



**Pattren-based CASE Tool for web Applications  
Development**

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إقرار تفويض

أنا احمد انور عبدالله ، أفوض جامعة الاسراء بتزويد نسخ من رسالتي ورقياً وإلكترونياً للمكتبات أو المنظمات او الهيئات والمؤسسات المعنية بالأبحاث والدراسات العليا عند طلبها .

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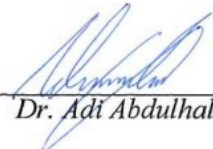
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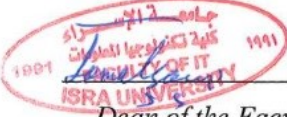
  
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## *DEDICATION*

I dedicate my graduation to the light of my path, to my father, may God bless him, who walked with me in every path and every way to take me to the path of success,

And my dear mother, may God preserve her, who overwhelmed me with prayers and affection,

To my family, my friends and all people who encourage me and help me to complete this work.

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## ***LIST OF ABBREVIATIONS***

### **C**

#### *CASE*

Computer Aided Software Engineering, 1, 2, 10, 11, 12, 14, 15, 69, 75, 77, 78, 81, 108, 109, 110, 111, 112, 113, 114, 115

### **D**

#### *DPs*

Design Patterns, 17, 77, 78, 113, 114, 115

### **G**

#### *GoF*

Gang Of Four, 11

### **J**

#### *JS*

Java Script, 15

### **O**

#### *OOP*

Object Oriented Programming, 17, 48, 113, 114

### **S**

#### *SPSS*

Statistical Package for the Social Sciences, 112, 118

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## *Abstract*

Design patterns for web applications are helpful for developers as they organize the code and make it on a better way to reduce the maintenance time and effort that will be done by the other developers in the maintenance part. Also, companies are specially looking for developers who can write using an organized manner in coding, so that the design patterns are important.

Design patterns are not used by all the developers as of many reasons, such as the low experience in coding and the lack of knowledge that lead to write these design patterns and use it in a large code set.

According to the above reasons and as there are many developers that are not able to apply design patterns, this thesis documents the most used design patterns for the web development, and creates a tool and its description to provide those design patterns as a sample of code that will be editable for users to make additions to the selected design pattern and save it to use it on a different code in any IDE.

In regard of the created tool and as mentioned in the late chapters, this thesis shows the experiments on how this tool really helps the developers and makes it easier to write the code using design patterns without any issues.

In light of the results of this thesis, a tool have been delivered with a high level of satisfaction of the tool's users, as it helps them using the design patterns without a huge time and effort . In this regard, this has been measured using an experiment discussed in the late chapters that show the different time and effort when using the provided tool and when not using it.

### **Keywords:**

Design patterns, case tool, case tool for design patterns, web development, case tool for web development, pattern based case tool, creational design patterns, behavioral design patterns, structural design patterns, web design patterns documentation.