

Intelligent College Scheduling System

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Abstract-Intelligent College Scheduling System (ICSS) is an android application which is helpful for students as well as the colleges. In the existing system all the activities are done manually. It is very costly and time consuming. In our proposed system, students can view results using Android phones. The data will be stored in the college server. The faculty can login into their college account through the app itself and update the academic result. In this system, students have easy access for viewing the marks, provided their authentications are correct and they are not permitted to change/update the marks. The proposed work has three modules: 1) Student 2) Admin 3) Sta. In the student's module, student need to register, student name. Admin module maintains the students, sta s and students and sta related notices. Sta module maintain the students, there attendance and related notices. Notification to students will be sent from admin one through app directly. Any new notice for a particular semester will be uploaded by professor through application notifying to respective semester students. Application also includes logic to support above mentioned facilities to its students. Student's attendance is also monitored by the application.

Index Terms-Academic, Intelligent, Monitor and notices.

1. INTRODUCTION

College placement cell provides a glimpse in to the activities of our college primarily technical events. It is essential for every student to have beforehand information pertaining to placements and various events namely seminars, workshops and paper presentations happening at the intra and inter college level. This Application provides all the above information which makes it every student friendly. Firstly application focuses on placement opportunities for the students on campus. The entry to the website is through a login page where the students can login through their university role number. On the home page ,the present various pointers like company papers which includes and integration of aptitude and reasoning questions, sample questions from technical subjects like c, java, dbms, dld & co, html etc. Video links for group and panel discussions and probable interview questions. Secondly we have included another aspect of our campus activities i.e. intranet inter college events. This includes pointers to seminars, workshops, training sessions, paper and poster presentations held at our college. As well as in other college. Student who have logged in can also post all the required information about any such events out side our college dynamically. Finally this website provides attributes to reputed coaching centres for students. Intending to pursue higher studies be it GRE, GATE and CAT. The other attributes are faculty and students suggestions which might prove to be use full

for students. Hence our primary aim is to develop a website which is informative, innovative and most importantly student friendly.

2. SPECIFICATIONS

2.1. Requirements

2.1.1. Usability Requirements

As it is a Internet Application, must have some usability Features. End users of this System are Unlimited and from Various Skilled groups, so that we can't restrict them. By providing some facilities we have to make them comfortable.

- Colours what we use in this Web Portal design are must be attractive.
- Fonts that uses for User Interface (Customer Store front) Design are must be in Uniform.
- Colours Easy Navigations are preferable to do any task
- Multiple flows (ways) are preferable to do any task
- Home page should be Centralized System (Screen/Window) to go to any feature and to get any result.
- The facility to return to Home page from any page should available.
- Labels of all Objects in the entire system must be in Understandable form (Meaningful form).

2.1.2 Performance Requirements

(Application's performance not only depends on application design also on Customers System's Configuration (both Hardware and Software), Internet Access Speed, networks and others)

Even though the performance is not only depends on application design, our application design and implementation also responsible for the Performance.

- It has to load, with in the Industry Standard time
- It has to support up to 2000 Concurrent users.
- It has to update the database in short time in order to reduce the stock verification problems.

2.1.3 Compatibility Requirements

(As it is a Internet Application, it has to support various Hardware configurations, Software's and Network Communications)

It should support all types of Hardware versions, Operating Systems and Browsers.

3. FEASIBILITY REPORT

3.1. Technical Feasibility

Evaluating the technical feasibility is the trickiest part of a feasibility study. This is because, at this point in time, not too many detailed design of the system, making it difficult to access issues like performance, costs on (on account of the kind of technology to be deployed) etc. A number of issues have to be considered while doing a technical analysis.

3.1.1 Understand the different technologies involved in the proposed system

Before commencing the project, we have to be very clear about what are the technologies that are to be required for the development of the new system.

3.1.2 Find out whether the organization currently possesses the required technologies

Is the required technology available with the organization?

If so is the capacity sufficient?

For instance –

“Will the current printer be able to handle the new reports and forms required for the new system?”

3.2. Operational Feasibility

Proposed projects are beneficial only if they can be turned into information systems that will meet the organizations operating requirements. Simply stated,

this test of feasibility asks if the system will work when it is developed and installed. Are there major barriers to Implementation? Here are questions that will help test the operational feasibility of a project:

- Is there sufficient support for the project from management from users? If the current system is well liked and used to the extent that persons will not be able to see reasons for change, there may be resistance
- Are the current business methods acceptable to the user? If they are not, Users may welcome a change that will bring about a more operational and useful systems.
- Have the user been involved in the planning and development of the project?
- Early involvement reduces the chances of resistance to the system and in
- General and increases the likelihood of successful project

Since the proposed system was to help reduce the hardships encountered. In the existing manual system, the new system was considered to be operational feasible.

3.3. Economic Feasibility

Economic feasibility attempts 2 weigh the costs of developing and implementing a new system, against the benefits that would accrue from having the new system in place. This feasibility study gives the top management the economic justification for the new system.

A simple economic analysis which gives the actual comparison of costs and benefits are much more meaningful in this case. In addition, this proves to be a useful point of reference to compare actual costs as the project progresses. There could be various types of intangible benefits on account of automation. These could include increased customer satisfaction, improvement in product quality better decision making timeliness of information, expediting activities, improved accuracy of operations, better documentation and record keeping, faster retrieval of information, better employee morale.

4. MODULES

4.1. User Module

In this module we are authenticating the users by providing username and password. If username and password is valid then they will be taken to their screens. To identify user we are using unique IMEI

number of android device with the number stored at server. When they get matched with each other system checks the status of that device and transfer the control to respective user-interface.

4.2. Database Module

The proposed system used MySQL as its database because of their simplicity and flexibility. This module store every single information about students, faculty and model their data on specified operations. These operation can be storing student attendance, result data or can be authentication credentials.

4.3. Staff Module

This module is designed for staff, which use mobile phone to take attendance, upload result and upload college notifications. The entered admin details are encrypted and sent to server for verification. Only after successful authentication the operations are performed. If username and password cannot match, he/she can enter in to attendance page.

4.4. Attendance Module

The purpose of Attendance Entry Module is to enter the attendance using cell phone. In this module Lecturer takes the attendance using the cell phone. Lecturers select the branch, semester and year. After this session he enters in to attendance page. Here staff makes a mark on the absentees. Lecturer are only allowed to take attendance during their lecture time. In case of swapping of lecture or extra lecture, HOD can allow other faculty to take attendance of students by swapping the logic of time-table permanently or temporarily.

4.5. FEEDBACK Module

This module performs automated calculation of student's feedback of their professors, and then this will be represent graphically. Student can see only fifteen questions and give feedback by select provided options. This module, stores student feedback into JSON object to provide faster transfer of feedback data to server or client-side. Next we extract string from the JSON to apply algorithm over and decide the result of feedback.

4.6. Result Generation Module

This module allows the HOD and Lecturer to generate various reports on the student attendance and marks data. To generate reports, the user must login through app and ensures that internet is on. In this

module, application generates PDF file dynamically using java program.

4.7. Notification Module

This module allows the department HOD to update students about any college related information through notifications. The students can view notifications provided by the interface provided by application. HOD can send message to only available options like all student, all faculty, specific faculty and to all.

5. ALGORITHM

5.1. Vector Space Model

Use to measure the similarity.

Use to rank the documents.

Document and query are both vector

$$d_i = \{ w_{i,1}, w_{i,2}, \dots, w_{i,t} \}$$

Where, $w_{i,j}$ = weight for term j

$$j = \{ 1, 2, 3, 4, \dots, t \}$$

t = term

d_i = document

5.2. TF-IDF Model

It is complete vector space.

$$TF\text{-}IDF(d, t) = TF(d, t) * IDF(t)$$

- The vector space model and TF-IDF model are use to index construction and query generation.
- We construct a special tree based index structure and propose a "Greedy depth-first search algorithm".
- Providing efficient multi-keyword ranked search.

6. GREEDY DEPTH-FIRST SEARCH ALGORITHM

- It is searching algorithm.
- It is use graph or tree data structure.
- The time complexity is $O(bd)$.
- The space complexity is $O(bd)$.

6.1. Algorithm

- Step 1: Putting any one vertex of graph on top of stack.
- Step 2: Take the top item of stack add it to the visited list.
- Step 3: Create a list of that vertex adjacent nodes. Add the one each are not in the visited list to the top of the stack
- Step 4: Keep repeating step 2 and 3 until the stack is empty

7. MATHEMATICAL MODEL

Let S be the whole system,

Let $S = \{ I, P, R, K, O \}$

Where ,

I: Set of inputs.

P: Set of processes.

R: Rules or constraints.

K: Keyword

O: Set of outputs/Final output.

$I = \{I_1, I_2, \dots, I_n\}$

Where,

$I_1, I_2, \dots, I_n =$ Files shred by the users.

$P = \{ P_1, P_2, P_3, P_4, P_5, P_6 \}$

- Where,
- P1: Key generation
- P2: Generate commitment string
- P3: Open
- P4: Verify
- P5: Update.
- P6: Proof Update.

$R = \{ R_1, R_2 \}$

- Where,
- R1: Revoked user should not be able to access files shared by users.
- R2: Proper keyword should be extracted.

O1: Valid user access any file.

- $U(Z) = \{u_1, u_2, u_3, \dots, u_n\}$
- $K(Z) = \{k_1, k_2, k_3, \dots, k_n\}$
- $D(Z) = \{d_1, d_2, d_3, \dots, d_n\}$
- $S(Z) = \{s_1, s_2, s_3, \dots, s_n\}$
- $P(Z) = F(u_n, k_n, d_n, s_n) \dots u_i > 0$

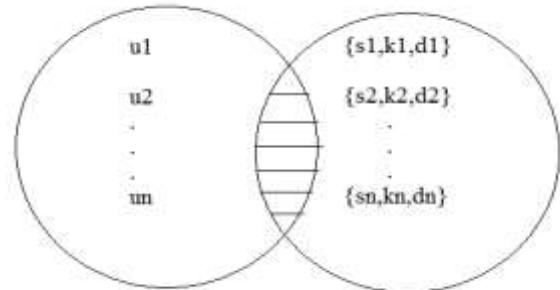
where ,

U->User, K->Keyword, D->Download , S->Search

7.1. Output

$U(Z) \cup S(Z) \cup K(Z) \cup D(Z)$

- Above diagram shows how much search user as per keyword.
- Keyword search data multiple order.
- Every keyword check data as per indexing.



8. CONCLUSION

We have presented a system to student database. The system exploits a ML soft classifier to enforce customizable content-dependent FRS. Furthermore, the flexibility of the system in terms of college data is enhanced through the management of ics. The first concerns the extraction and/or selection of contextual features that have been shown to have a high discriminative power. The second task includes the learning phase.

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