	Appendix A	59
	Appendix B	60
	Appendix C	61
	Appendix D	62
	Appendix E	65
	Appendix F	77

## ACKNOWLEDGEMENTS

We want to thank our project supervisor Mrs. Eliza Loizou for the help and the support she gave us during the development and the implementation of the project, and specially the preparation of the Analysis report.

We also would like to thank Mr. Andrea Pogiatzis from CYTA for all the guidance he gave us to get familiar with unknown tools and technologies and generally for the whole system and how it will work.

Finally we want to thank friends and family that helped us and support us during the project.

## SUMMARY

The City Navigator is proposed by Mrs. Eliza Loizou, lecturer at the General Studies Department of Higher Institute (HTI) and by Cyprus Telecommunications Authority (CYTA), for the partial fulfillment of the award of the Diploma in General Studies.

The system to be developed will be a city navigator. In other words you will enter the place where you are and what you want to find like restaurants, café, pharmacies and you will receive an SMS on your mobile or if you are on the Internet a new page with the results of the search with a map to show you where exactly the place you requested is.

The system is designed in such way, to be as simple as possible in order to be easy in use from its users. We must also take under consideration that the users of the system can be person of any age and with limited knowledge of the English language.



## INTRODUCTION

The service to be developed is for use by Cyprus Telecommunications Authority (CYTA) and will be used from the Internet and also with the other services that the CyBee already provides to all the mobile subscribers in Cyprus. The tools which we are going to use are Apache web server, PHP language, MySQL DBMS. XML will be used in order to get information from the existing Geographic Information System (GIS) of CYTA.

We will create our own database that will store personal information of each user/owner of property that will use the system. Also we will store information about each property an owner enters into the system so that other simple users will be able to see it.

The system will have as input the area where the user is, at the specific time if he/she is using the mobile phone, and if he/she is using the internet where the user is going to go. The output will be the place where he/she wants to go such as cinemas, restaurants, café, pharmacies and many other places.