Linking Innovations – An Enhanced Information System of Excogitations

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Abstract- The **term "Software Crisis" has completely undergone a change in its meaning from the definition first coined by F.L. Bauer in 1968. The software crisis in the past mainly was complexity, expectations, and constant change in the user requirements of the software. The present software crisis has been different. The British Computer Society (BCS) has reported that the present crisis in the software development is that students who pursue their graduation studies do not have a basic knowledge about the programming or the real time skills required to survive in the field of computing. This crisis of the gap between the real time implementation and the theoretical knowledge and ideas has been in exponential increase not only in the field of computing but also in several other fields of science and engineering. This paper aims at reducing this gap by bridging the innovations of students around the country. The innovations of every student will be validated by research doctorates in that field, so plagiarisms can be avoided. Valid innovations can be then implemented as projects. The information system designed provokes sharing of ideas and recognizing real innovations and helps any other student who has an interest in that field or ideology to know more about it, irrespective of distances.**

Index terms **– Software crisis, information system.**

LABYRINTH OF FRESH GRADUATES IN INDUSTRY TODAY

"*The IT industries in India needs of 3.5lakh able engineers a year, but only 1.5lakh engineers are available, so there will be a 5lakh engineer shortage for IT industry by 2010"* was the NASSCOM report released on May 4, 2009 and the NASSCOM president, Som Mittal blames the poor education system of India which has developed a gap between the real time industry requirements and graduate degree completing requirements. This has not only been a problem in India but also in many developing and even developed countries across the globe.

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II. INNOVATIONS INFORMATION SYSTEM

Information system refers to the specific application software that is used to store data records in a computer system and automates information processing activities which could convert a raw data set into knowledgeable information.

The information system we have designed aims at sharing new ideas of practical implementation (projects) of theoretical ideas of students around the country. Every student who wishes to implement any innovative idea as project will have to submit his project details and abstract to the panel of doctorates of that field and the idea will be analyzed. If it has been already implemented, then its will be reported as repeated project, otherwise it will be assigned a project id so that student can start work on implementing his innovation. This will put an end to intentional and unintentional plagiarisms. No student can do a project without the project id and the project id can be issued only by the panel after thorough analysis of the idea submitted. The panel can send comments on the idea to the student and also rate the innovation.

Any student who wants to do a project in his fields of interest can first search and see all the projects done previously in that field with abstracts. This will not only give a basic idea of that field but also can pave the way to trace the direction the technology has been growing, so that a new dimension of thinking in that field can be provoked.

Our information system not just gives the project ideas but also the details of the student who has done that, so that a healthy relationship of idea sharing and discussion can be developed all over the country irrespective of the distances. Moreover since all students of every university are compulsorily connected by this, there will be every level of student from beginners to experts and not like any other existing systems where only experts and professionals of that field are allowed to share ideas and a fresher of that field can never participate.

III. OBJECTIVES OF THIS PROJECT

We have developed this information system with the following objectives to be fulfilled,

1. There must be no more plagiarisms of others innovation
2. Any student must be able to update himself with the practical implementations of theoretical ideas he has read by seeing the projects done on that idea
3. Any student with great innovation can be recognized and appreciated by everyone across the country
4. By analyzing the list of projects done in a particular field, the way or dimension of the growth of technology can be studied and new dimension of thinking can be provoked.

IV. PROJECT DETAILS

Title: "Linking Innovations"

Platform: J2SE

Language: Java

Backend Database Server: MySQL

V. PROJECT DESCRIPTION

The software model we have developed fulfilling the aims and objectives dealt above is described here,

Entry page – login

The first frame of our system will be the login page, which asks for your user id and password. The user logging in may be one of four following types,

i. Master Administrator
ii. Moderator
iii. Project Manager of the University
iv. Student

i. Master Administrator

Master administrator is the user with maximum rights. In the master admin window below, we have three tabs specifying the three regions of access powers of the master administrator. First is the access with moderator.

1. He can fix the moderators for every field of the various disciplines. Master administrator alone has the right to add, remove moderators or edit details of them.

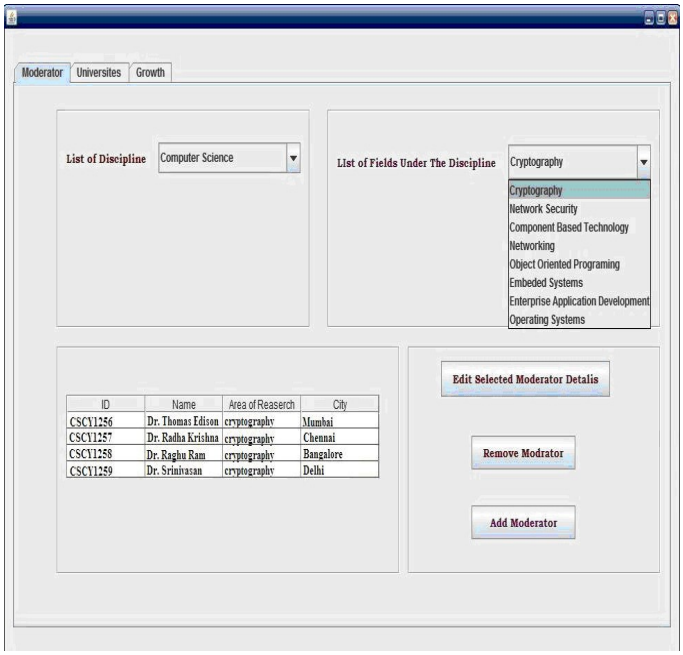

Fig. 1. Moderator editing window of Master Admin

The moderator editing window has a combo box displaying all branches present and after a branch is selected, the fields of that branch are displayed in the next combo box. When a field is selected in that, second combo box, the details of doctorate panel members of that field are displayed in the table. Ex: here Discipline is chosen as Computer Science and Field is chosen as Cryptography, so the panel members of cryptography are displayed which can be edited, added or removed by the administrator.

2. He can view the number of projects done in various fields of various universities

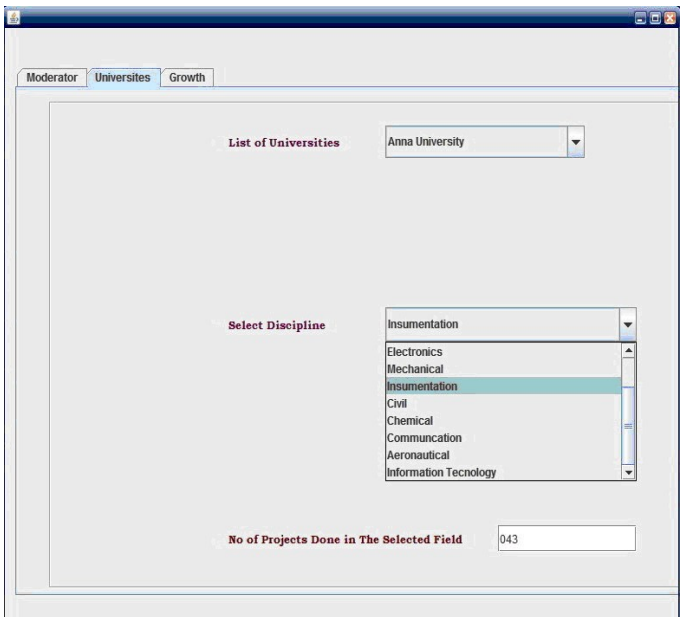

Fig. 2. University projects check window of Master Admin

The project check window of the master admin give access power to view the number of projects done by any university by selecting its name and the name of the discipline in which the number of projects done is expected to be viewed in the universities tab, number of projects done in that selected discipline is returned.

3. He can view the "growth graph", a graph plotted with the number of projects done in every field of a selected discipline.

Fig. 3. Technological growth graph window of the master admin

Technological growth graph window gives a graph of the selected field ("Computer Science" for example). It displays the various disciplines from which when a field is selected all projects done in its sub fields are shown in the form of a graph. This growth graph helps in identifying the growth rate of every field of technology

ii. *Moderator*

Moderator has the second highest access rights in his field. He can view the list of projects submitted in his field and read their abstracts. On reading the abstract of the project, he can report that it is a repeated project, by clicking on "report repeat" button or assign the project id accepting that the idea is really innovative by clicking on the "Assign Project ID" button. He can also send comments on the project to the students and he can finally rate the innovation in a scale out of 10, with 1 poor and 10 excellent.

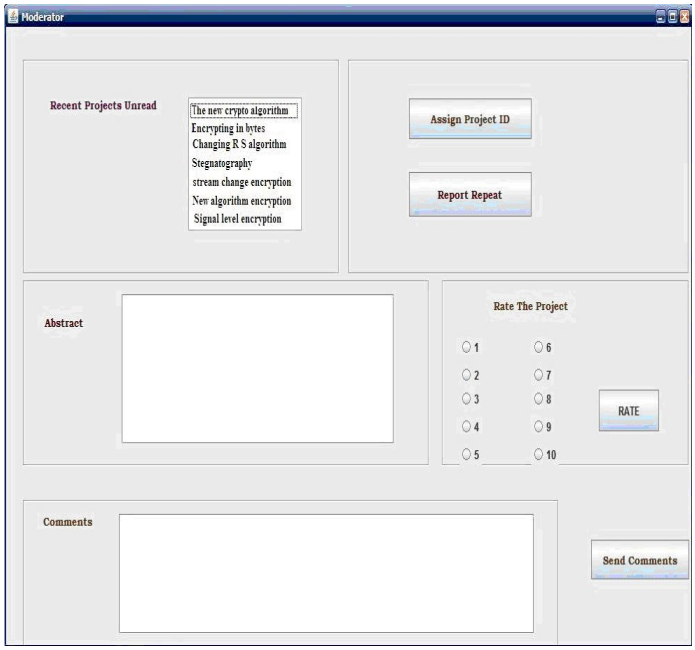

Fig. 4. Field Moderator Window, the window of every moderator of a specialized field of research

In the above window, the moderator of cryptography views his unread projects as the list. If he selects any project, the abstract of the project is displayed in the text area below it.

iii. *Project Manager Of The University*

The project manager of the university is the only person who has the power to allow a student to submit a new project for the first time.

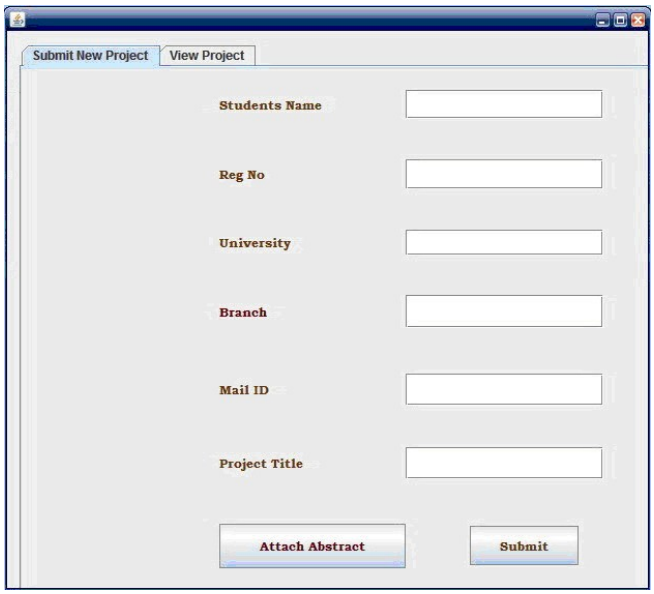

Fig. 5. Project manager window of the university

The above form is the student project submission form. Every student has to fill in their details with the project details and abstract and submit it to the panel. This will prevent garbage entries and will have a control and

order in the submission of ideas by the students.

The other access right of the project manager is to view the projects like the master administrator.

iv. Students

Students , the main type of user for which this system is designed for, has all access powers to view projects, their abstract, the details of the project developing students and the growth rate in various fields of their discipline.

The four searching options provided to the students are search by fields, title, year of project and rating of project.

When the search is completed, the list of projects is displayed in the list box. When a project is selected, the name of the students who did that project, their university and abstract of the project are displayed.

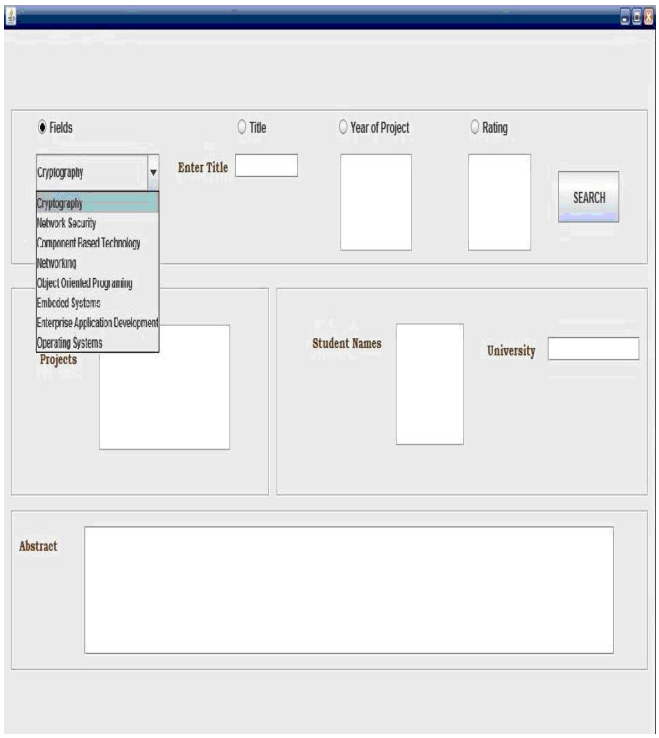

Fig. 6. Student project search window

The other access rights of the students are,

Viewing their profile listing their projects done and the comments received.

- View the growth graph as viewed by the master administrator.

Thus the four users' access rights are clearly specified to control and make the information system effective to satisfy its aim of linking the valid innovations across the country and improve the real time skills of the students.

VI. PROJECT FUNCTIONAL LAYOUT

The complete functional layout of the project described above is pictorially represented below. It explains the basic methodology or logic in which the innovation is shared and processed by this project.

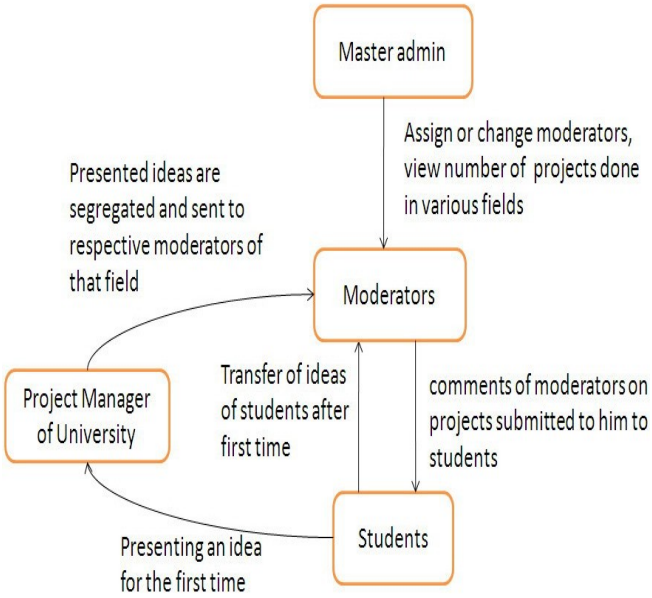

Fig. 7. Functional layout of project - Linking Innovations

The above block diagram gives the functional layout of the complete idea the project stands on. First time when an idea is presented it is sent to the respective moderator panel through the project manager. The moderator reviews it and either accepts or rejects it. He also sends comments to the student to reform it in a better way. The master admin manages the moderators and have a count on the number of effective projects done in every field.

VII. CONCLUSION

Thus the software model presented in the paper, when implemented will surely shrink the gap between the theoretical graduate studies and real time skills required in the industry by provoking the students to apply their ideas as projects and communicating it with the research people in that field. They can also share ideas around the country so that everyone can learn together, reform and grow as a professional to enter industry with zeal of confidence and skill which is what the information system we have designed aims at.

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