A MODEL OF DATA WARE HOUSING PROCESS MATURITY

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Abstract - In spite of Data Warehousing (DW) needs a large amount of contribution, still Data Warehousing is getting a good hype in the market. On the other hand, most of the DW resources fail at the end. However, here we argue about the maturity of a Data Warehousing Process (DWP) which could somewhat come together with large-scale failures and get the confirmation about the process, better quality, "single-version of a true fact" data in a sequence order. Though, the assessment of DWP maturity has not been overtaken in a systematic way, unlike software development. In spite of crucial level of priority of data as a corporate initiative, the necessity of a maturity model for DWP won't result in a great manner. Here we elaborate about the design and development of a five-level DWP maturity model (DWP-M) in a span of three years. In this model, the Data Warehousing Development process and operations process are wrapped which is the best quality of its kind.

Key words - Data warehousing procession, design,science research, model validation, software maturity model, KPAs, CMM

I INTRODUCTION

In computing, a DW is a database used for data analysis and presenting. It is a central repository of data which is created by integrating data from one or more disparate sources. The projects of DW are expected to be costlier. The DW project requires two most important contribution, hard work and finance. Though, the DW project is now on a great demand in its field, basically for the Data Warehouse being a strong helping kit. If this process continues in the market then the real data can reach 1,000 terabytes easily in Data Warehouse. The growth of data warehouse is not only in headlong size, but also in many other places like data complexity, query volumes, end users and on time information. However, DW are also getting combined with mission-critical systems which now high data quality, demand high availability and appropriate rates. Even though this intensified market, a huge amount of DW resources fail to end up properly. Friedman expected most of the Data Warehousing projects will end up failure and only few will experience limited acceptance. So, it is not easy for DW community to rectify more possibilities of understanding the errors in development, DW design, management and implementation. DW resources experience the bad end up because of few reasons such as unacceptable performance, slipped schedules, poor availability, expandability problems, poor data quality and complicated tools. One of the important issue is data quality, because the variety of encompasses diverse aspects, stakeholders and complex assessment techniques are required. Later, the software process and its management were advocated my researchers to study to response to some same types of problems in software engineering domain. Humphrey Broadly later then defines a process of software like a set of methods, tools and practices which help to produce a software product. Therefore, the objectives of software process management are mainly to generate products according to plan, on the other hand concurrently improving the ability to make better products. The Capability Maturity Model

(CMM) and ISO 9001 were developed to assess and promote software process aspect standards in organizations

II RELATED WORK

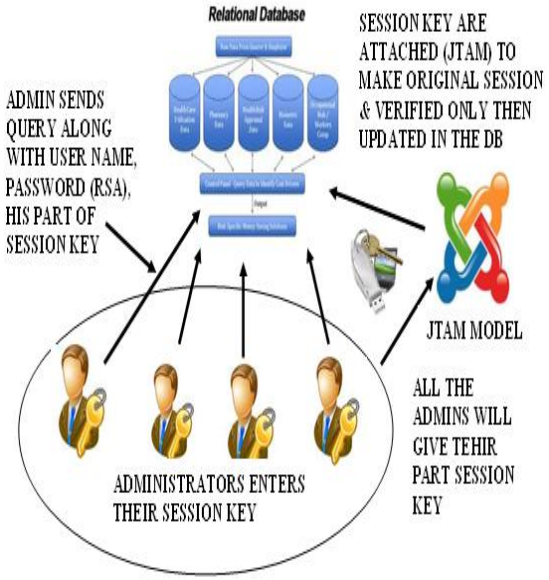
A. TRADITIONAL SYSTEMS:

In the Existing System, In spite of Data Warehousing (DW) needs a large amount of contribution, still Data Warehousing is getting a good hype in the market. Whatsoever, DW resources experience the bad end up because of few reasons such as unacceptable performance, slipped schedules, poor availability, expandability problems, poor data quality and complicated tools.

B. PROPOSED METHOD:

In the proposed system, we're organizing data in data warehouse and also performing the operations like collecting the data, Non duplicate data, well defined, managing the data and Optimizing the data in the Data Warehouse. Also the Data Owner can set the access privileges for the users to view the data. The modification process, in that we're providing security by providing the access privileges to all the administrators and Session key will be sent to the administrators phone number so that all the admin can come to know about the updating the user's information.

III SYSTEM ARCHITECTURE



The system architecture contains User privilege, JTAM, Policy matching, Preparation of session key, Admin validation.

IV MODULES

A. USER PRIVILEGE

User privilege is nothing but the access authentication of the database table of The main issue in the administration of response policies is how to protect a policy from malicious modifications made by a DBA that has legitimate access rights to the policy object. Some of the users have minimum prioriti level they will access the database with certain level. Some of the peoples have maximum prioriti. They will also have restriction level. So we have to give proper permissions to the users.

B. JOINT THRESHOLD ADMINISTRATION MODEL (JTAM)

Joint administration model referred to as the JTAM.of The threat scenario that we assume is that a DBA has all the privilegess in the DBMS, and thus it is able to execute arbitrarily SQL insert, update, and delete commands to make malicious modifications to the policy. Such actions are possible even if the policy are stored in the system.

C. POLICY MATCHING

In this section, we present our algorithms for finding the set of policies matching an anomaly. The policy are stored in the system tables. The policy matching algorithm is invoked when the response engine receives an anomaly detection assessment. After evaluating a predicate, the algorithm visits all the policy to the evaluate predicate. If the evaluate to true, the algorithm increments the predicate-match-count of the connected policy nodes by one. A policy is match when its predicate-match-count becomes equal to the number of predicate in the policy condition. On the other hand, if the predicate evaluate to false, the algorithm marks the connected policy nodes as invalidated.

D. PREPARATION OF SESSION KEY

Take as an example, if the admin of a particular department wants to modify the values in the table means it will reflect the other manager provide the key for the

assume the DBMS to be in possession of secret key for verifying the simply create a HMAC (Hashed Message Authentication Code) of each policy using its secret key, and later use the same key to verify the integrity of the policy.

E. ADMIN VALIDATION

Over all control of all data base is maintained by an administrator like D B A. One user wants to change the consistency of the database means, admin check the level of the query, that will satisfies with the admin means he will allow the user with warrning. Or else the control of the user will be deleted from the log. I will depend on the client request.

V DESIGNING A DWP MATURITY MODEL

Even though the concept of data warehousing process maturity has been mooted in the literature work in this area has been limited to a simple specification of the levels and mapping of some of the activities from the CMM, without much serious theory-base development. In this section, we develop a conceptual model of DWP maturity by grounding our work in design-science research and in the literature on quality, maturity model, and IT services.

A. Design-Science Research

According to Hevner et al.the goal of the design-science research paradigm is "to extend the boundaries of human and organizational capabilities by creating new and innovative artifacts" Their framework for design-science research provides a set of guidelines. Of The first guideline is that design-science research should result in an artifact, which could be a construct,of model, method, or instantiation. But design is also a process comprised of a set of activities that produces the artifact. Construct provide the symbols and vocabulary for defining and solving problems they are the representations of the entities of interest A model uses the constructs to represent the design problem and its solution of space A method defines the process for searching through the solution of space. Finally, an instantiation is the implementation of the construct, models, or methods in a working system

B. Initial Model

As discussed in Section the designed artifact could be in the form of Constructs are the representations of the entities of the interest. The ultimate artifact we are interested in designing is the DWP maturity model. Of Given the complexity of DWP, the development of this model necessitates the design of intermediate constructs. First, we need to design the "maturity" of construct. Second, because maturity models typically define a number of levels, we also need to define the "maturity of level" of construct, which represents how maturity a DWP is. Third, we need to specify a set of KPAs at each maturity of level, so we also have to design the "KPA"of construct

C. Knowledge Acquisition

We interacted with DW managers and practitioners to elicit the knowledge required for developing the model. Specifically, we conducte multiple brainstorming sessions and interviews with key DW professionals from industry to the identify, analyze, and under the maturity level, as well as the key process areas and associated activities for each level. Evolution of the DWP-M Model Designing theDWP-Mmodel involved searching a large space of possible solutions. Wedescribe below the method we used to makethe search process manageable. Of The initial model that we had designed went through several rounds of changes and evolution based on feedback from industry experts. We presented the initial version of the DWP-M model to the industry group at the first brainstorming session in a workshop held in June 2004. We had asked the participants about the key outcomes of a mature data warehousing process. We present below a summary of theirs consensual views on the key out come, along with theirs rationale:

VI Implementation and results

Platform : Windows Xp,
Front End : Java JDK1.5. Apache Tomcat 5.5
Back End : MS SQL 2000
Processor : Pentium IV
RAM : 512 MB
HDD : 80 GB

Result JTAM SCreenSHots

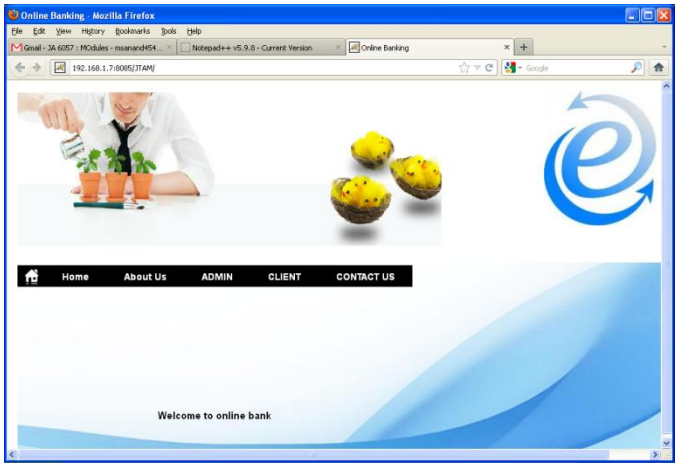


Fig.1 : (Online Banking)

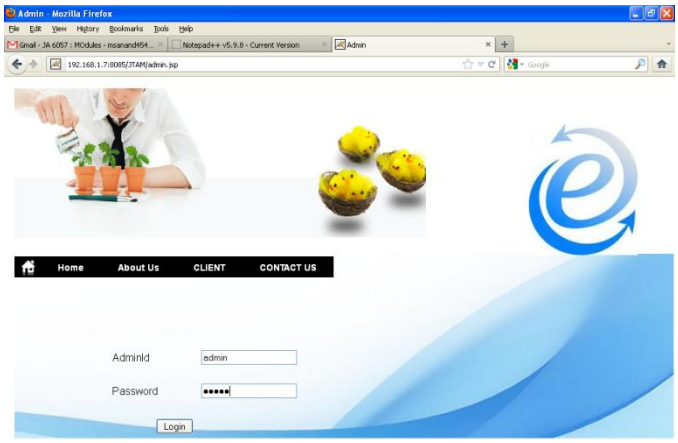


Fig. 2 : (Login page)

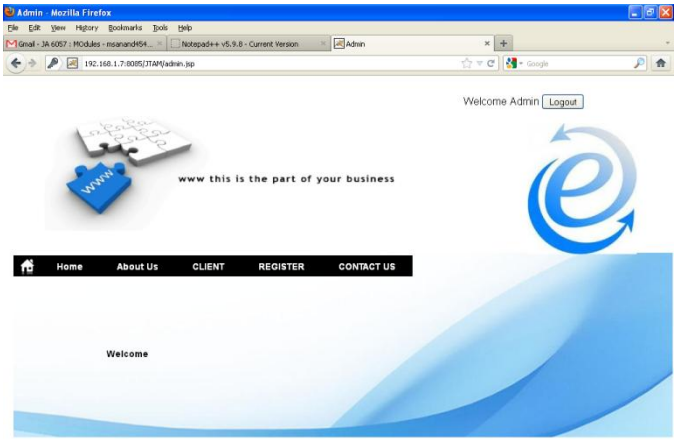


Fig.3 : (Admin)

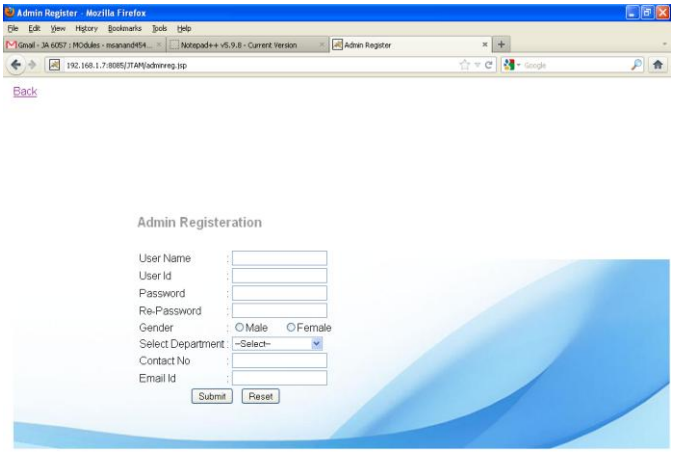


Fig.4 : (Admin Registeration)

Fig.5 : (User Register)

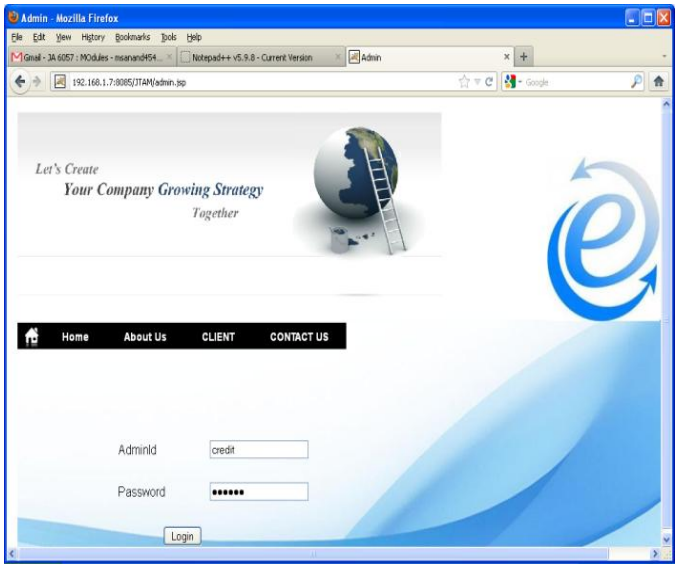


Fig 6 : (Admin)

Fig.7 : (Sub Admin)

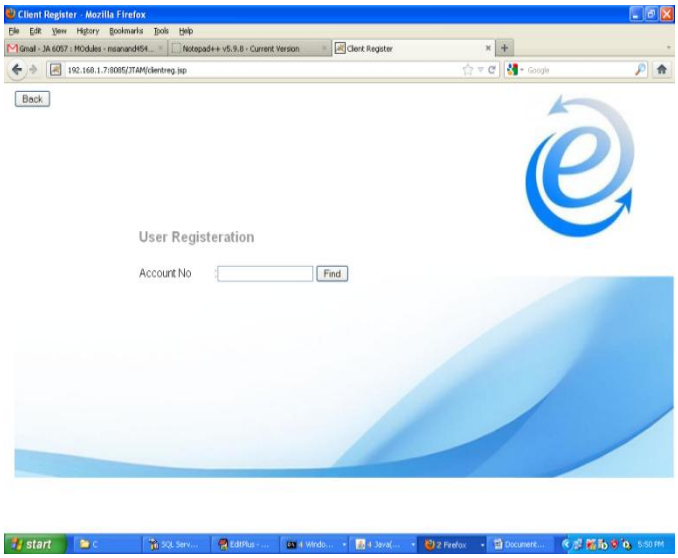


Fig.8:- (Client Register)

VII CONCLUSION

The main contribution of this study is in the development of an innovative artifact—the DWP-M model—which addresses the pressing issues associated with a DWP. The model defines several KPAs and activity, which would enable a firm to examination its DWP, identify the problems, and help it to attain a higher level of maturity by addressing the problems. These KPAs and activities are also design artifact, more specifically the constructs or representations of interest in the DWP maturity domain. Of The DWP,M model also captures the relationships among process area, depicting the interactions among the KPAs in terms of information flow and prerequisite KPAs. The DWP-M model addresses several important and relevant problems that organizations face in their DWP initiatives, including the related to data quality, data change, metadata management, data warehouse governance, trust, and,user satisfaction. The model has a total of KPAs, several of which are unique to a data warehousing process. For example, it includes KPAs such DWP definition, business metadata and management, of DW product engineering, information delivery management, of DW governance, integrated metadata quality management, and data change management, metadata change management, of DW technology change management., that are germane to DW process maturity but that fall outside the scope of traditional software process maturity assessment.

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