HandsFree Computing

By

KHALEEL UR REHMAN





Supervised By Mrs. Farzana Khan

A thesis submitted to the department of Computer Science, Bahria Institute of Management and Computer Sciences, Islamabad

In the partial fulfillment of requirement for the degree of BCS (Hons.)

TABLE OF CONTENTS

Dedication 1V Acknowledgements V Certificate vi Abstract viii List of Figures viii 1 Introduction 1~6 1.1 Introduction 2 1.2 Present Communication Technology 2 1.3 Voice Communication 3 1.4 Project Overview 5 1.5 Scope of the project 6 2 Literature Survey 7~10 2.1 Purpose of the project 8 2.2 Planning Initial Investigation 8 2.3 Conducting Initial Investigation 8 2.4 Project Feasibility 9 2.5 Existing System 10
Certificate Vi Abstract vii List of Figures viii 1 Introduction 1~6 1.1 Introduction 2 1.2 Present Communication Technology 2 1.3 Voice Communication 3 1.4 Project Overview 5 1.5 Scope of the project 6 2 Literature Survey 7~10 2.1 Purpose of the project 8 2.2 Planning Initial Investigation 8 2.3 Conducting Initial Investigation 8 2.4 Project Feasibility 9 2.5 Existing System 10
Abstract vii List of Figures viii 1 Introduction 1~6 1.1 Introduction 2 1.2 Present Communication Technology 2 1.3 Voice Communication 3 1.4 Project Overview 5 1.5 Scope of the project 6 2 Literature Survey 7~10 2.1 Purpose of the project 8 2.2 Planning Initial Investigation 8 2.3 Conducting Initial Investigation 8 2.4 Project Feasibility 9 2.5 Existing System 10
List of Figures viii 1 Introduction 1~6 1.1 Introduction 2 1.2 Present Communication Technology 2 1.3 Voice Communication 3 1.4 Project Overview 5 1.5 Scope of the project 6 2 Literature Survey 7~10 2.1 Purpose of the project 8 2.2 Planning Initial Investigation 8 2.3 Conducting Initial Investigation 8 2.4 Project Feasibility 9 2.5 Existing System 10
1 Introduction 1.1 Introduction 2 1.2 Present Communication Technology 2.1 3 Voice Communication 3 1.4 Project Overview 5 1.5 Scope of the project 6 2 Literature Survey 7~10 2.1 Purpose of the project 8 2.2 Planning Initial Investigation 2.3 Conducting Initial Investigation 2.4 Project Feasibility 9 2.5 Existing System
1.1 Introduction 2 1.2 Present Communication Technology 2 1.3 Voice Communication 3 1.4 Project Overview 5 1.5 Scope of the project 6 2 Literature Survey 7~10 2.1 Purpose of the project 8 2.2 Planning Initial Investigation 2.3 Conducting Initial Investigation 2.4 Project Feasibility 2.5 Existing System
1.2 Present Communication Technology 1.3 Voice Communication 3 1.4 Project Overview 5 1.5 Scope of the project 6 2 Literature Survey 7~10 2.1 Purpose of the project 8 2.2 Planning Initial Investigation 2.3 Conducting Initial Investigation 8 2.4 Project Feasibility 9 2.5 Existing System
1.3 Voice Communication 3 1.4 Project Overview 5 1.5 Scope of the project 6 2 Literature Survey 7~10 2.1 Purpose of the project 8 2.2 Planning Initial Investigation 2.3 Conducting Initial Investigation 2.4 Project Feasibility 2.5 Existing System 3 5 6 7 7 10 8 10
1.4 Project Overview 1.5 Scope of the project 2 Literature Survey 7~10 2.1 Purpose of the project 8 2.2 Planning Initial Investigation 2.3 Conducting Initial Investigation 2.4 Project Feasibility 2.5 Existing System 5 8 7~10 8 110
1.5 Scope of the project 2 Literature Survey 2.1 Purpose of the project 2.2 Planning Initial Investigation 2.3 Conducting Initial Investigation 2.4 Project Feasibility 2.5 Existing System
2 Literature Survey 2.1 Purpose of the project 2.2 Planning Initial Investigation 2.3 Conducting Initial Investigation 2.4 Project Feasibility 2.5 Existing System 7~10 8 10
2.1 Purpose of the project 2.2 Planning Initial Investigation 2.3 Conducting Initial Investigation 2.4 Project Feasibility 2.5 Existing System
2.2 Planning Initial Investigation 2.3 Conducting Initial Investigation 2.4 Project Feasibility 2.5 Existing System
2.4 Project Feasibility 2.5 Existing System
2.4 Project Feasibility 2.5 Existing System
2.5 Existing System
11 00
3 Proposed System
3.1 Reasons for the new system
3.2 Main Features of the proposed system
3.3 Tools Used
3.3.1 UML
3.3.1.1 Goals of UML 15
3.3.1.2 Scope of UML 15
3.3.1.3 Development Project Artifacts 17
3.3.2 Visual Basic
3.3.2.1 Visual Basic Editions
3.3.3 ActixeX 21
3.3.3.1 Basic Components of an ActiveX Control 22
3.3.3.2 Active and Inactive States of an ActiveX Control 23
3.3.3.3 Serialization 23
3.3.4 Microsoft Speech Recognition Engine 4 24
3.3.4.1 Speech 24
3.3.4.2 Speech Recognition 24
3.3.4.3 Text to Speech 26
3.4 Technique Used 27
4 Design & Analysis 29~36
4.1 Introduction
4.2 Use Case Diagram 30
4.3 Use Cases 32
4.4 Conceptual Model 35

TABLE OF CONTENTS

DEDICATION

To my family, friends and respected teachers.

ACKNOWLEDGEMENTS

First of all I would like to thank Almighty Allah for His blessings. I am very grateful to my family and friends for their encouragement and motivation throughout the project.

They have always been there for me. I am very grateful to Madam Farzana for she has been a great help for me. Her advice and experience has steered me in the right direction for completing the project.

Khaleel ur Rehman

CERTIFICATE

We accept the work contained in this report as a confirming to the required standard for the partial fulfillment of the degree of BCS (Hons.) in the subject of Computer Sciences

Head of Department

Sinfawad

Internal Examiner

Mes. FARDAMARHAN

Supervisor

External Examiner

of Sund All

ABSTRACT

The use of computers is becoming more common by the day. Computers are used for work, school, or play, but some people cannot use a keyboard efficiently. Perhaps one has lost full use of hands due to spinal cord injury, orthopedic trauma, carpal tunnel, or some other reason. Many people, regardless of whether they have a disability, would like to just talk to the computer and have it respond. It is known that programs exist that allows one to "just talk to the computer." Will one of these programs be useful for such people? "How can one gain access to his computer - access that is suited accordingly to one's skills, abilities, preferences, work environment, and work tasks (or school or play)?" The most conventional method of computer access is to issue commands to the computer from a keyboard, and by pointing and clicking a mouse. When an individual is not able to use these access routes (or prefers not to), then one looks for alternatives. Thus this voice recognition software has been designed to facilitate the user. It is user friendly, very simple and yet comprehensive. It doesn't make the user go through a lot of steps to recognize his voice to the software. No need to create multiple accounts for multiple users.

LIST OF FIGURES

Figure	Description	Page #
4.1	Use Case Diagram	31
4.2	Conceptual Model	30
5.1	Screen Shot	47