

**Universiti Teknologi MARA**

**The Use of Pattern in CORBA Middleware:  
XML-Acceptor Pattern**

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## **DECLARATION**

I certify that this research is the product of my own ideas and work except for summaries and the literature review, which has been duly acknowledged.

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## **ABSTARCT**

The emerging of numerous systems required the available implementation of middleware to suite the different of application systems. Middleware is a software layer which allows different systems to communicate without bother about the platform of operating systems, programming language and the networks' protocol as well as the connection. Middleware like CORBA is useful and interoperability in order to send and reply back the requests from the different systems. The communication of the systems is well managed by using the pattern. The pattern provided in the research is XML-Acceptor pattern. The objectives of the research are to identify the benefits of using the pattern and the features of using XML-Acceptor Pattern with the CORBA middleware. Then, the weakness and strengthens of XML-Acceptor Pattern are provided. To achieve the objectives, the data and the information are gathered from the previous research through online and offline research. Besides that, the interview is conducted in formal and informal as well as via the electronic mail. Finally the results are produced where the XML-Acceptor pattern is simplicity, extensibility and richness pattern. The degree of both of the pattern and CORBA can work together is measured on the used of platform, hardware, software and the languages used by the systems. Besides that, the management of the data and the other object-oriented approach also has been considered. Developers are encourage to experiment the capability of the pattern and middleware before implement them through the Internet. This is because the challenges are there which included the security, the data management and safety and the time constraints. At the end of the research, there should be a lot of research will be done for better understanding in the future.

# **CHAPTER I**

## **INTRODUCTION**

This chapter provides the background and rationale of the research. It includes details of the problem statement, scope of the research, the objectives that to be achieved and the significant of the research.

### **1.0 Background of the Problem**

Nowadays, the rapid growths of numerous systems keep on expanding. Every system is build for different tasks such as in business's applications, finance's applications, management's applications and aerospace's applications. Because of the different platforms (operating systems), programming languages and network's connections, it will be difficult for the system to communicate. The communications between different systems allow them to share information. With the multi information gather, it will enable the systems to have more opportunity to create more transactions. Therefore, they need an intermediate layer that connects them. This intermediate layer is known as middleware.

Middleware is a software layer which is standing between the operating system and the application. It enables the transparent integration of distributed objects (Bernstein, 1996). Middleware really helps in order to connect the different type of systems. Middleware acts like a middleman when the different systems are interact across heterogeneous computing platforms. It is reusable software to bridge the gap between the applications and the underlying operating systems, network protocols and databases. Middleware is an infrastructure that supports (distributed) component-based application development such as