KNOWLEDGE MANAGEMENT SYSTEM FOR DYNAMIC LEARNING AND PROBLEM SOLVING IN IT INDUSTRY

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ABSTRACT

Knowledge Management System is the way of sharing knowledge from one person to another across the world or people within an organization. The knowledge sharing will connect people to people and share information for things such as problem solving, dynamic learning, strategic planning and decision making. In this work, the word knowledge refers to the information, description or skills about the IT such as programming language, operating system etc. The objective for knowledge management system is to create groups in interested areas. It provides platform to store and retrieve information and also able to share the documents. It helps to solve the problems in faster rates and to start new line business. This knowledge management system is to provide web application that allows the user to ask questions, answer to other user’s questions and upload/view the article related to IT technology.

Keywords: Knowledge Management System, dynamic learning, IT Industry.

I. INTRODUCTION:

A large level of information that might be useful to many people is currently only accessible to a chosen few - either because it is not shared in people's heads or because it is only available to certain organizations. We want to make a bridge the people with knowledge to the people who need it. This will bring people with diverse perspectives together to empower everyone to contribute their expertise or the rest of the world's benefit. The proposed site where anyone may ask any question and will get significant answers from experts. This makes the people from all over the world together to answer the same question with the different thoughts and learn from one another.

II. LITERATURE REVIEW

According to the studies [1,2], knowledge has significantly driven firms to go towards business intelligence. Knowledge is seen as a worldwide economic transformation hub [3]. It is also a significant source of money and a necessary component for firms to remain competitive in the commercial world [4]. Knowledge management has emerged as a critical component in achieving customer satisfaction. Organizations should have a thorough grasp of how knowledge is generated, transmitted, and used in executing and fully utilise process improvement. Knowledge management gathers information from within and around organisations, converts it into plans, implements it within enterprises, and safeguards it.

Knowledge can be defined as knowledge held in people's minds, as well as their experience and comprehension [7,8,9]. It comprises ready-to-use data that may be used to make decisions and take actions. Knowledge, according to Anand and Walsh[11], consists of information, skills, and competence. The major goal of sharing knowledge is to provide better visible in order to demonstrate the importance of knowledge in businesses and to motivate employees to engage in behaviours such as sharing knowledge for IT infrastructure development. Unfortunately, knowledge that is not properly managed can become outmoded and useless [12,13]. As a result, firms must establish and use a set of processes to administrate their knowledge [14].
III. IMPLEMENTATION

This is web application where questions are asked, answered, edited, and organized by its community of users in the form of opinions. And the website is made available to the public. It requires users to register with their real names. Anybody can ask questions and anybody can answer it. Each reply to the questions in forum is ranked based on star rating which is known as Star based ranking mechanism. This ranking and credit point system helps to motivate people to participate.

The product is supposed to be an open source. It is a web-based system implementing client server model. The system is designed to be web based and is designed to help users to share their knowledge to the ones who is in need of it. We used HTML5 is mark-up language used for structuring and presenting content on the World Wide Web. It is used with Cascading Style Sheet (CSS) and JavaScript to create web pages and web applications. And .NET framework developed by Microsoft that runs primarily on Microsoft windows.

The Knowledge Management System can perform the following functions:

- Upload/Share articles: In Knowledge management system we can upload or share the articles. It also gives access to digital media such as audio, images and video, documents, programs, or books.
- Post questions: If user has any doubt or any confusion the user can post the questions in this web site and user can get the answer to the question.
- Answer for any questions: In Knowledge management system if the user has any doubt on any programming languages users can easily get the best solution.
- Edit profile: There is an option to edit the profile of the users.
- Download/View articles: Users are able to download any article which is posted public ally and can view that article and use to gain more knowledge.
- Like/Comment other articles: One user can like or comments on other users

Architectural Design

Architectural design is a vital process that involves attempting to create a system structure that meets both functional and non-functional system needs. Since it's a building process, the activities vary greatly depending on the number of system being designed. As a result, thinking of the architectural design process as a choice rather than an activity is more useful. During this process, system architects make a number of critical decisions that will play significant impact on the system and its growth.

Fig1. Architectural design for knowledge management system
Use Case Diagram

A system consists of a set of use cases and actors. Each use case illustrates a subset of the system's capabilities. The set of use cases depicts the system's entire capability in some depth. The set of actors represents the complete set of objects that the system can serve. Objects accumulate behaviour from all the systems with which they interact as actors. Admin can login using his username and password. He can manage resumes and post uploaded by users. User is able to upload resumes, post questions, answer to the posted questions, post articles and also comment and like the articles posted by other users.

![Use Case Diagram](image)

**Fig:2 use case diagram for knowledge management system**

Modular Design

Modular design is a design method that breaks a system into smaller components known as modules or skids which can be built separately and can be used in multiple systems. Functional partitioning are distinct, scalable, reusable and adoption of industry standards for interfaces are the characteristics of a modular system. The entire project is divided into two modules:

**Admin:** He can login using his username and password. He can manage resumes and post uploaded by users. He is also able to decide the most active user depend on the star based ranking mechanism.

**User:** is able to upload resumes, post questions, answer to the posted questions, post articles and also the comment and like the articles posted by other users.
Fig:3 Modular design diagram for knowledge management system

**Class Diagram**

In the Unified Modelling Language, a class diagram depicts the relationships and source code dependencies between classes (UML). A class defines the methods and variables in an object, which is a specific entity in a programme or the unit of code that represents the entity in this context. A class diagram resembles a flowchart in which classes are represented as boxes, each with three recognisably different options. The top rectangle contains the name of the class, the middle rectangle contains the attributes of class, the lower rectangle contains the methods also called the operations of the class.

Fig 4 Class diagram for knowledge management system

**Test Reports**

The steps for admin are:

Step 1: The Admin enters username and password be able to view all the registered users

Step 2: When the admin clicks on add stream, he will be able to add new stream into the application.
Registration Page:

User need to register first to access the KMS.

Login Page:
IV. CONCLUSION

Knowledge management system helps user to post and answer the question based on any IT topics. It helps the user to download the article posted by another user and also get the accurate answer to their posted questions. The admin has full access to this system and he is able to manage the posted article/questions. In future additional features can be added according to the user requirement to increase the usability and system performance.

REFERENCES