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# Online Computer Laboratory

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**Abstract:** *Now-a-days online learning has become a very integral part for the learners, the reason behind it, that is we have gone through the pandemic almost all was stop, but now we are recovering and everything is back to normal, during pandemic almost all was stopped and one of the main field which stopped was education, being educated is very important because it helps us in various ways like helps us for our daily wages and to fulfil our need etc. from the pandemic everyone has adopted the concept of e-learning and are becoming very familiar to it, as we are interested to build a project related to the e-learning topic the website which we are developing will guide the students regarding their curriculum through which they will be able to analyse their self and will also provide the solutions and descriptions as well as the other study material related to syllabus will be provided, while doing this project our main goal is that if such situation occurs our education system should not stop so We think this can be the solution to the problem.*

**Keywords:** *e-Learning*

## I. INTRODUCTION

E-learning or electronic learning is changing the educational scenario rapidly. Being an It profession we are developing a website through which the process of education will not stop, but the learning will be more interesting and enjoyable for the learners. Providing good quality education in an efficient as well as convenient way is the main aim of our project. Information and Communication Technology has opened a new sky for the experiments on teaching-learning methods to make education more interesting, flexible and broader. During this pandemic we were restricted to sit at home and work from home so the studies were stopped this problem occurred, So we have tried to find out a solution to this problem that our project will help the students to learn in a very convenient manner and the textual material which is required for learning will be made available on the website through which it will save the money, time and power and other study material will also be provided to the learners but first they will have to register to our website and login, then they have to select options regarding the courses, year and subjects after the selection of the subject the list of practical's will be appeared according to the course, year and subject selection if they select the option of list of practical's then the questions and description related to it will be suggested and model answer papers will also be provided and after the student completes all the studies then he/she can attempt the quiz and can do a self-analysis which will help the student to know that how much more or less he/she needs to work on So, the misconception that Being physically present in classroom will only help the child to learn efficiently, should be thrown out of the mind, this is a virtual laboratory where he or she can visit anytime and continue learning according to his/her convenience and score good. There are various benefits of E-learning that it is time saving, it is a very convenient mode of learning and it also helps us to sharpen the digital skills or helps in begin digitally pro. Edutainment is also called "e-learning" are new methods and practices that enabled learning in faster, more efficient and more entertaining ways.

## II. PROBLEM STATEMENT

Create Virtual lab with following features:

- A. Practical experiments
- B. Question papers
- C. Pretest
- D. Posttest
- E. Procedure
- F. Aim
- G. Theory
- H. Simulation
- I. Study Material
- J. Question Papers

### III. PURPOSE OF STUDY

As we have faced this situation and have come out stronger, we have learnt many lessons we have faced many problems in various fields and education field is one of those as now we are becoming used to it so we should also accept the situation and move forward. We should also be ready, if such situation occurs. So, we will try our best to solve all the problems occurring in the virtual learning through our project. The crisis which occurred through that we are inspired and got motivated. The main intention is to make the learning experience more flexible, stimulating and available around the clock and at any place with Internet facilities.

### IV. LITERATURE REVIEW

It is an interactive learning based on simulation of real phenomena. It allows students to explore a topic by comparing and contrasting different scenarios, to pause and restart application for reflection and note taking, to get practical experimentation experience over the Internet. Numerous opportunities are presented to our generation like technology, communication and ICT. Technology has touched every field in some or the other way. Education through e-learning applications have opened up horizons of learning. From distance, efficient methods of learning and added quality to knowledge sharing activities. There has been a significant amount of research by scholars, academicians and technology experts with technology at its prime focus but the effectiveness of e-learning in extensively shaping the future of students and adding quality to their thinking and values has not been discussed much. This study therefore reviews the literature that is available on online and offline sources in the form of books, scholarly articles and research writings from peer reviewed journals. The aim of the literature review is to understand the scholarly works on the topic of e-learning both from the technological point of view and for its impact on the students. The research highlights the gaps in the existing literature and marks the areas that the future studies should cover to bridge the existing gaps in the literature available on the topic.

E-learning is a rapidly growing industry, E-learning provides fast and vast access to learning resources. There is no meaning of campus boundary of institutions in e-learning. We can connect ourselves around the globe. We can join different learners and teachers' groups and social networking websites. We can have access to the libraries of various countries situated in different countries. We can chat or contact via e-mail to our resource persons and fellow learners. It allows us to use various e-repositories. It provides us the opportunities to create various groups of worldwide learners and teachers with common interests. For example: Learners of Mass Communication can have a group on Facebook with world-wide participation. They can share their knowledge, queries, initiatives and innovations in this group. 'Media Educators' is a group on Facebook of Mass-communication teachers, researchers and students. They usually discuss various subject related matters and exchange field related information. E-learning breaks all boundaries and provides an unlimited treasure of knowledge to the learners and teachers. Now that affordable e-learning solutions exist for both computers and internet, it only takes a good eLearning tool for education to be facilitated from virtually anywhere. Technology has advanced so much that the geographical gap is bridged with the use of tools that make you feel as if you are inside the classroom. E-learning offers the ability to share material in all kinds of formats such as videos, slideshows, word documents, and PDFs. Conducting webinars (live online classes) and communicating with professors via chat and message forums is also an option available to users.

### V. METHODOLOGY

The idea is implemented as a website so firstly the user has to register into the website by entering following details that is name, course, Gmail, username, password, phone number after the registration process the user first will have to login in the website after successful login there are various options provided that is aim, theory, procedure, pretest, posttest, simulation, study material and list of practical's. Then the user will have to choose a particular subject for example if he selects HTML as his subject then he will be redirected to the list of practical's page so in that page the list will be provided related to the subject chosen that is HTML if he selects practical number one then the theory, procedure, pretest, posttest, simulation, study material will be provided accordingly so in study material video links will be provided and latest model answer papers will be provided and firstly the user will have to attend the pretest it will be a quiz which will include basic questions related to the topic and in the simulation the user will be able to run the code of the following subject that is HTML and after the execution of the experiment there will be a posttest which will contain technical question where the self-analysis will be observed by the user ,there are various options provided that is various services provided by us it will contain information regarding us and there will be a section named as my profile in that the user will be able to edit his information that is if he gets promoted to next semester then he can edit the profile and access the information or material regarding the current semester. In this way we can use this website in a very simple and efficient manner and will help you to be technically skilled.

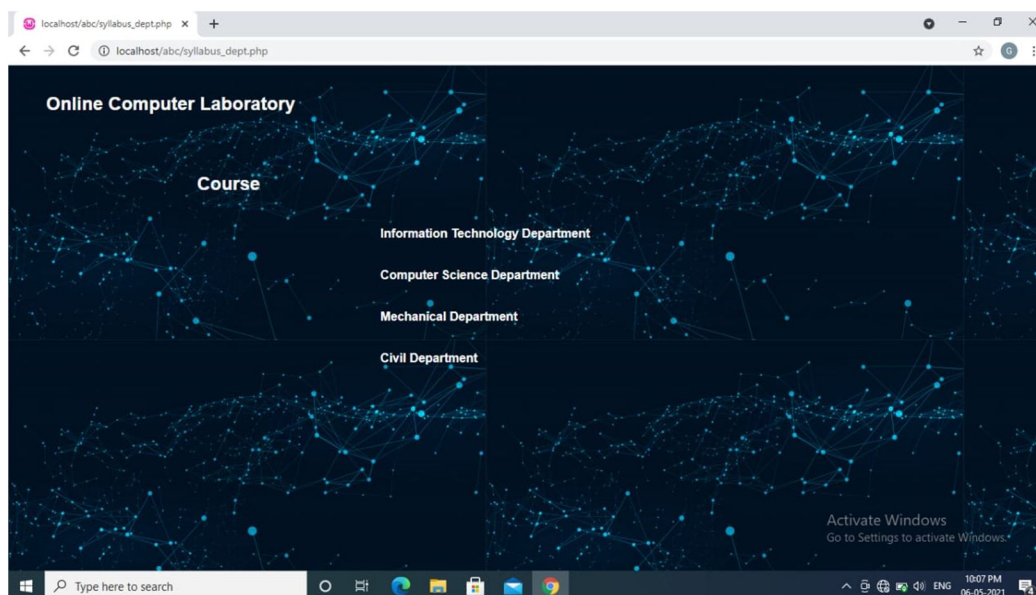
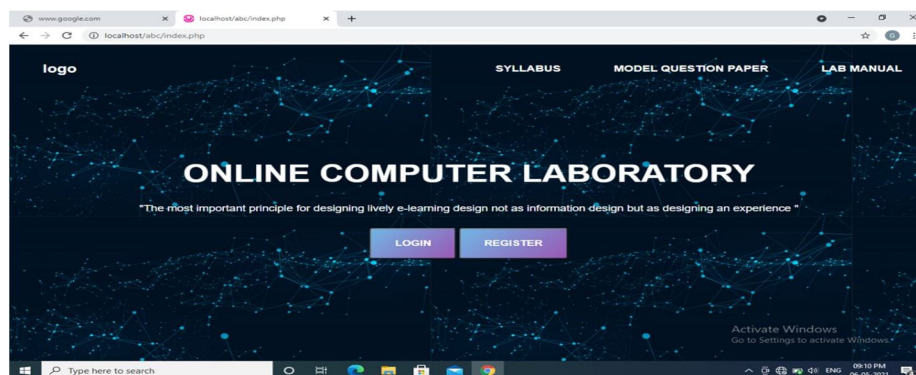
## VI. DATA COLLECTION AND ANALYSIS

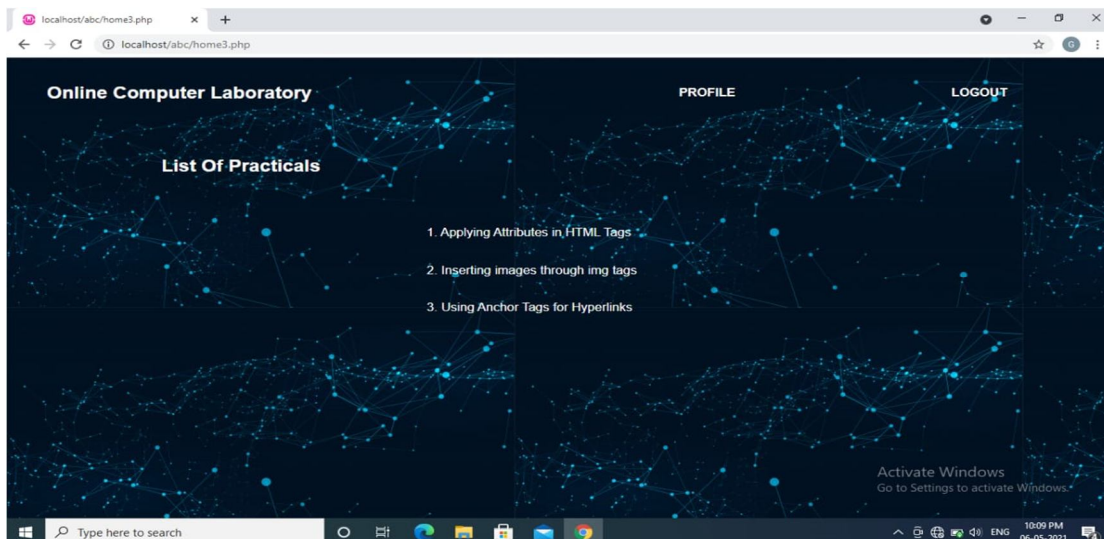
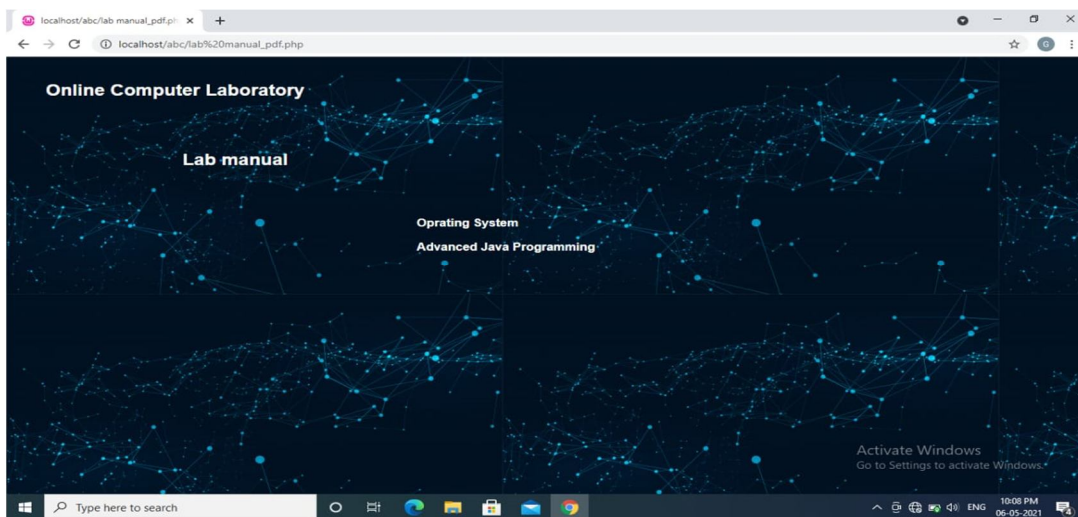
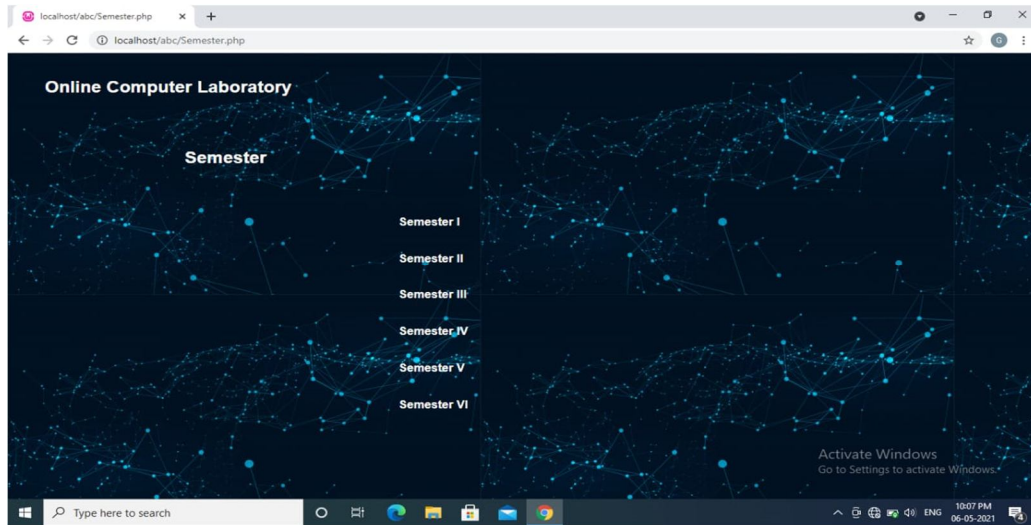
Website required a numerous amount of data that is various names of the courses that is information technology, civil engineering, mechanical engineering, computer science engineering etc. then their semester wise subjects that is if we choose information technology department then there are total six semesters each semester has two subjects so in all twelve subjects so the data related to that then the theory related to the experiments ,the procedure to perform the experiment the quiz is also included related to the topics etc. There are gaps to identify the questions like what is it that students find frustrating about e- learning or complain about its shallowness? Some studies suggest that for long term value addition e-learning practices are not good enough, hence, studies can focus on the reasons for the non-sustainability of e-learning as far as value addition for the students is concerned. Studies have addressed e-learning as a compromise solution for a low-cost alternate to classroom studies, future studies should make sure to establish this fact and highlight the causes for its ineffectiveness for students. There is also scope to analyze the reason for high dropout rates among e-learning students.

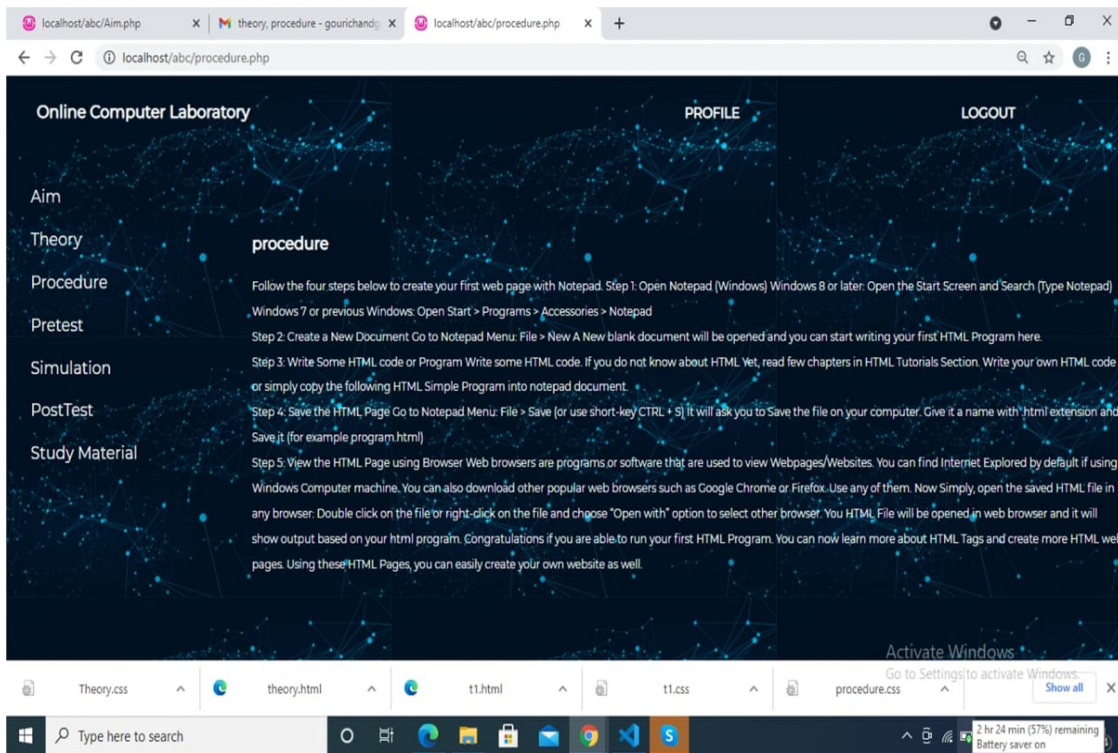
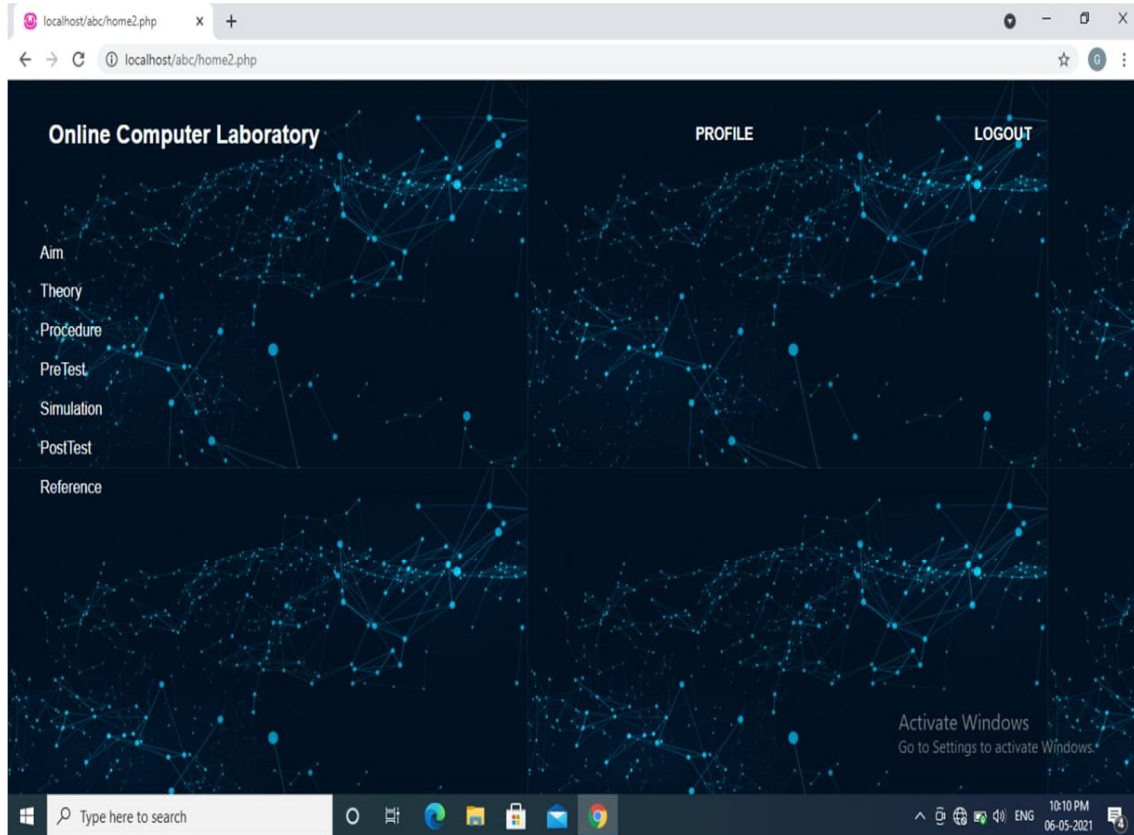
## VII. GOAL

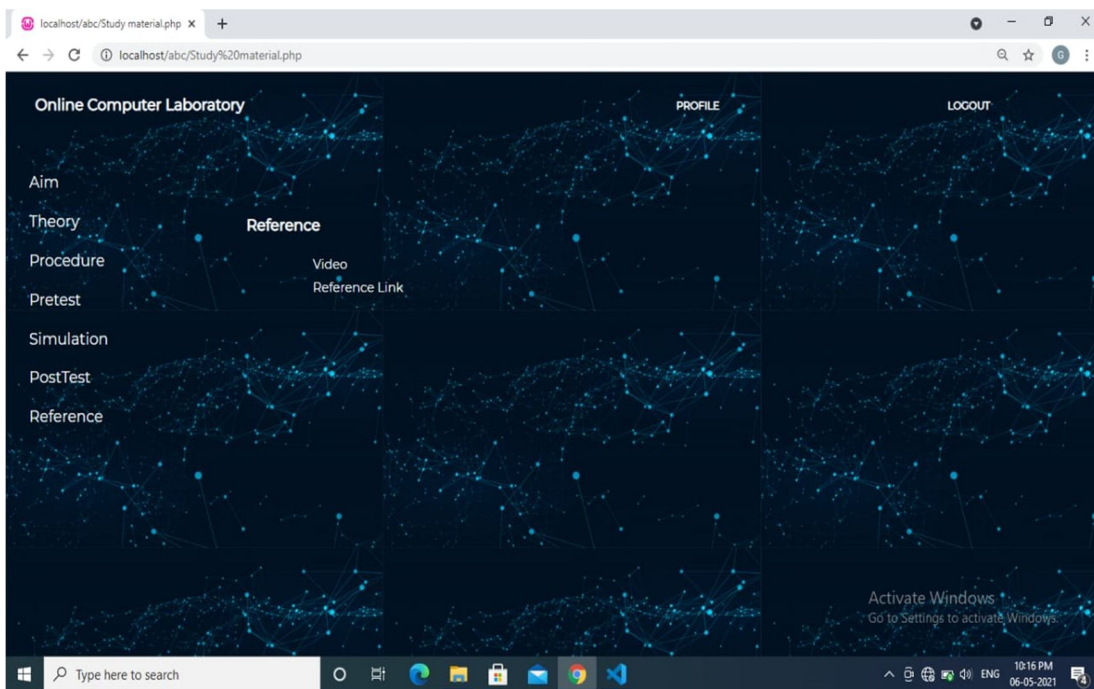
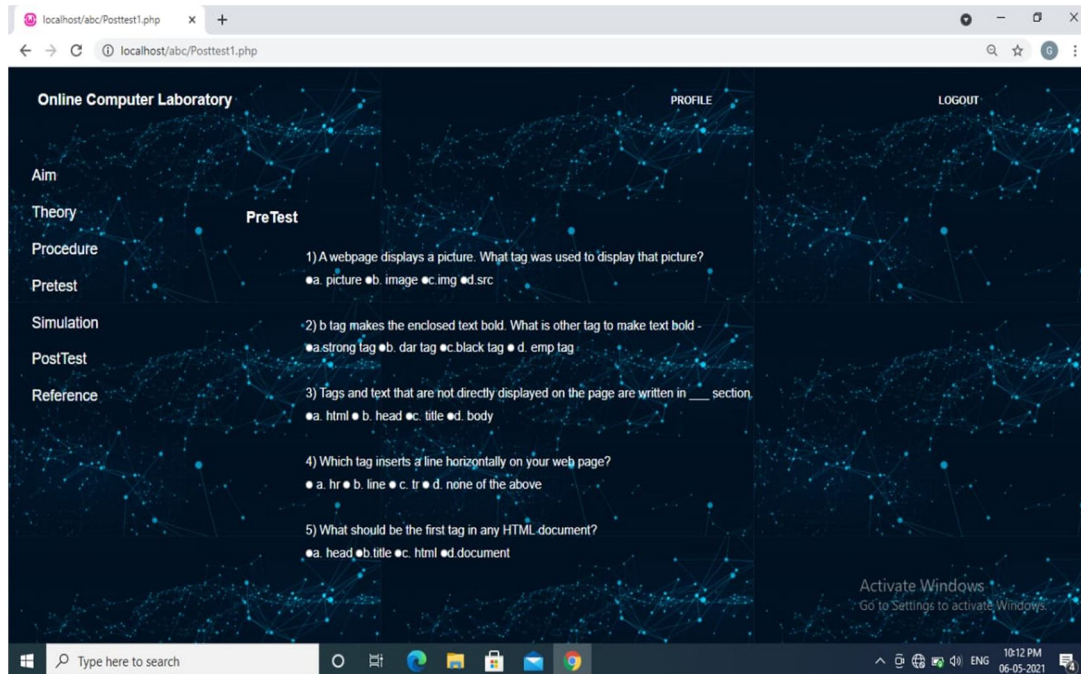
- A. E-Learning platform can be made more interesting and beneficial and the e-learning tools are potential to make a useful change to the field.
- B. The schools and colleges in India must also use Virtual labs to improve the educational standards. The Virtual Labs will be more than a "living" textbook.

## VIII. OUTPUT









## IX. CONCLUSION

Out project or system will t serve as a remedy to the problems and weakness observed in the old system. The system which will be developed will have uniqueness as well as will be effective for the learners because all the material which is provided to the students on the website will be very useful for them and will also help them for self-analyzation as it will contain quiz, related to the topics and the study material like practical's question papers will also help them for there all over growth and there will be a growth observed in their knowledge after the study of provided material, if any exam conducted the students will be able to answer and will score good, lets say this a very efficient, convenient and flexible manner of studying or gaining knowledge.



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