

Online System for Creating and Sharing Interactive Textbooks, Learning Content and Notes

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ABSTRACT—Due to the rapid advancement in multimedia- based technologies, our day to day learning activities have become significantly dependent on them because education has evolved into learner centered system from a teacher centered system. This is possible essentially due to the provision of online courses which provide virtual classroom environment on the internet through various kinds of interactive study materials which can be easily shared with peer groups. So, we are creating an online system through which a user can create interactive study materials in the form of notes or textbooks and share the same as per his or her choice which might come in handy for the other learners ,which makes the learning system smart and effective for students. Unlike the traditional learning system, wherein the teachers and students need to be physically present in the classroom , our system cuts down the unnecessary wastage of time, space and money. Our paper intends to explain the same.

Keywords— Online Sytem, Learning Contents, Widgets.

I. INTRODUCTION

E-Learning has become a huge game changer inn the education sector by connecting the teachers and learners simultaneously from various locations. The E-learning experience can be enhanced by making it more interactive

Interactive learning can done by giving the user the following provisions in the form of widetgs:

- (a) Notes creation facilities
- (b) Images
- (c) Videos
- (d) Content Sharing
- (e) Discussions

We're developing a system for creating and sharing interactive textbooks, learning content and notes. Here a user can create and share various types of interactive study material. The interactive features of textbooks or notes are widgets such as questions, image slider, embedded videos and presentation slides similar to Slideshare. Users can also go through the study material created by other users as well as they can create their own notes and can

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share the same with public. A discussion forum is also provided so that users can have discussion with each other and can clear each other doubts.

II. LITERATURE REVIEW

A. Development and Implementation of E-Learning System in Smart Educational Environment :

Amr Elsaadany and Karim Abbas have explained in their paper[1] about Intelligent web educational application for creating and sharing interactive textbooks, learning contents and notes. This application is used to promote distance learning and creation and sharing of study materials. This application allows access to all the materials for the educational process and makes them electronically available to everyone on the Internet whenever they need and wherever they are.

B. E-Learning Methodologies and Tools :

Oye N.D., Mazleena Shaik and N.A. Lahad have explained in their paper[2] that Web educational application is among the most important explosions propelled by the internet transformation. This allows users to fruitfully gather knowledge and education both by synchronous and asynchronous methodologies to effectively face the need to rapidly acquire up to date know-how within productive environments.

C. Cloud Computing and E-Learning and Their benefits for the Institutions of Higher Learning:

Blanka Klimova and Petra Maresova have elucidated in their paper [3] that at present , the institutions of higher learning attempt to be competitive for their applicants. Therefore, they look for new ways of attracting them. One of the ways is also the efficient use of modern technologies since the young generation entering these institutions is the so-called digital natives who perceive technologies as an inseparable part of their lives.

D. Digital Education: Assessment of e-Learning and m- Learning adoption in Tertiary Institutions in South Africa :

Nureni Ayofe Azeez and Charles Vander Vyver have explained their paper[4] that over the years, academic learning has taken a new dimension from the popular old traditional approach to modern technologically innovative techniques induced by Information and Communication Technology (ICT). This development has undoubtedly improved the entire learning framework and consequently circumvented previously noticed challenges regarding the traditional learning approach.

E. Design an Active E-Learning Website :

Chun – Xia Qi, Hui-Bao Cui, Chang-Yi Li and Yue-Xing Sun have explained in their paper [5] that active learning provides a powerful mechanism to enhance depth of learning and get learners involved with the learning process instead of passively participating in it. And web educational applications get popular with the advances of the Internet. The designs focus on students' activeness and include most active learning function or tools. The central ideas behind active learning represent activities of students should be combined with every learning step

F. What is the importance of different E-learning tools and systems? : An implementer's point of view:

Abdulaziz Omar Alsadhan has explained in his paper [6] about determining the significance of E-learning systems from an implementer's veiwpoint. A comprehensive analysis of existing literary works and consultations with the engineers of E-learning systems was done to identify the 8 commonly used of E-learning systems. A survey

was conducted to evaluate the importance of each of these systems with the help of people working in the e-learning industry. All the systems were tested to determine their importance as far as E-learning programs are concerned. The levels of significance of these systems were resolved based of quantitative techniques.

III. PROPOSED METHODOLOGY

(a) Project Block Diagram

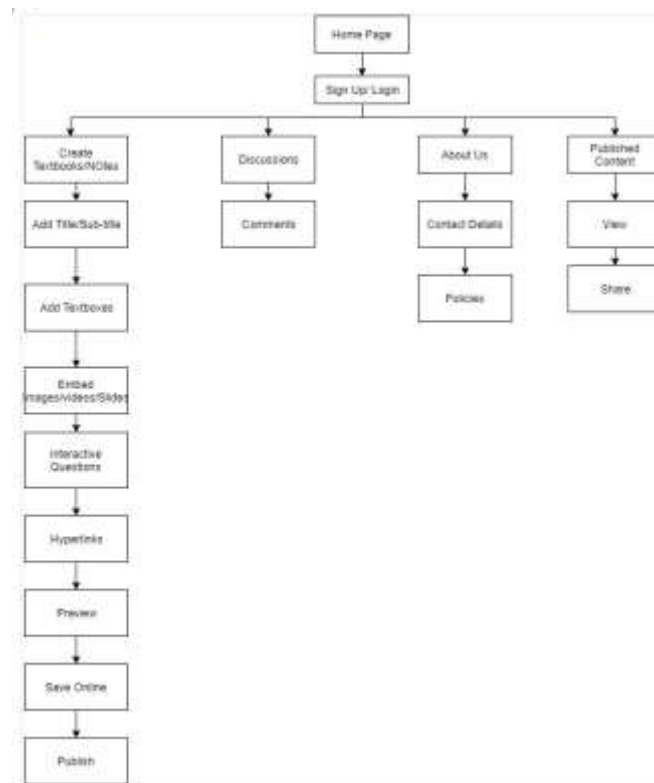


Fig 1.: Block Diagram

In the diagram depicted above, the user would first land on the home page of the website . Wherein, he will be given an option to sign up or log into his account. Upon entering the correct credentials the user will come on the textbook/notes creation page. Here, the user can make notes using the aforementioned widgets such as interactive questions, embed images/videos/slides, add hyperlinks, textboxes, add title or subtitles and can preview it as well. Further, he would be prompted to save the notes/textbook online. After that the user can share the notes using email or Whatsapp or with fellow users in the discussions section. Then a webpage providing all the necessary contact details and usage policies is given. Finally the published content can be viewed and shared.

(b) System Architecture

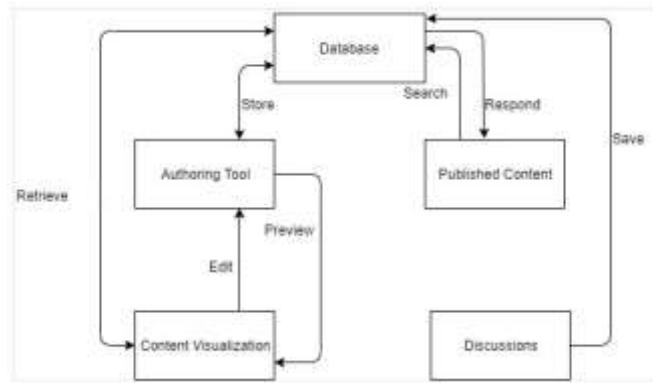


Fig 2 : System Architecture

As the user logs in to the account he will be provided with an authoring tool consisting various text editing options and other widgets. After the editing is done the user can preview all the content edited so far in the content visualization part. If needed he can edit the parts that are not as wanted by going back to the authoring tool again. Once the user is satisfied with the overall appearance of the textbook or notes he can store it in the database . He can retrieve the same content from the database for further editing or for publishing. After the notes are published the fellow users of the website can search for the notes or textbooks or their interest from the database and the website will respond accordingly depending upon the availability of the corresponding content. Also the users can discuss about the textbooks and notes in the discussion section. These discussions will be stored in the database.

(c) Project Flow

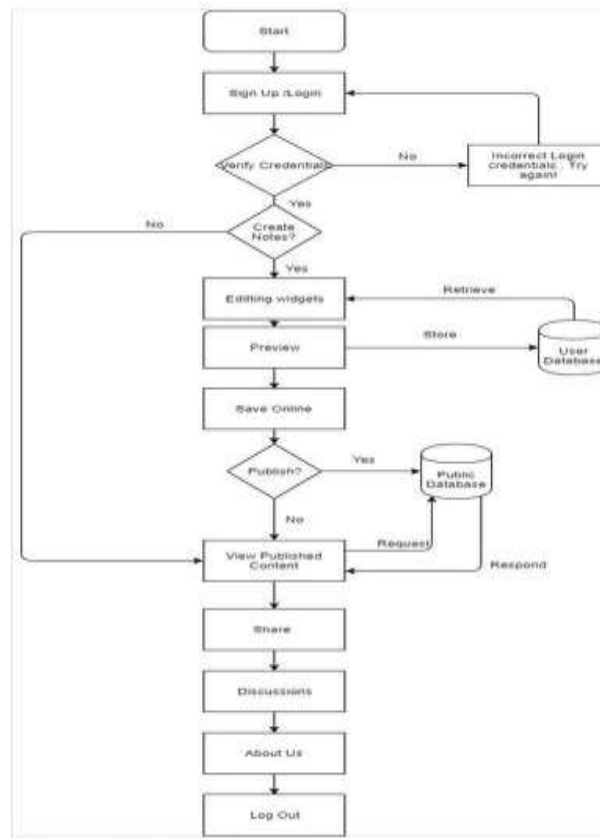


Fig 3: Flow chart

In the diagram depicted above, it starts with a Sign Up / Login page, if the credentials are correct then you will land up on a page where you will be asked for whether you want to create notes, if selected no then you will be redirected to published content if yes then you will be given tools or editing widgets through which you can create notes, preview it as well and save online which will be stored in user data base and can later on be retrieved if one wants to edit the notes again. After all this you can publish your content which will get stored in public database. After landing on view published content user will be able to view published content through public database, can share the same as well and can discuss about it in the discussion forum.

III. OUTPUTS



Fig 4: Home Page

The above figure is that of the home page of the website. Here the user can click on the options provided in the upper right corner and move towards the respective page.

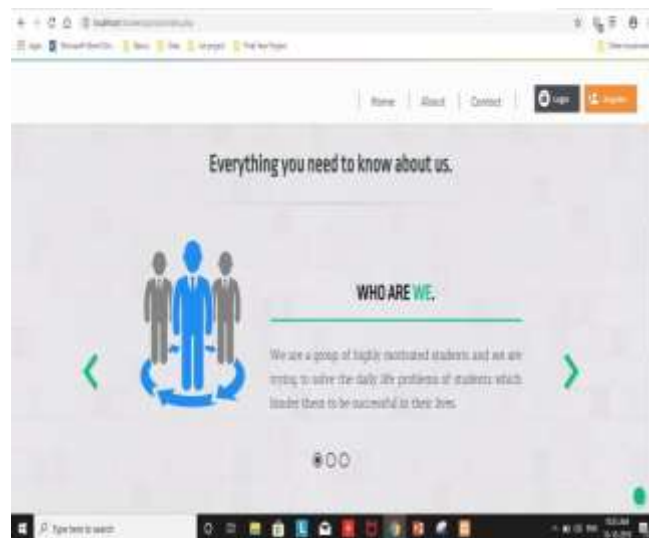


Fig 5: About Us Page

On the 'About Us' page the user will gain information about the website which will help him or her to know the purpose of the system.

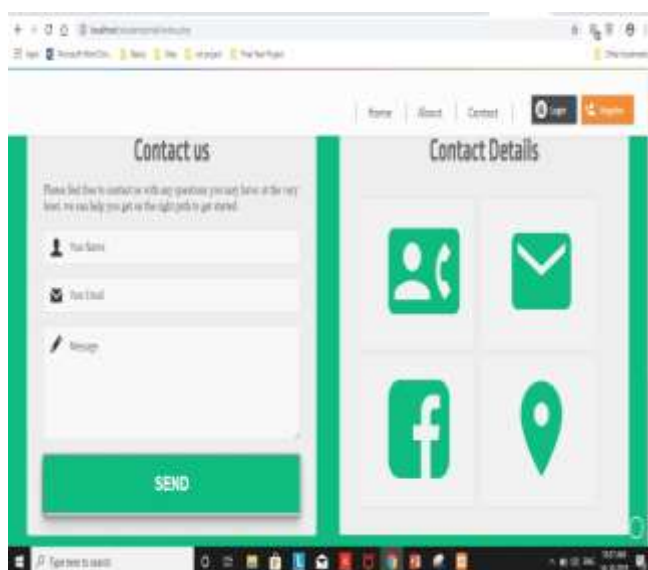


Fig 6: Contact Page

Here, the user is provided with various options to contact us or they can submit their email address to us.

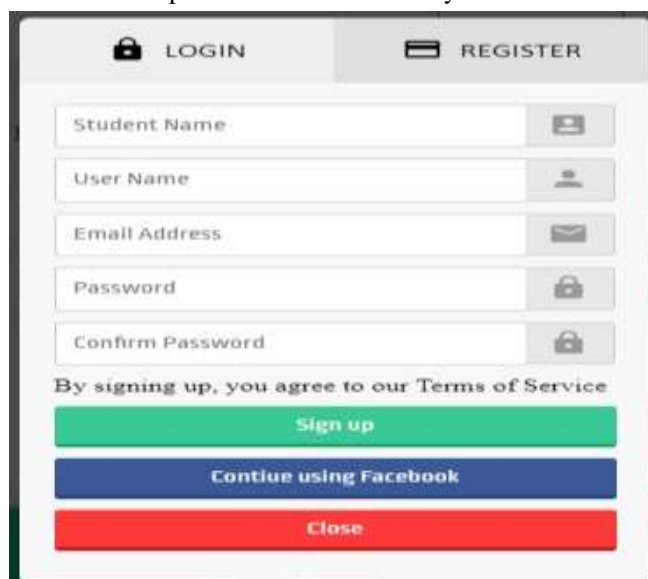


Fig 7: Registration Page

On the registration page the user is asked to fill in his details as asked and set password and user name.

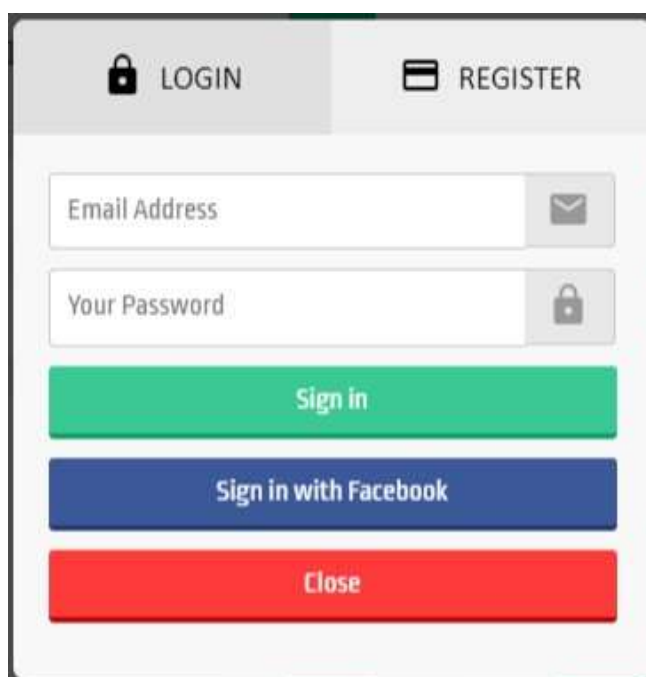


Fig 8: Login Page

In the login page, the user is prompted to submit his or her credentials as set earlier. On verifying the credentials the user is allowed access to the website else denied on failing to submit correct credentials.



Fig 9: User Profile

Here, the user can add his educational details and skills. Also, in the options provided in the left corner lead the user to the authoring tool and the saved notes or textbooks.

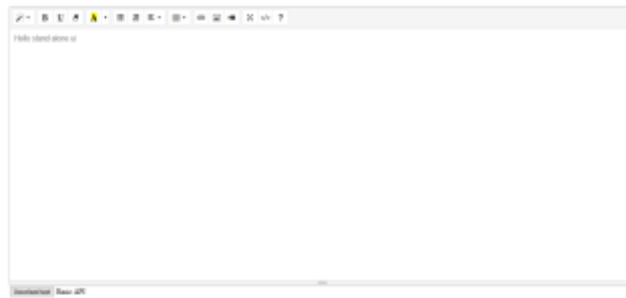


Fig 10: Authoring Tool

In this section, various text editing widgets as well as options to include images and video links have been given.



Fig 11: Options to upload or browse files.



Fig 12: Account Information

On this page, the user can change account settings , view and update account information.

IV. CONCLUSION

To conclude the paper, it can be said that it is necessary to have an interactive online system along with note making and sharing tools, for a more enhanced and easy learning experience. This system makes the learning easier, quick and allows the creation and sharing of contents to summarize the study work in short or in brief. Thus, helping the students to stay more focussed on the material and retain the information in their mind for longer time.

V. ACKNOWLEDGEMENT

No project is ever complete without the guidance of those experts who have already traded this before and hence become master of it and as a result, our leader. So we would like to take this opportunity to take all those individuals who have helped us in visualizing this project.

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