

الاية

اعوذ بالله من الشيطان الرجيم

قَالَ رَبِّ اشْرَحْ لِي صَدْرِي (25) وَيَسِّرْ لِي أَمْرِي (26) وَاخْلُلْ عُقْدَةً مِّنْ

لِسَانِي (27) يَفْقَهُوا قَوْلِي (28)

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Abstract

The selection of a workflow management system may be very difficult and complex. This research proposed a comparison framework that help developer selects the most suitable workflow management system and offers comparison of two popular workflow management systems. Moreover this research describes the promotions process as workflow case study, analyzes this process and implements it on the two selected workflow system tool (joget and processMaker). The proposed Framework is an extension to Garcês et al. survey framework. The research adds three extra features to their framework. After the systems have been implemented, the research compared the two systems using the comparison framework. The result shows that both tools are fully compliant to the WFMC reference model specification. In Functional Areas, Both tools in Documentation, installation and utilization, web based, require java JDK, support middleware platform, DBMS integration, Process Definition and in support organizational perspective have the same score. In transaction support, joget support exception handling and rollback while processMaker only support rollback. Both tools support parallel task. Joget provide user view which allows us to design graphical user interface while processMaker doesn't provide that. In Email server joget send email message to a predefined targeted recipient(s) through a set of primary and secondary SMTP servers while processMaker send email message to a predefined targeted recipient(s) and can send Email from a value that is enter by users in executions time. In variables joget only uses variables in decision while processMaker use it in decision, storing data and retrieve data from forms.

المستخلص

إختيار أداة إدارة سير العمل قد يكون صعب جدا ومعقد. هذا البحث يقوم بإقتراح إطار للمقارنة بين أدوات إدارة سير العمل الذي يساعد المطور لكي يقوم بإختيار الأداة الأكثر ملائمة لنظامه ، ويقدم مقارنة بين إثنين من أكثر أدوات إدارة سير العمل مفتوحة المصدر شعبية (Joget , Peocessmaker). وعلاوة علي ذلك يصف هذا البحث نظام الترقيات كدراسة حالة سير العمل ، و يقوم بتحليل نظام الترقيات وتطبيقه علي أداتين سير العمل (Joget , Peocessmaker). إطار المقارنة المقترح هو تمديد لإطار Garcês واخرون ، ويضيف البحث اربعة خصائص إضافية . بعد ان تم تنفيذ الأنظمة ومقارنة النظامين باستخدام إطار المقارنه وجد ان الأدتين متوافقتان مع مواصفات النموذج المرجعي WFMC تماما . اما في المجالات الوظيفية فإن الأداتين تم توثيقهم بصورة شاملة ، وايضا كلاهما بسيطتا التركيب والاستخدام . ايضا كلاهما يعمل علي شبكة الانترنت ويتطلب تثبيت Java JDK مسبقا ، ايضا كلاهما يدعم الوسائط و نظام إدارة قواعد البيانات. عملية التعريف في كل من الأداتين بسيطة ، وكلاهما يدعم المنظور التنظيمي للمستخدمين . في دعم العمليات يدعم Joget معالجة الإستثنائات والتراجع بينما ProcessMaker يدعم التراجع فقط. الاداتين يدعمان المهام المتوازية . يقدم Joget خاصية عرض المستخدم التي تسمح لنا بتصميم واجهة المستخدم الرسومية بينما ProcessMaker لا يوفر هذه الخاصية . في البريد الالكتروني Joget يقوم بإرسال رسالة بريد الكتروني الي مستلم محدد مسبقا في مرحلة التصميم من خلال مجموعة من خوادم SMTP الإبتدائية والثانوية بينما ProcessMaker يقوم بإرسال رسالة بريد الكتروني الي مستلم محدد مسبقا في مرحلة التصميم او الي مستلم يحدده المستخدم في مرحلة التنفيذ. في المتغيرات يقوم Joget باستخدامها في الشروط فقط بينما يقوم ProcessMaker باستخدامها في الشروط، والتخزين واسترجاع البيانات.

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Table of Abbreviations

WF	Workflow
WFMS	Workflow management system
BP	Business Process
BPM	Business Process Modeling
BPMN	Business Process Modeling Notation
HTTP	Hypertext Transfer Protocol
API	Applications programming Interface
AJAX	Asynchronous JavaScript and XML
JSON	JavaScript Object Notation
SMTP	Simple Mail Transfer Protocol
LDAP	Lightweight Directory Access Protocol
PDF	Portable Document Format
SOAP	Simple Object Access Protocol
PHP	Hypertext Preprocessor.
HTML	Hyper Text Markup Language
IEEE	Institute of Electrical and Electronics Engineers.
WFMC	Workflow Management Coalition
WSDL	Web Service Description Language
XPDL	XML Process Description Language
XML	Extensible Markup Language

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