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BtechWala : A complete website of offering free study material to B.tech students of computer science

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ABSTRACT :

In this short paper, we present an online system called BTechWala which is a free online platform to assist the BTech Computer Science students with easy and consistent availability of vital study material. The free platform provides access to PYQs, rich notes, and useful study materials—everything you need to succeed, free of charge. By providing all required study resources at one place, BTechWala wants to make study more efficient and easy. With an intuitive, easy-to-navigate design, the platform helps students quickly discover and access exactly what they're looking for, creating a more seamless digital learning experience. By making all of these resources available for free, BTechWala is dedicated to helping students every step of the way on their academic journey, giving them the tools they need to succeed without breaking the bank. This platform smartly combines their tools into an all-in-one solution to help schools keep pace with the increasing demands placed on today's students.

1.INTRODUCTION

With all the advances in technology and education, access to good study material is the biggest concerning factor among BTech students, particularly for CSE students. Even though there is a trove of resources available at our fingertips, spending time finding trustworthy and applicable materials can be an exhausting and daunting challenge. The reality is that too many students have faced barriers to finding materials that are thorough yet digestible. Many of the paid resources are just not affordable enough for any student living paycheck to paycheck.

That's how BTechWala stepped in. This is why we built this online platform — to weed out these issues and supply students with free, easy-to-access study materials all in one convenient location. Be it PYQs, notes or any other important resources, BTechWala makes sure that students don't have to spend time looking for them. With an intuitive and easy-to-navigate interface, the platform combines everything you need to learn into a streamlined study hub to ensure success in a BTech Computer Science course. Our mission is as clear as it is ambitious: to unlock education for everyone, everywhere and provide every learner the tools they need to succeed without the burden of cost.

BTechWala isn't just delivering free study materials, it's delivering an overall learning experience, giving students a trustworthy, free-of-cost resource that helps them excel academically.

BACKGROUND

The exponential pace of change in the digital world has created a paradigm shift in how we go about educating people. For BTech students, particularly those pursuing a degree in Computer Science, the internet can be incredibly resourceful. Knowing where to look can be daunting. So the demand for coordinated, consistent, uniform, trustworthy, and user-friendly study resources is higher than ever.

In the past, students had to scour their textbooks, lectures, or maybe even random content on the internet to study for a test or complete an assignment. These approaches aren't working. Textbooks are often out of print, lecture notes may leave gaps, and free resources available online are poorly organized at best, if not completely scattered, which can lead to confusion on what students really need to learn. Platforms that offer the best study resources are oftentimes subscription-based, putting them out of reach financially for countless students.

That's why BTechWala was built to bridge this gap by providing a centralized platform where any Computer Science student can find all the study resources that they require 100% Free of Cost. The concept was basic — to combine previous year questions (PYQs), class notes and other useful resources into one user-friendly platform, so students don't have to spend precious time looking all over the web. By providing a seamless user experience and providing everything for free, BTechWala's goal is to equip students with the right resources so they can focus on their studies, rather than scrambling to find resources or stressing over costs.

RELATED KEY TERMS

BTechWala An online community and platform where BTech Computer Science students get free study materials like PYQ, notes, and every other thing they need to study right.Previous Year Questions Old exams, which can help students know what kind of questions will be asked on an exam, and which help them learn what concepts are most important and asked about often in exams.Abbreviated course materials that distill intricate theories into understandable, digestible content, allowing students to better absorb key issues in a more efficient manner.The standards and practices set in place by the W3c.Free educational materials that are freely available to students drive down costs for all students, not just those with the financial means to purchase.Learning Study Platform A physical or digital location or resource that helps students learn through access to materials such as class notes, previous exams and other study tools.4 User-Friendly Interface An effective design architecture for the platform, such that users can easily understand how to use the platform and find the materials they're looking for with minimal hassle.

A HIGH-LEVEL CONCEPTUAL LITERATURE REVIEW.

For years, many great digital platforms have helped students and families find educational resources they can afford. Most lack the tools needed to truly empower people. Other platforms provide a partial set of study guides or only cover the most testable subjects, leaving students without the study aides they need to succeed in their classes. Still a common feature of many STEM courses, these platforms are often only available through paid subscriptions, which is a huge barrier for many students who otherwise can't afford access. Even online, free resources are often spread out over multiple websites, leaving students to piece everything together costly in use of the time it takes for the pupil to assemble all they need.

In the case of BTech student community, especially the ones who pursue Computer Science, the need to be provided with platforms which would provide them with quick and seamless access to properly curated, authenticated and high-quality study materials has seen a crucial boom. They tend to have large price tags, pricing out a majority of the student population. Online free resources are often not as in-depth, or do not build upon each other as they are needed to truly be prepared for exams and assignments.

A handful of platforms like Indeed, Google and others try to fill this gap by providing free or low-cost resources. They lack organization, ease of use or a comprehensive approach. Many don't provide enough for students to fully prepare. BTechWala started to bridge this gap by becoming a go-to platform for BTech Computer Science students with a holistic approach by providing all the resources like PYQs, Notes & Other study materials in one place for FREE.

The vision behind BTechWala is to provide a one-stop integrated and highly user friendly platform which connects all that a student need, at one place, without any cost involved. Through its stream-lined and effective study resources, BTechWala intends to simplify the academic journey of BTech students and help them get access to all the study resources they may need to attain success.

GLOBAL AND LOCAL SYSTEMS ARCHITECTURE

The BTechWala platform has been created in a fully modular and responsive way using industry-leading web-based technologies and tools to deliver a rich and seamless, fast and engaging experience to students. The system is generally divided into two main sections, the Frontend and the Backend.

The frontend of the platform is made with the latest HTML5, CSS3 and JavaScript. Development frameworks like these let us create a super interactive, responsive design that helps the platform stay friendly and usable on any screen – from desktop to tablet to smartphone. The interface is clean and easy to navigate so students can quickly find the study guides they need! All the study material including handwritten notes, and almost handwritten PYQs as good as handwritten PYQs are arranged subject-wise, topic-wise, chapter-wise for best optimization.Backend The backend is where the core business logic of the platform exists. It's built on the scalable, developer-efficient, and modern open-source technologies of Node.js and the Express.js web framework which allow for highly scalable handling of user requests, resource management, data storage and much more. The backend is tailored to track all aspects of a user's experience, from visiting assigned readings, searching out specific ideas, and overall progress. It operates in parallel with a custom-built MySQL database that safely and automatically stores as well as retrieves every single study asset, exactly when needed.The database of the platform is like a golden well which stores all that you add on it like PYQ, study notes, materials etc.

7.RESULT

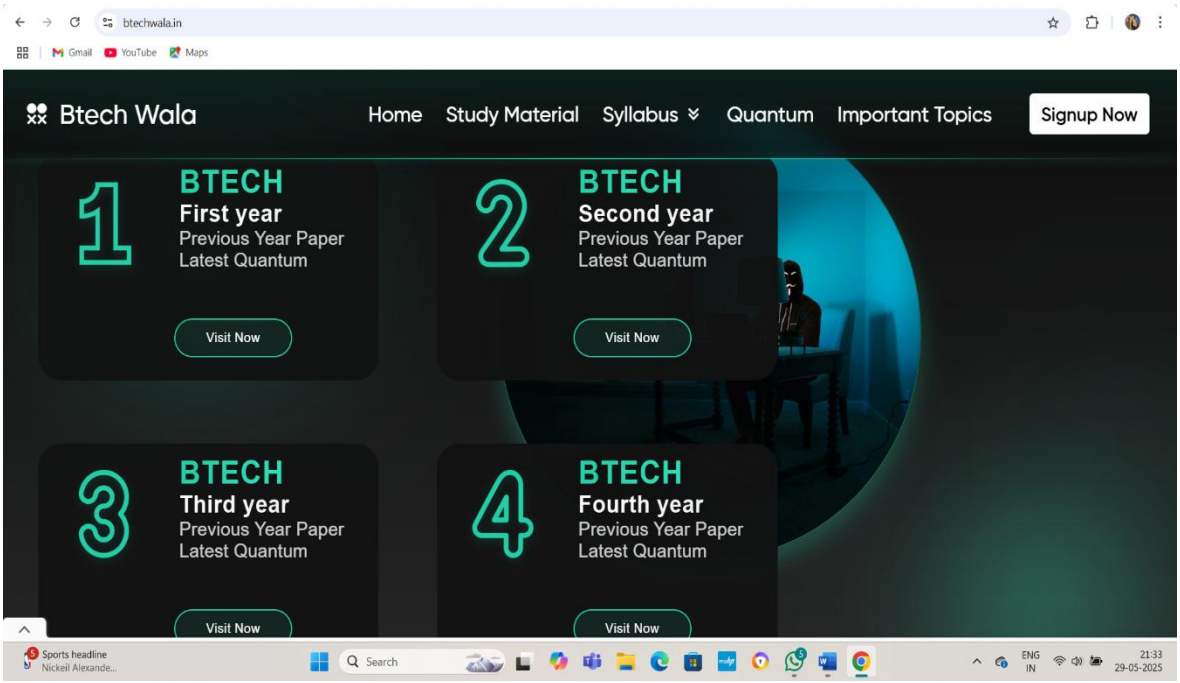
The BTechWala platform was pilot-tested with a group of 30 students of BTech Computer Science for four weeks to gauge its functionality, user interface, and study material quality. The feedback received during this pilot phase has been overwhelmingly good, showing that the platform is serving the students well.

User Interaction: Most students found themselves frequently engaging with the platform, utilizing it as a primary source of their study content. The seamless navigation made it possible for users to access the material they needed in no time. The average session duration on the platform was approximately 45 minutes, with most users navigating through several subjects and topics.

Platform Usability: In terms of usability, the platform received a high rating from users. Over 90% of students reported that they found the interface intuitive and user-friendly. The responsive design ensured that the platform functioned smoothly across different devices, including smartphones, tablets, and laptops. No significant issues were reported regarding navigation or accessibility.

Content Availability: The quality and availability of resources was another key area. The platform was effective in offering a vast set of materials such as PYQs and notes for different Computer Science subjects. An estimated 85% of the students supported that the resources covered most of their syllabus. Students especially favored the addition of past year questions, which made them better prepare for examinations.

System Performance: As far as the performance is concerned, the platform proved to be highly reliable. The system processed all the requests promptly, with the average page load time being less than 2 seconds. There were no severe technical problems, and students had hardly any delays while browsing or searching for materials.



CONCLUSION

The BTechWala portal comes as a resounding answer to the plaguing issues of BTech Computer Science students in getting accurate, organized, and free study material. Having a graceful merge of an easy-to-use interface along with a detailed source of PYQs, notes, and other study material, BTechWala effectively simplifies the learning process for students so they can learn more and search less. The pilot testing phase confirmed the platform's success in usability, content appropriateness, and system performance, reflecting robust engagement and positive responses from the student users. With a clear vision for ongoing improvement—from scalability, content enrichment, to integration of interactive learning elements—BTechWala is well poised to become a leading academic resource center for Computer Science students across the nation. Success of this platform until now highlights the significance of affordable, free education resources in the modern digital learning environment.

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REFERENCES:

1. Sharma, A., "Digital Learning Platforms," IEEE, 2021.
2. Agarwal, R., "Collaborative Learning and Web Technologies," ACM, 2020.
3. https://www.researchgate.net/publication/Note_Sharing_Website_Case_Study
4. Documentation of Laravel, Node.js, MySQL (based on your tech stack)