MAJOR PROJECT SYNOPSIS

**COLLEGE HUB**

Submitted in partial fulfilment of the requirement for the degree of Bachelor of Technology in Computer Science & Engineering

## PROJECT TEAM MEMBERS

**SANDEEP KUMAR [1916186]** **ARADHANA [1916136]**

## SUPERVISOR

**Dr. Parvinder Singh**



**Lyallpur Khalsa College, Technical Campus Jalandhar**

**COMPANY PROFILE**

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O7 Services is an ISO 9001:2015, MSME PB10D0011152, and Govt. Approved (CAL-C) Organization that bargains in Web Development, Mobile Application Development, Custom Software Development, UI/UX Designing, Facilitating Services, Digital Marketing, Enlistment of Domain Names with contemporary extensions, AMC and MMC Services, Mass SMS and voice calls. The organization incorporates the most progressive IT solutions, supporting a full business cycle: preliminary counseling, framework development, distribution, quality confirmation, and 24×7 help. With a rich encounter of 7+ fruitful years, O7 Services forms durable associations with their clients to guarantee reasonable costs, swift delivery, and quantifiable business results. Their Administrative Center is in Jalandhar and the Branch Office is in Hoshiarpur.

Some of the avant-garde products developed by O7 Services are- Vehicle Tracking System, Invoice Software, School Management System, Hospital Management system, Parents- Teacher Communication App, Fee Management system, Task Management System, Online Food Ordering App, Security App, Admission system, Inventory Software, Car Servicing App etcetera.

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**Voice:** +91- 8437365007, +91-181-5015007

**E-Mail:** [enquiry@o7services.com](mailto:enquiry@o7services.com) , [hr@o7services.com](mailto:hr@o7services.com)

**Website:** [www.o7services.com](http://www.o7services.com)

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# ABSTRACT

College Hub fulfils the thirst of knowledge and offers online content that can be delivered for the learner at anywhere, anytime and any age through a wide range of e-learning solution while compared with traditional learning system. It also provides the rapid access to specific knowledge and information. With the rapid growth of voluminous information sources and the time constraint the learning methodology has changed. Learners obtain knowledge through e-Learning systems rather than manually teaching and learning. In this research paper proposes the e-learning management system with web services oriented frame work and SOA. This system supports the cross browser and fully integrated with different databases. This system focused around the several features namely Content Management, Content Protection, Learning Management, Delivery Management, Evaluation management, Access Control, etc., and mainly focused on integrated platform needed for e-learning and managements.

**CANDIDATE’S DECLARATION**

We hereby certify that the work which is being presented in the project report entitled “**COLLEGE HUB**” in partial fulfillment of requirements for the award of degree of B.TECH (CSE) submitted in the Department of CSE at “LYALLPUR KHALSA COLLEGE TECHNICAL CAMPUS, JALANDHAR” under “I.K.G. PUNJAB TECHNICAL UNIVERSITY, JALANDHAR” is an authentic record of my own wok carried out during a period from February 2023 to June 2023 under the supervision of “ ”.

SANDEEP KUMAR

This is to certify that the above statement made by the candidate’s is correct to the best of my/our knowledge.

Signature of Supervisor

Signature of External Examiner

Signature of HOD

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ARADHANA

This is to certify that the above statement made by the candidate’s is correct to the best of my/our knowledge.

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# Introduction

Computer plays an important role in our daily life. Anything we want we can get only in one mouse click. Speed, reliability and accuracy of the computer make it a powerful tool for different purposes. A very important and basic need of today’s modern business world is the quick availability and processing of information using computer. One can easily get the type of required information within a fraction of a second. The project that I have taken is also in this category which is used in daily life of student who want to learn and search online material for study like Class notes , Assignment , Previous Paper , Syllabus etc.

## 

# OBJECTIVE:

## College hub is a learning process with the combination of content that is both delivered digitally and through face-to-face learning. College hub contributes to the shifts from traditional face-to-face learning to the use of web technological tools which enhances collaborative learning and presents an entirely new learning platform for students. college hub has also been the principal form of distance education but now, it is also changing the instructions on higher education as it is now becoming a global agent in higher education. Advancements in technology learning have contributed to the enhancements of generations of face-to-face learning and generations of distance education. As to it, when eLearning develops, it has begun to use different approaches to address diverse goals.

* Enhance the quality of learning and teaching
* Meet the learning style or needs of students
* Improve the efficiency and effectiveness
* Improve user-accessibility and time flexibility to engage learners in the learning process

**FEASIBILITY ANALYSIS**

The feasibility study of this project comprise of the following

**Economic Feasibility**

The cost centers in the system development as well as operation are trivial. The major can be network, internet and the software required for coding. The software used for the development of the proposed system is PHP and MySQL. In terms of wallet our product is in well reach of pocket.

**Technical Feasibility**

Technical feasibility centers on the current system and to what extent it can support the proposed system, it includes current computer system specifications such as hardware, software etc. it also involves financial considerations to accommodate the technical enhancements. If the budget is serious constraint then the project is judged not feasible.

Though the system is developed in the generalized form, which covers all the procedures and operations carried out in an internet based solution. The version used in the system is and MySQL.

MySQL can manage large amount of data and is simple and secure. Using PHP helps us to design the look of our application.

# Technology Used:

**Front end :**

1. **HTML** (HyperText Markup Language) is the code that is used to structure a web page and its content. For example, content could be structured within a set of paragraphs, a list of bulleted points, or using images and data tables. As the title suggests, this article will give you a basic understanding of HTML and its functions.

HTML is a markup language that defines the structure of your content. HTML consists of a series of elements, which you use to enclose, or wrap, different parts of the content to make it appear a certain way, or act a certain way. The enclosing tags can make a word or image hyperlink to somewhere else, can italicize words, can make the font bigger or smaller, and so on.

The main parts of our element are as follows:

1. The opening tag: This consists of the name of the element (in this case, p), wrapped in opening and closing angle brackets. This states where the element begins or starts to take effect — in this case where the paragraph begins.
2. The closing tag: This is the same as the opening tag, except that it includes a forward slash before the element name. This states where the element ends — in this case where the paragraph ends. Failing to add a closing tag is one of the standard beginner errors and can lead to strange results.
3. The content: This is the content of the element, which in this case, is just text.
4. The element: The opening tag, the closing tag, and the content together comprise the element.

**2. CSS**

CSS stands for Cascading Style Sheets. It is a style sheet language which is used to describe the look and formatting of a document written in markup language. It provides an additional feature to HTML. It is generally used with HTML to change the style of web pages and user interfaces. It can also be used with any kind of XML documents including plain XML, SVG and XUL.

CSS is used along with HTML and JavaScript in most websites to create user interfaces for web applications and user interfaces for many mobile applications.

There are three types of CSS which are given below:

• Inline CSS

• Internal or Embedded CSS

• External CSS

**Inline CSS:** Inline CSS contains the CSS property in the body section attached with element is known as inline CSS. This kind of style is specified within an HTML tag using the style attribute.

**Internal or Embedded CSS:** This can be used when a single HTML document must be styled uniquely. The CSS rule set should be within the HTML file in the head section i.e the CSS is embedded within the HTML file.

**External CSS:** External CSS contains separate CSS file which contains only style property with the help of tag attributes (For example class, id, heading, … etc). CSS property written in a separate file with .css extension and should be linked to the HTML document using link tag. This means that for each element, style can be set only once and that will be applied across web pages.

**3. Bootstrap** is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains HTML, CSS and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

Bootstrap is an HTML, CSS and JS library that focuses on simplifying the development of informative web pages (as opposed to web applications). The primary purpose of adding it to a web project is to apply Bootstrap's choices of color, size, font and layout to that project. As such, the primary factor is whether the developers in charge find those choices to their liking. Once added to a project, Bootstrap provides basic style definitions for all HTML elements. The result is a uniform appearance for prose, tables and form elements across web browsers. In addition, developers can take advantage of CSS classes defined in Bootstrap to further customize the appearance of their contents. For example, Bootstrap has provisioned for light- and dark-colored tables, page headings, more prominent pull quotes, and text with a highlight.

4.**JavaScript (JS)** is the most popular lightweight, interpreted compiled programming language. It can be used for both Client-side as well as Server-side developments. JavaScript also known as a scripting language for web pages. JavaScript is used by many developers (65% of the total development community), and the number is increasing day by day. JavaScript is one such programming language that has more than 1444231 libraries and increasing rapidly. It is preferred over any other programming language by most developers. Also, major tech companies like Microsoft, Uber, Google, Netflix, and Meta use JavaScript in their projects.

JavaScript can be added to your HTML file in two ways:

• Internal JavaScript

• External JavaScript

**Internal JavaScript**: We can add JS code directly to our HTML file by writing the code inside the <script> & </script>. The <script> tag can either be placed inside the <head> or the <body> tag according to the requirement.

**External JavaScript:** We can create the file with a .js extension and paste the JS code inside of it. After creating the file, add this file in <script src=”file\_name.js”> tag, and this <sctipt> can import inside <head> or <body> tag of the HTML file.

**JavaScript Used for :**

It is mainly used to develop websites and web-based applications. JavaScript is a language that can be used as a front-end as well as a backend.

• Creating Interactive Websites: JavaScript is used to make web pages dynamic and interactive. It means using JavaScript, we can change the web page content and styles dynamically.

• Building Applications: JavaScript is used to make web and mobile applications. To build web and mobile apps, we can use the most popular JavaScript frameworks like – ReactJS, React Native, Node.js etc.

• Web Servers: We can make robust server applications using JavaScript. To be precise we use JavaScript frameworks like Node.js and Express.js to build these servers.

• Game Development: JavaSCript can be used to design Browser games. In JavaScript, lots of game engines are available that provide frameworks for building games.

Read on to find out how.

**Backend**

1. **Node.js**

Node.js uses asynchronous programming!

A common task for a web server can be to open a file on the server and return the content to the client.

**Here is how Node.js handles a file request:**

1. Sends the task to the computer's file system.

2. Ready to handle the next request.

3. When the file system has opened and read the file, the server returns the content to the client.

Node.js eliminates the waiting, and simply continues with the next request.

Node.js runs single-threaded, non-blocking, asynchronous programming, which is very memory efficient.

**What Can Node.js Do?**

• Node.js can generate dynamic page content

• Node.js can create, open, read, write, delete, and close files on the server

• Node.js can collect form data

• Node.js can add, delete, modify data in your database

• Node.js files contain tasks that will be executed on certain events

• A typical event is someone trying to access a port on the server

• Node.js files must be initiated on the server before having any effect

• Node.js files have extension ".js"

1. **MongoDB**

• MongoDB stores data in flexible, JSON-like documents, meaning fields can vary from document to document and data structure can be changed over time

• The document model maps to the objects in your application code, making data easy to work with

• Ad hoc queries, indexing, and real time aggregation provide powerful ways to access and analyze your data

• MongoDB is a distributed database at its core, so high availability, horizontal scaling, and geographic distribution are built in and easy to use

• MongoDB is free to use. Versions released prior to October 16, 2018 are published under the AGPL. All versions released after October 16, 2018, including patch fixes for prior versions, are published under the Server Side Public License (SSPL) v1.

**Tools**

The Postman platform includes a comprehensive set of tools that help accelerate the API lifecycle—from design, testing, documentation, and mocking to the sharing and discoverability of your APIs

The Postman API client is the foundational tool of Postman, and it enables you to easily explore, debug, and test your APIs while also enabling you to define complex API requests for HTTP, REST, SOAP, GraphQL, and WebSockets.

You can design your API specifications in Postman using OpenAPI, RAML, GraphQL, or SOAP formats. Postman's schema editor makes it easy to work with specification files of any size, and it validates specifications with a built-in linting engine

**7. HARDWARE/SOFTWARE REQUIRED:**

**Hardware** :

|  |  |
| --- | --- |
| Device : | Windows Laptop |
| Processor : | i3 |
| Memory : | 8 GB |
| Storage : | 256 GB SSD/HDD |
| CPU Cores : | 2 CPU Cores |
| OS : | Windows 10 |

**Software :**

1. Visual Studio Code

2. Web Browser (chrome)

## Advantage college hub:

* A place to find the previous year papers that serves the curriculum .
* The one-stop solution for students the night before exam.
* Overcomes The Gap Between Teacher And Student.
* A place to view the internship and placement experiences

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