

### University of Benghazi



#### Faculty of Information Technology

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# Design Patterns for Dialog Boxes in User Interface Mobile Applications

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## **DEDICATION**

I dedicate this work to my caring parents, wonderful

husband Mohamed and my two adorable children

Abdalrahman and Schayb.

## **Table of Content**

Abbreviations	X
Acknowledgment	X
Abstract	xii
Chapter 1. Introduction	1
1.1 Introduction	1
1.2 Problem Statement	2
1.3 Motivations and Objectives	4
1.4 Solution approach	4
1.5Structure of Thesis	5
Chapter 2. Background	6
2.1 Introduction	6
2.2 Overview of Design Pattern	6
2.2.1 Design Patterns Definition	8
2.2.2 Design Pattern Catalog	9
2.2.3 Essential Elements of Pattern	12
2.2.4 Benefits of Design Patterns	13
2.3 Families of Model- View-*(MV*) design patterns	13
2.3.1 Model view controller (MVC) design pattern	14
2.3.1.1 MVC Interaction Cycle	19
2.3.1.2 Advantage of MVC design pattern	20

2.3.1.3 MVC Architectural Pattern of Mobile Web Application
2.3.2 Model View Presentation
2.3.3 Model View View Model
2.4 ICONX Methodology
2.4.1 ICONX Process
2.4.2 Robustness Analysis
2.4.2.1 Robustness Analysis in MVC
2.4.2.2 Robustness Diagram Rules
2.5 Related Work
<b>Chapter 3.The Proposed Approach for Designing a Prototype Model of UI Mobile</b>
3.1 Introduction
3.2 Overview of a Solution Approach
3.3 Framework of MVC Design Pattern
3.4 ICONX Methodology
3.4.1 Stage One : Requirements Review
3.4.1.1 Identify Real-World Domain Objects
3.4.1.2 Allocate Functional Requirements on Use Case Diagrams
3.4.1.3 Generate GUI Prototyping for Each Use Case
3.4.2 Stage Two : Preliminary Design Review
3.4.2.1 Perform Robustness Analysis for each Use Case
3.4.2.2 Update Domain Model
3.4.3 Stage Three : Detailed Design Review
3.4.3.1 Generate Sequence Diagram from Boundary and Entity Objects on the Robustness Diagram

3.4.3.2 Select Suitable Design Pattern	40
3.4.3.3 Update the Domain Model into Class Diagrams as Needed	42
3.4.4 Stage Four : Implementation	43
Chapter 4.Implemention	44
	1
Chapter 5. Conclusions and Future Work	65
5.1 Conclusion	65
5.2 Future Work	66
References	67

## **List of Figures**

Figure 1.1: The complexity of the problem statement	3
Figure 2.1: The Land of MV* Design Patterns	··· 14
Figure 2.2: Component of MVC design pattern	··· 15
Figure 2.3: Smalltalk'80 MVC pattern	18
Figure 2.4: Web MVC pattern	. 18
Figure 2.5: Interaction between components of MVC	
Figure 2.6: Different between MVC & MVP	22
Figure 2.7: MVVM pattern	
Figure 2.8: ICONIX Methodology	
Figure 2.9: The phases of the ICONIX process	26
Figure 2.10: Robustness diagram symbols (EBC)	27
Figure 2.11: Robustness analysis in MVC	. 28
Figure 2.12: EBC pattern	28
Figure 2.13: Robustness analysis mediates between analysis and design	29
Figure 2.14: Actors communication with the system	29
Figure 2.15: Robustness diagram rules	30
Figure 3.1: .NET Framework and MVC	34
Figure 3.2: The main stages of ICONX methodology	35
Figure 3.3: The sub stages of ICONX methodology stages	36
Figure 3.4: Use case diagram	37
Figure 3.5: Elements of robustness diagram	39
Figure 3.6: Sequence diagram of MVC	40
Figure 3.7: Observer design pattern	41
Figure 3.8: Strategy design pattern	···· 41

Figure 3.9: MVC design pattern	42
Figure 3.10: Class diagram	42
Figure 4.1: Domain model of the application	44
Figure 4.2: Use case diagram of the application	45
Figure 4.3: Prototype of the start use case	46
Figure 4.4: Prototype of the Selection process use case	46
Figure 4.5: Prototype of contacts setting use case	47
Figure 4.6: Prototype of the Create message use case	47
Figure 4.7: Robustness Analysis for Star	48
Figure 4.8: Robustness Analysis for contact setting	49
Figure 4.9: Robustness Analysis for Create Message	50
Figure 4.10: Robustness Analysis for SEARCH contact	51
Figure 4.11: Robustness Analysis for DELETE contact	51
Figure 4.12: Sequence Diagram of the Start Screen	52
Figure 4.13: Sequence Diagram of SEARCH contact	53
Figure 4.14: Sequence Diagram of ADD contact	53
Figure 4.15: Sequence Diagram of DELETE contact	54
Figure 4.16: Sequence Diagram of COMPOSE message	54
Figure 4.17: The MVC folders	55
Figure 4.18: Adding a class into a Model	57
Figure 4.19: Create a Storage class into a Model	57
Figure 4.20: Adding a Controller	57
Figure 4.21: Adding a MobileController into a Controller	58
Figure 4.22: Adding a view	58
Figure 4.23: The Class diagram application	61
Figure 4.24: The Start screen of the application	62

Figure 4.25:	The select process screen of the application	62
Figure 4.26:	The setting of contact screen of the application	62
Figure 4.27:	The Message screen of the application	63
Figure 4.28:	The SMS1 screen of the application	63
Figure 4.29:	The SMS2 screen of the application	64
Figure 4.30:	The SMS3 screen of the application	64

## **List of Table**

Table 2.1: Description of design pattern	11
Table 2.2: Template of design patterns	12
Table 2.3: Smalltalk'80 MVC &Web MVC	17
Table 2.4: Different between MVC & MVVM	23
Table 4.1: The Application folders	56

#### **List of Abbreviations**

UI User Interface

IT Information Technology

SW Software

PC Personal Computer

**PDA** Personal Digital Assistant

**GOF** Gang of Four

UML Unified Modeling Language

MV\* Model View \*

MVC Model View Controller

MVP Model View Presenter

MVVM Model View View Model

WAP Wireless Application Protocol

**EBC** Entity Boundary Controller

**CLR** Common Language Runtime

CSS Cascading Style Sheet

Graphical User Interface

OO Object Oriented

**EBC** Entity Boundary Controller

**HCI** Human Computer Interaction

WPF Windows Present Foundation

**HTML** Hyper Text Markup Language

**DPs** Design Patterns

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#### **Abstract**

Because of the emerging challenges accompanying the development and advancement of information technology in many fields and industries, this makes IT experts, designers, manufactures and researchers in need of creating up-to-date and more effective solutions to overcome those challenges and obstacles. In fact, technology of mobile phones and devices proved to be infinite as different brands of modern mobile devices are produced with a wide variety of features, but at the same time great challenges occur for users and IT experts. One of these challenges is noticeable when the SW keyboard is shown and hidden in UI applications of PDA, PC or any other mobile devices. This keyboard is shown when the user wants to enter a text, which unfortunately leads to the occupation of the application area by this SW keyboard. This means that the application will have less room for its "normal interaction "

The main aim of this research is to use ICONX methodology and a Model View Controller (MVC) design pattern to solve this problem associated with SW keyboard. It attempts to make the interaction of dialog boxes when entering a text on mobile UI easier, and more practical as users will enjoy more interaction space as they enter texts.

**Key words**: User interface (UI),Personal Digital Assistant (PDA),Software(SW),Personal Computer (PC),Information Technology(IT), Global Positioning Systems(GPS),Model-view-Controller (MVC)