

بسم الله الرحمن الرحيم

إخوتي في منتديات الفريق العربي للبرمجة، إنني أحبكم في الله. أما بعد ،

فيسعدني أن أبدأ سلسلة دروس – أتمني ان تستمر للنهايه – عن ال design patterns و ذلك لأهمية هذا العلم و مدي الفائدة التي تعود علي المتعلم من معرفة عميقة لل object-oriented . و لكن يؤسفني أنني سوف أقدمها باللغة الانجليزية و أجو من الله أن يكون عملي هذا خالصا لوجهه الكريم.
* اللهم اجعل عملي كله صالحا و اجعله لوجهك خالصا ولا تجعل فيه لأحد غيرك شيئا*

Lesson 1 : Introduction

Who this articles for:

To be able to understand this articles you *should* understand the oo-basics (Abstraction, encapsulation, polymorphism and Inheritance) and know some about object composition (i.e. how to compose object into another object) and i think any java programmer should be fimillary with composition.

ex. on composition to make you remmember it:

```
class Point {  
int x, y;  
}
```

```
class Shape {  
Point p;  
// other code  
}
```

Shape is said to compose Point.

and also you *prefered* to be good at j2se at least. (io, networking, threads, exceptions ..)

Introdution :

First of all, i'd like to introduce you with “desgin patterns” as a pharase, all of us knows what desgin means; it is a process of the software devlopment life cycle. the systems first starts with analysis, then the desgin takes place then implementaion (coding) and finally testing.

in the analysis phase the analysits gather the info. from the current system users and then try to desing the new system based on their requirements and build the desing and lastly they give the desgin to the programmers to do the coding (implementation) and the last the system tested and deliverd to the client to use.

this was “Desing”, what about “Patterns”.

Pattern in non-programming contexts can be described as a tried solution by many people. Pattern here means : “a solution to a problem in a context”.

so Desgin Patterns means : “ A desing solution to a problem in the desing phase in a systematic context”(1)

ex: I have a context : an object in my system called Server.java
and I have a problem : I want to create just one and only one instance of that object:
the desing pattern (solution) : i make the constructor of this object as private and create
static method that return just one instance of that class each time that static method
called (The Singleton pattern) (2)

So Desing patterns is a ready-made desing pieces that you apply to your system to solve
problems arisen in you system.

I need to enter to the patterns directly without talking a lot about desgin patterns itself
(such as its types etc.) because concrete concepts may make you boring but taking things
from a practical view will learn you rapidly and without any boring.

This was the first lesson, the next lessan In shaa ALLAH, if I found you interested, I'll start
with the first pattern.

before leaving i'd like to refer to the reference i uses to illustrate you, it is “ Head First
Desing Patters” O'REILLY 2004.

أستودعكم الله الذي لا تضيع و دأئعه و علي وعد بقاء آخر بعد اسبوع إن شاء الله و قدر و السلام عليكم
و رحمة الله.

- (1) This is my own definition, i drived it my self.
- (2) You may not understand this solution, do not worry, we all was as you at first.