

## **JREM: An Approach for Formalising Models in the Requirements Phase with JSON and NoSQL Databases**

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**Abstract :** This paper presents an approach to reduce some of its current flaws in the requirements phase inside the software development process. It takes the software requirements of an application, makes a conceptual modeling about it and formalizes it within JSON documents. This formal model is lodged in a NoSQL database which is document-oriented, that is, MongoDB, because of its advantages in flexibility and efficiency. In addition, this paper underlines the contributions of the detailed approach and shows some applications and benefits for the future work in the field of automatic code generation using model-driven engineering tools.

**Keywords :** conceptual modelling, JSON, NoSQL databases, requirements engineering, software development

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