

**Service Oriented Architecture for Enterprise  
Resources Planning**

**Jsoper**

A dissertation submitted to the  
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by

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## **Abstract**

Jsoper is an innovative Enterprise Resource Planning (ERP) system developed based on Service Oriented Architecture (SOA). With the use of its unique and comprehensive characteristics, I decided to use SOA as it is the most suitable architecture for a system in this scale and functionality.

After analyzing the present day architectures used for current ERP systems such as Model View Control Architecture (MVCA) and Model Driven Architecture (MDA), I came across many negative findings. Some of which are mentioned below;

- The layers are always tightly coupled,
- Most ERP systems are forced to depend on a centralized database,
- Heavy compatibility issues in relation to the communication between the current ERP system and other Enterprise Applications,
- When developing the ERP system, all the related sub modules have to be developed concurrently resulting in higher cost.

Considering the above findings and other negative attributes, I designed, developed and tested the Jsoper ERP system and concluded for it to be the most cost effective and efficient solution for the current market.

Some of Jsoper ERP systems' advantageous characteristics are as follows;

- The layers are always loosely coupled,
- Each module uses its own independent and individual database,
- Eliminates any compatibility issues in relation to the communication between the current ERP system and other Enterprise Applications through the use of interfaces embedded to the system itself,
- As separate plug-ins are used within Jsoper itself, the need to develop new sub modules become unnecessary. Therefore, this will result in a considerable cost reduction.

With all the above positive characteristics and many more added features, I am confident that the Jsoper will become a market leader in its industry in time to come.