

COURSE REGISTRATION SYSTEM

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Abstract - A college management registration system empowers colleges and educators to manage regular tasks such as campaigns, student enrolment, admissions, course registration, etc. Registering for courses while taking admission to a college is the most crucial step as it lays the foundation for an entire semester. Providing this information to thousands of students, and that too correctly is a huge task if done manually. Hence, an online College Management System is needed which can provide a list of courses available according to the semester a student selects and talks about the courses one has selected. This system can be used as an integrative tool for many colleges and can be modified according to a college's requirements. This system is much quicker, efficient and the only force used is the clicking of a mouse button.

Key Words: College management, Registration System, Course ID, Semester.

1. INTRODUCTION

1.1 AIM

The aim of implementing the College Management System is to use technology to make human work easier. Using this system as a tool, students can search and register for courses of their choice. All colleges can integrate this tool in their existing websites and applications and can make their existing systems faster and more efficient. It will also come in very handy to students and will be easy to use.

1.2 SCOPE

1. The scope of this project is to develop a tool for students that will work with a database. The front end has a title "Course Registration System" and displays a welcome message "Welcome to the course registration page of Your College". Here the students will see two steps for Course Search and Course Registration.

2. After selecting the Course Search option, the students will be able to choose the correct semester. Once done, they can view the Course ID, their selected Semester, and the Course Name.

3. The next step is for Course Registration. Here the students are required to enter the Course ID of their choice and the Semester and register for the course.

4. Exception handling is also used for potential errors.

2. PROPOSED METHODOLOGY

1. The Course Registration Page:

The Home screen will display a scrolling Welcome message with the college's name which will give it a personalized feel. It will have a small general message stating About the Courses offered at a college. This content will be as required by the college. It will also have two steps with radio buttons for Course Search and Course Registration. The last element will be a footer which will have a hyperlink to the college's Homepage.

2. The Course Search Option:

After selecting the radio button for Course Search, the card expands and prompts the student to select their upcoming semester. This is a dropdown box with "Select Semester", "Fall 2021" and "Spring 2021" as the options. Once the semester is selected, the student is required to click on the Submit button which will then pop up an alert on the page with the Course ID, selected semester, and name of the course.

3. The Course Registration Option:

Step 1 for Course Search is successfully completed. The next step is registering for the course. After clicking this radio button, the card expands with two text fields prompting the student to enter the Course ID and Semester. Once the details are currently entered, the student must click the Register button which displays a pop-up message saying that the student has successfully registered in Course Name for the Selected Semester.

4. Error Handling:

4.1 If the student does not select any semester in Step 1 for Course Search, an error message is displayed requesting him to select a semester.

4.2 If any of the text fields are left blank in the Course Registration option and the Register button is clicked, an error message is displayed stating that Course registration was unsuccessful.

4.3 If a wrong entry is done in either one or both the Course Registration fields, the error message says that the course is not offered.

5. Database:

The database is created and managed using MySQL. The database is named after the college. It has a table for Courses which has information about the Course ID, Semester and Subject stored in three columns. It is connected to the front-end using Java Database Connectivity (JDBC).

3. SOFTWARE METHODOLOGY AND FRAMEWORKS USED

1. JAVA:

JAVA is a general-purpose, class-based, object-oriented programming language designed for having lesser implementation dependencies. It is a computing platform for application development. Java is fast, secure, and reliable. It is one of the easy-to-use programming languages to learn. We just need to write code once and can be run on almost any computing platform. Java is platform-independent which means programs developed in one machine can be executed in another machine. It is designed for building object-oriented applications. It is a multithreaded language with automatic memory management. It is created for the distributed environment of the Internet. It facilitates distributed computing as its network centric.

It is used for developing Android Apps, helps you to create Enterprise Software, Wide range of Mobile java Applications, Scientific Computing Applications, Use for Big Data Analytics, Java Programming of Hardware devices and Used for Server-Side Technologies like Apache, JBoss, GlassFish, etc.

2. Web Technologies:

Web technologies involve the use of HTML, CSS, JS, AJAX, Bootstrap, etc. by which the computers interact with each other. It helps in creating responsive and effective web pages which are user-friendly across multiple platforms.

a. HTML:

HTML stands for Hyper Text Markup Language. It is the standard markup language for creating Web pages. It describes the structure of a Web page. It consists of a series of element. HTML elements tell the browser how to display the content on the page.

b. HTML 5:

It offers new features that provide not only rich media support but also enhance support for creating web applications that can interact with users, their local data, and servers more easily and effectively than was previously possible.

c. CSS:

CSS stands for Cascading Style Sheets. It describes how HTML elements are to be displayed on screen, paper, or in other media. It is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. It saves a lot of work. It can control the layout of multiple web pages all at once. External stylesheets are stored in CSS files. It is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

d. CSS 3:

(CSS3) is the iteration of the CSS standard used in the styling and formatting of Web page. It is responsible for colours, font properties, text alignments, background images, graphics, tables, etc. It provides the positioning of various elements with the values being fixed, absolute, and relative.

e. Bootstrap:

Bootstrap is a free and open-source tool collection for creating responsive websites and web applications. It is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first web sites. It solves many problems which we had once, one of which is the cross-browser compatibility issue. Nowadays, the websites are perfect for all the browsers (IE, Firefox, and Chrome) and for all sizes of screens (Desktop, Tablets, Phablets, and Phones). All thanks to Bootstrap developers.

3. MySQL:

MySQL is an open-source, fast reliable, and flexible relational database management system, typically used with PHP. It is a database system used for developing web-based software applications. It provides multi-user access to support many storage engines and is backed by Oracle. It is used for both

small and large. It supports standard SQL (Structured Query Language). It is free to download and use. It is written in C and C++ language.

4. IMPLEMENTAION DETAILS

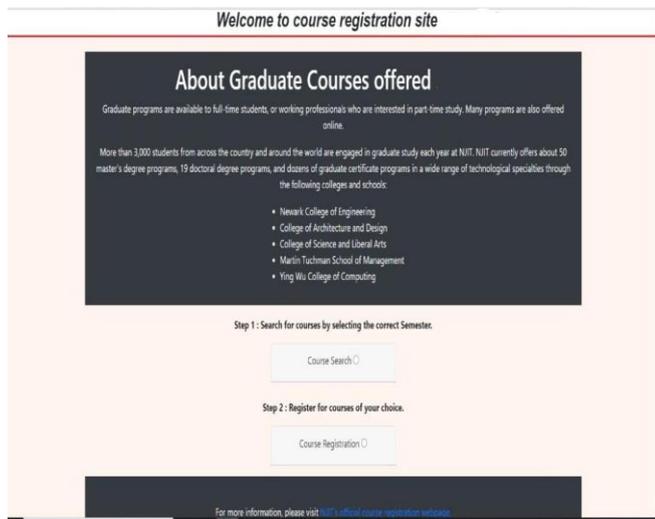


Fig 1. Registration Page

The figure above shows the registration page of college website general information about the university is displayed and students can either search for the courses offered by the college or can register for any particular course of their interest or choice.

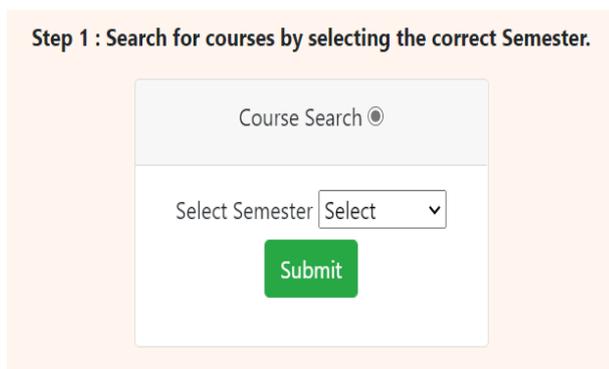


Fig 2. Course Search

Here, as soon as the student clicks on the radio button 'Course Search', a drop-down list box with label 'Semester' and a submit button 'Submit' appears on the screen. The student can select the semester he is looking for and click on the submit button to know more about the courses offered in that particular semester.

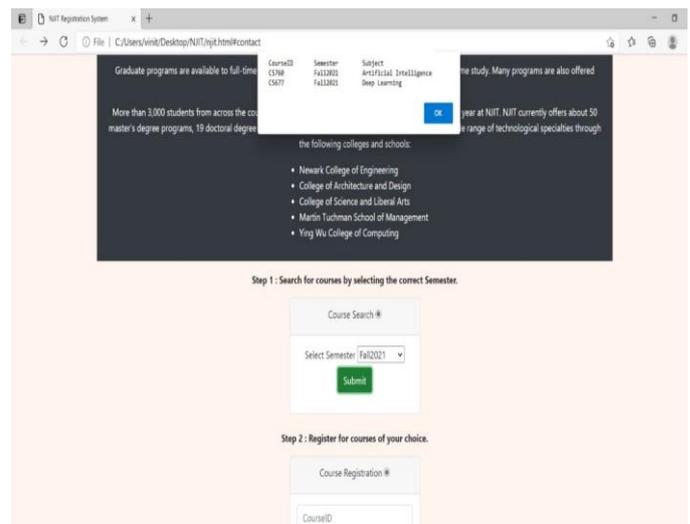


Fig 3. Details of the course selected.

As soon as the student selects a particular semester of his choice from the drop box below and press the 'Submit' button, a query is sent to the database that returns a result that is displayed on the webpage as shown in the figure.

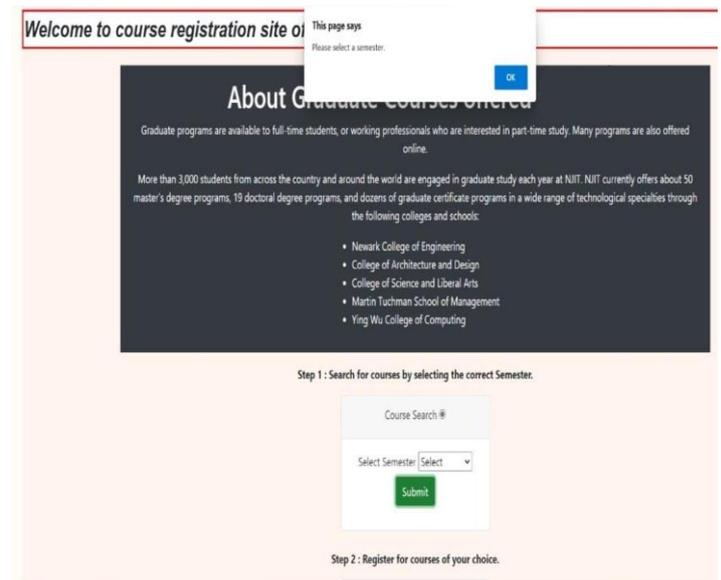


Fig 4. If no semester is selected.

On 'Course Search' option, when a student does not select Semester and clicks on the "Submit" button, a query is sent to the database which does not return anything. The query fails and this error is handled by displaying a message on the screen to select a semester.

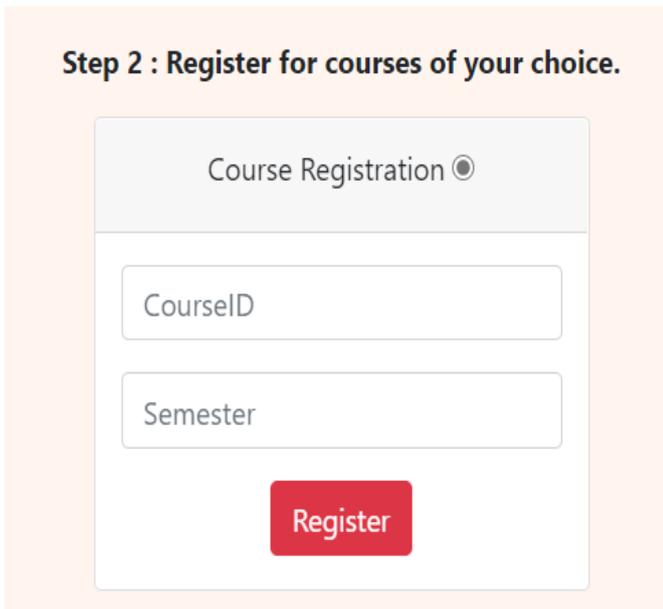


Fig 5. Register for a particular course.

When a student clicks on the radio button 'Course registration', following appears on the webpage: A text box 'CourseID', a text box 'Semester' and a button 'Register'.

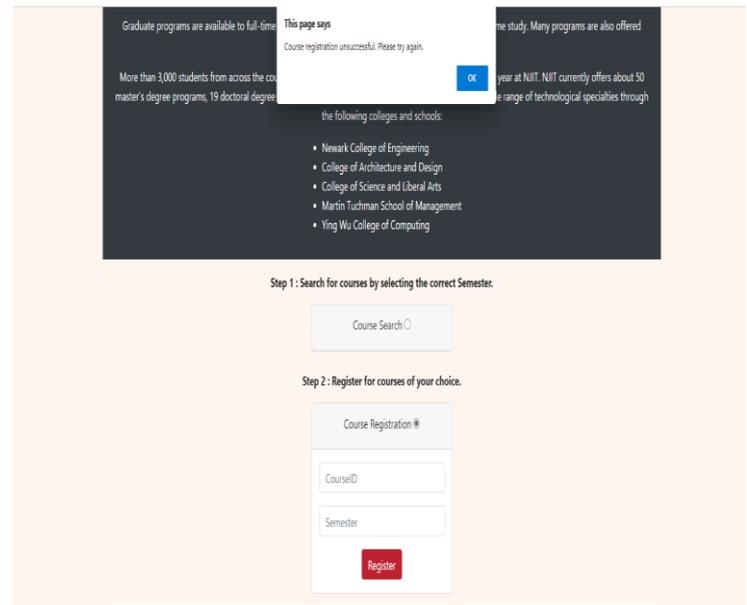


Fig. 7(b) Registration Failed due to empty field.

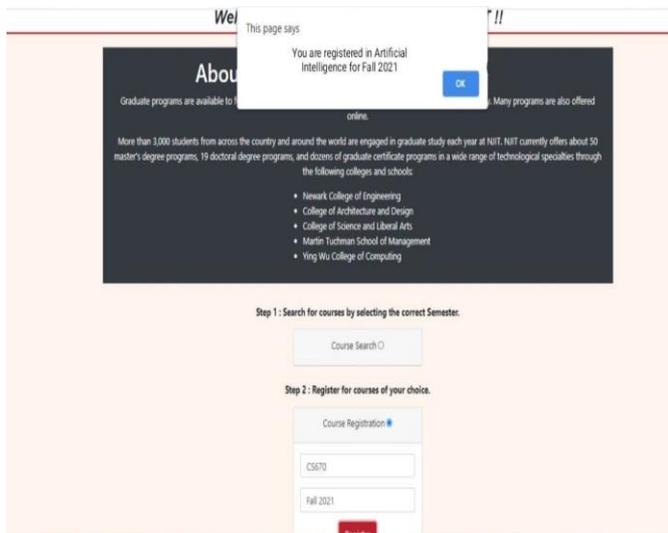


Fig 7(a) Successfully registered for a particular course.

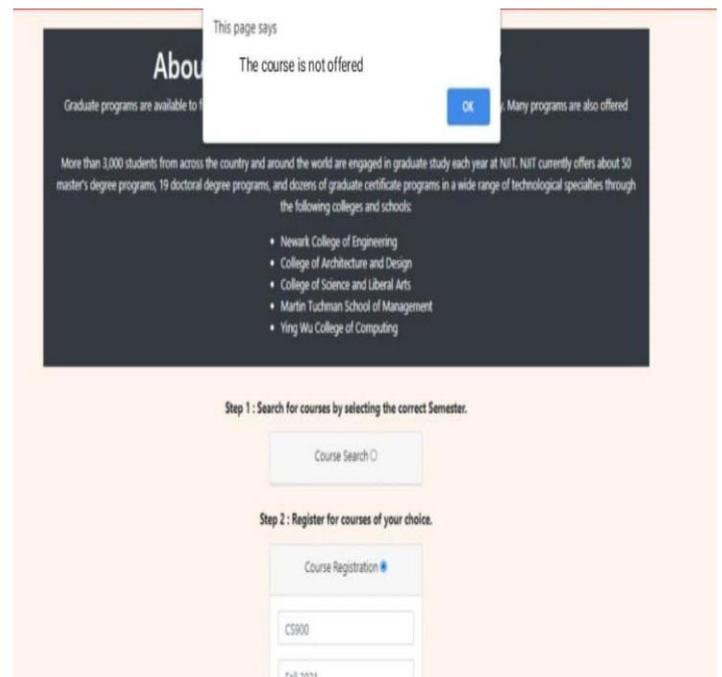


Fig 7(c) Course not available.

Student enters a CourseID, a semester and clicks on the button 'Register'. This will send a query to the database which has two possible outcomes:

a. if the query finds a match, a message is displayed on the client (as shown in figure 7(a)).

b. If the field is submitted blank, a message is displayed on the client 'Course registration unsuccessful. Please try again later' (as shown in figure 7(b)).

c. If the query does not find a match, a message pops up on the client stating "The course is not offered (as shown in figure 7(c)).

5. CONCLUSION

The Course Registration System was implemented keeping in mind to create a tool for all the colleges which they would integrate in their existing systems and make a much more user-friendly interface for the most important steppingstone before the start of every semester. Using this tool, the students can view and register for courses by just a two-step process – Course Search and Course Registration. The Course Registration System comes in very handy, is easy to use, responsive and quite efficient.

6. FUTURE SCOPE

Most of the time, Students must visit universities or colleges to collect various information like Tuition fees, Term Schedule, etc. during their admission process or as per their daily needs. This process is very tedious and time consuming, also it requires manpower in providing required information to visitors. Hence, to overcome the problems a chatbot can be developed. The project can be made more interactive between users and chatbot which can be accessed from anywhere anytime. The chatbot can be easily attached with any university or college website with few simple language conversions. Chatbot provides various information related to university or college and also students-related information. The chatbot can be used by anyone who can access the university's website. The project will use the concept of Artificial Intelligence and Machine Learning. PHP Language will be utilized for the development of Chatbot. User can ask university-related questions, then the query is applied as an input to algorithm, which processes the message and displays the corresponding response to the user.

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BIOGRAPHIES



I am Anju Padia. Desirous of an IT Service Management role in a challenging workplace that welcomes innovative ideas and offers growth opportunities and a positive environment for accomplishing projects. Hold Bachelor of Engineering (B.E) degree in the field of Information Technology from Thadomal Shahani Engineering College (2019-20). Being an IT engineer, I enjoy learning about the breakthrough in technology. My key skills include problem-solving abilities, handling databases, MySQL, Java, Python and Web Technologies.



I am Vinit Santani. I have received my Bachelor of Engineering (B.E) degree in the field of Information Technology in 2020 from Thadomal Shahani Engineering College. I am always interested in learning new technologies and I look forward to challenging situations which encourage me to push myself. I am proficient in Java, Python, and Web technologies. My career objective is to work in an organization that provides me with ample opportunities to enhance my skills and knowledge along with contributing to the growth of the organization.