**PROJECT REPORT**

**On**

1. **LEARNING WEBSITE**

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**Bachelor of Technology**

**In**

**Computer Science & Engineering**

**Chandigarh Group of Colleges, Mohali**

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**ABSTRACT**

In our project we propose a method to help students to prepare for their campus placements or to learn new Trending Technologies which are in demand. It is Web based Project which makes use of different Technologies.Website contains different sections for different Technologies such as Interview Questions, Programming Languages, Block Chain etc. The best thing about Website is that it provides all the content for free and contains videos for each topic.

A Multiple Pager Website is created using HTML5 and CSS3 with different elements to show information. JavaScript is used to add Dynamic view to the Website . Python is also used in this project in order to built a Chat Bot which interact with students and resolve their doubts and recommend Videos or lectures on the basis of their Interest. The main Objective of this Project is to provide best resources which are available free at One Platform.

Programming Languages section includes languages like Java, C++, Python, JavaScript etc. There are separate sections for those who want to prepare or learn Android Development and Web Development. Website provides a complete Road Map to students to learn Technologies and Implement them.

After learning Technology their is need to practice it, so here comes the Website with another feature which includes Project Section . Project Section includes various projects on Android Development, Web Development, Data Science ,Machine learning etc.

**Keywords-** HTML5; Buttons; Div Container; recursive backtracking algorithm; time complexities; Web-based Sudoku solver; JavaScript,Python,Chat Bot,Android Development,Web Development,Data Science, Machine Learning, Artificial Intelligence, Block Chain etc..

**Introduction**

A learning system based on formalized teaching but with the help of electronic resources is known as E-learning. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. E-learning can also be termed as a network enabled transfer of skills and knowledge, and the delivery of education is made to a large number of recipients at the same or different times. Earlier, it was not accepted wholeheartedly as it was assumed that this system lacked the human element required in learning.

  
  
However, with the rapid progress in technology and the advancement in learning systems, it is now embraced by the masses. The introduction of computers was the basis of this revolution and with the passage of time, as we get hooked to smart phones, tablets, etc, these devices now have an importance place in the classrooms for learning. Books are gradually getting replaced by electronic educational materials like optical discs or pen drives. Knowledge can also be shared via the Internet, which is accessible 24/7, anywhere, anytime.  
  
E-learning has proved to be the best means in the corporate sector, especially when training programs are conducted by MNCs for professionals across the globe and employees are able to acquire important skills while sitting in a board room, or by having seminars, which are conducted for employees of the same or the different organizations under one roof. The schools which use E-learning technologies are a step ahead of those which still have the traditional approach towards learning.

**Problem Statement & Objectives**

Traditional System of learning is the oldest form of delivering education to students through face to face interaction between teachers and students. The schools are divided into grades which include both primary and secondary education system.

 Although this type of education system is practiced all over the world it is losing its popularity nowadays. Everything nowadays is part of the digital revolution, education is no exception.

 The traditional education system needs to be revised in order to continue delivering education successfully in the present scenario which we called the digitized world.

The traditional education system is well–organized institution with proper classroom, building and teacher faculties. Everything that is going to be taught is pre-planned not only regular activities but also extracurricular activities.

**2.1 Objectives**

E-Learning is a learning process with the combination of content that is both delivered digitally and through face-to-face learning. eLearning 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. eLearning 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.

* 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

E-Learning is vast and an expanding platform with huge prospective in higher education. Since there are many challenges in making eLearning effective, it is important to know how to manage it and access to the resources.

Take a minute and just imagine if one is not having the roadmap to guide from start to finish is actually like plunging into eLearning without an effective strategy because learners would be lost in the learning content.

**E Learning Website**

**Summary**

Web-based learning is commonly referred to as eLearning or online learning. It essentially includes learning online through the courses that are offered on the net. Emails, live lectures, and videoconferencing are all possible through the net. This enables all the participants to give their views on a particular topic and then discuss them further. They also offer static pages like course materials that are printed for the benefit of all the participants. One of the main advantages of accessing pages on the web is that most of the web pages have hyperlinks that will lead you to another page and thus opens up a vast amount of information on the net.

**Advantages**

* You are able to link the various resources in several varying formats.
* It is a very efficient way of delivering courses online.
* Due to its convenience and flexibility, the resources are available from anywhere and at any time.
* Everyone, who are part time students or are working full time, can take advantage of web-based learning.
* Web-based learning promotes active and independent learning.
* As you have access to the net 24x7, you can train yourself anytime and from anywhere also.
* It is a very convenient and flexible option; above all, you don't have to depend on anyone for anything.
* Not only can you train yourself on a day to day basis, but also on weekends or whenever you have the free time to. There is no hard and fast rule.
* Through discussion boards and chats, you are able to interact with everyone online and also clear your doubts if any.

**Disadvantages**

* Most of the online assessments are limited to questions that are only objective in nature.
* There is also the problem of the extent of security of online learning programs.
* The authenticity of a particular student's work is also a problem as online just about anyone can do a project rather than the actual student itself.
* The assessments that are computer marked generally have a tendency of being only knowledge-based and not necessarily practicality-based.

**TECHNOLOGY USED**

* Operating System 64 Bit(Windows,Mac,Linux etc).
* **HTML5:** It is used to provide structure to the Website.Different buttons are created using HTML5 elements and images ,texts are also used to make it more understandable.
* **CSS3:** CSS3 is used to provide Website a cool look so Whenever someone come to website to play Sudoku solver the person not get bored. CSS3 various properties and selectors are used to make Website Interactive.
* **JavaScript:** JavaScript is used to write the logic behind the Sudoku Solver. The Algorithm is written in JavaScript which performs all operations. JavaScript Interact with HTML5 elements to perform different operations on the elements.
* **Visual Studio Code:** Visual Studio Code is the most used Code Editor for Web Development related work. It provides different Extensions to make work easier and auto complete option to make writing code in easier way.
* **Google Fonts:** Google fonts are used to provide interactive fonts to the text or Numbers which appear on the container containing different buttons.
* **Python:** Python is used to build Chat Bot which provides various features.
* **Responsive Design:** In order to make the website work efficiently on Mobile Phones,Tablets and Laptops it must be Responsive in nature.
* **Web Browser:** In order to run the Sudoku solver built by using Web Technologies we must need a latest browser which support Web Technologies.
* **Chat Bot:** Chat Bot will interact with students who came to learn new Technologies and provide them right career path for them on the basis of their Interest.

**Source Code With Working Images**

**HTML5**