INNOVATIVE IDEA OF PROJECT MONITORING SYSTEM

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ABSTRACT

Information retrieval System is application where Students of the College can register their projects. All the Student data will be ware housed according to Year and Department. Students visiting the application will get the information of the existing projects and their corresponding abstracts which are been implemented in past 3 years. The software is being designed to inform the students whether the project has been implemented previously .We will use mining algorithm to match the keywords of the project.

This application allows the current year students to register their project title along with their abstracts which will help them to compare their project with the previous years ones so as the project does not get repeated.

The advantages of this system includes: improved usefulness, improved efficiency, reduced manual searching time.

Keywords

Weka, Apriori, Association rules, Frequent pattern mining.

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1. INTRODUCTION

Final Year Engineering Students have to develop a project as a part of their studies. Students developing the project face a common problem of repetition of a project in earlier year or by their batch mates. Every year students think of some ideas to develop and present for their final year project. Some ideas may be innovative and some may not. Student ideas often collide with ideas or projects developed earlier.

Students take an idea of project and propose it to staff members, but sometimes their ideas are rejected due to similarity with an existing topic. So here we present to develop a system where previous year projects with their description and languages used are stored in server. Any student wanting to develop a project can register on server and can check for matching of their idea with previously developed project. This system can be helpful for students to choose an unique topic for their final year project and can be useful to avoid disappointment from faculty while discussing their project idea.

2. BACKGROUND

This system can be helpful for students to choose an unique topic for their final year project and can be useful to avoid disappointment from faculty while discussing their project idea. Final Year Engineering Students have to develop a project as a part of their studies. Students developing the project face a common problem of repetition of a project in earlier year or by their batch mates. Every year students think of some idea to develop and present for their final year project. Some ideas may be innovative and some may not be. Student ideas often clash with ideas or projects developed earlier.

Students take an idea of project and propose it to staff members, but sometimes their ideas are rejected due to similarity with an existing topic. So here we present to develop a system where previous year projects with their description and languages used are stored in server. Any student wanting to develop a project can register on server and can check for matching of their idea with previously developed project. This system can be helpful for students to choose a unique topic for their final year project and can be useful to avoid disappointment from faculty while discussing their project idea.

3. DATA MINING BASED APPROACH

Apriori Algorithm: Apriori is the Latin word and its meaning is „from what comes before" . Apriori uses bottom up strategy. It is the most famous and classical algorithm for mining frequent patterns. This algorithm works on categorical attributes. Apriori uses breadth first search [1].

Apriori is the classical and most famous algorithm. Objective of using Apriori algorithm is to find frequent itemsets and association between different itemsets i.e. association rule. In this paper, author considers data (bank data) and tries to obtain the result using Weka a data mining tool [1].

3.1 IMPORTANT TERMS USED IN APRIORI

→Min_supp: it is minimum support used for searching frequent patterns that satisfy this constraint.

→Min_conf: it is Minimum confidence used for finding the strong association rule that satisfy this threshold [2].

→Frequent Itemset (Li): denoted by Li, where I means ith item, these are the item sets that satisfy the minimum support (min_supp) threshold [2].

→Join Operation: for Lk, a set of candidate k- itemsets (Ck) is generated by joining Lk-1 with Lk-1(Lk-1 ∞ Lk-1) [2].

→Apriori Property: this property is very useful for trimming irrelevant data. It states that any subset of frequent itemset must be frequent.

→Prune step: used for finding frequent itemsets, for any (k-1)-itemsets that is not frequent cannot become subset of a frequent k-itemset [2].

Definitions: Lk – set of frequent itemsets of „k" size found using min support. Ck – set of candidate itemsets of „k" size

3.2 PSEUDO CODE FOR APRIORI ALGORITHM:

→ Scan the transactions to find L1 (i.e. the set of all frequent 1-itemsets) with their counts;

→For (k=2; Lk-1 ≠ ; k++) { Generate the set of candidate k-itemsets, Ck, from Lk-1, the set of frequent (k-1) itemsets by applying Lk-1 ∞ Lk-1(i.e. Cartesian product). Scan the transaction to count the occurrences of itemsets in Ck; A subset of Ck, Lk is created with count more than minimum support value ;}

→ Return L1 U L2 U L3U…… U Lk; [4][3]

4.WORKFLOW

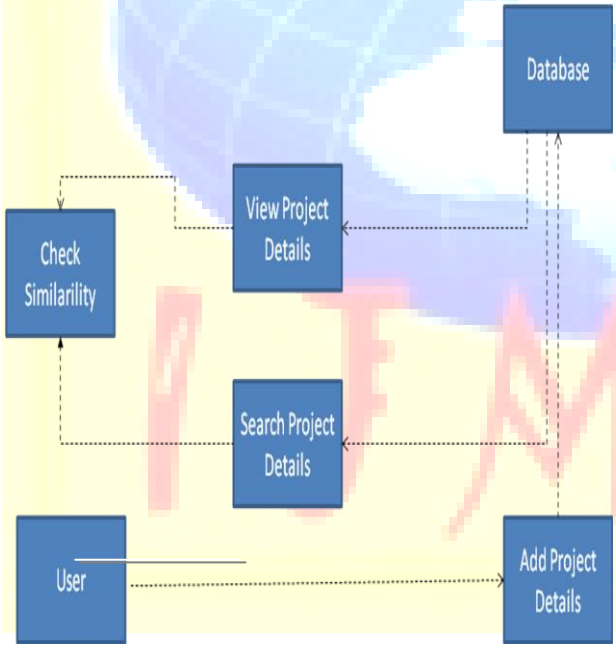

Fig 1: System View

4.1 STEPS TO BE UNDERTAKEN

PART ONE:ADD A PROJECT

1. Group Leader Registration
2. Approval Of Group Leader By Admin
3. Group Leader Login
4. Adding Of Team Member To Group By Group Leader
5. Add A New Project
6. Project Approved By Admin

PART TWO:SEARCH A PROJECT

1. Group Leader Login
2. Search A Project
3. Enter Title, Keywords, Language
4. Display Search Result To Group Leader

4.2.STEPS IN DETAIL

PART ONE:ADD A PROJECT

1.Group leader registers on the site.

2.The admin now approves an group leader for the same site.

3. Group leader will have to set a username and password for the login.

4. Group leader now adds other members to the group.

5.The Group leader or the other members can now add project to the database accordingly.

6.The added project has to be approved by the admin.

PART TWO:SEARCH A PROJECT

1.Group leader logs in with his appropriate credentials .

2. Group leader now enters the project title, the keywords of the project and the languages used in front end and back end in respective places.

3.The entered title will now be searched in the database and the result will be displayed to the group leader.

5. TOOL TO BE USED

Visual Studio and the Microsoft Application Platform

The Microsoft Application Platform is a portfolio of technology capabilities, core products, and best practice guidance focused on helping IT and development departments partner with the business to maximize opportunity.

As one of the core products of the Microsoft Application Platform, Visual Studio can help you drive the right business efficiencies, customer connections, and value-added services by providing a single, fully integrated development environment for all types of development, including Microsoft Windows, Microsoft Office, Web, and mobile applications. Use Visual Studio development solutions to give your development team powerful ways to:

* Increase productivity and quality through integrated and familiar tools.
* Deploy, secure, and support your critical Web applications and infrastructure.
* Reduce costs through better visibility of your development process.
* Provide better predictability and planning through integrated process and methodology

Microsoft SQL Server 2005 is a comprehensive, integrated data management and analysis software that enables organizations to reliably manage mission-critical information and confidently run today's increasingly complex business applications. SQL Server 2005 allows companies to gain greater insight from their business information and achieve faster results for a competitive advantage.

Key Capabilities:

- **High Availability:** Ensure business continuity with the highest levels of system availability through technologies that protect your data against costly human errors and minimize disaster recovery downtime.

- **Performance and Scalability**: Deliver an infrastructure that can grow with your business and has a proven record in handling today's large amounts of data and most critical enterprise workloads.

- **Security:** Provide a secure environment to address privacy and compliance requirements with built-in features that protect your data against unauthorized access.

- **Manageability:** Manage your infrastructure with automated diagnostics, tuning, and configuration to reduce operational costs while reducing maintenance and easily managing very large amounts of data.

- **Developer Productivity:** Build and deploy critical business-ready applications more quickly by improving developer productivity and reducing project life cycle times.

- **Business Intelligence:** Gain deeper insight into your business with integrated, comprehensive analysis and reporting for enhanced decision making.

6. CONCLUSION AND FUTURE WORK

In this paper we the authors explained this innovative idea , will be useful to any college with any streams who have projects in their syllabus (B.E., BSc.IT., MBA etc) Using this project student will find it register their project, as searching of topic will be easier for students based on the knowledge base of this project.Faculty Members will also find it easy to approve the topic given by students and also make sure the topic is new and not being repeated. Student for themselves can check if the topic they are interested in is repeated or is

a fresh one. This project can be clubbed with college website so students can search for the project topic at their convenience from anywhereAlso a Mobile App for same can be developed. So students can install that app and directly use mobile phone for searching and registering project.

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