



An Application of Dig-Queper with IBA

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ABSTRACT: In today's education system some universities sends the question papers manually to the colleges, security of queper and sending queper to the colleges is a very lengthy and risky process. Our application emphasis on providing security with implementation of image based authentication for circulating the particular subjects question paper on the day of commencement of exam without permitting to carry out any malpractices. In our application, admin make entry of various colleges and observers within application, registration process for colleges and observers is carried out based on image authentication that is before completing the registration process they need to select the image coordinator points of any order along with username and password being provided, where questions are stored into database in encrypted form. Later, login by colleges and observers, both need to login to application at a time with their username and password along with clicking the same point in of the image coordinator points to download the specific quepers on that day of commencement of exam, quepers are available in application as in decrypted form. The research will describe our experience and future work especially helped for the university and students.

KEYWORDS: Quepers, University, IBA

I. INTRODUCTION

Nowadays many of the universities sends question papers to colleges manually but in this way leaking of question paper before the examination is a very big problem.

After announcing the examination date, all colleges must send the combinations of subjects and strength of students those who are applied to attend the examination, after only university head order to prepare the question papers in a particular format. When preparing the queper they are going to prepare 3 sets of queper per subject and those 3 sets are printed. After preparing the question papers it will be ready to send.

During sending this, they can face many problems like, when question papers are prepared those 3 sets of queper will be packed and sealed with security under the guidance of register, after sealed that packets they will be locked in a secrete godown. Only 1 set of papers will be sent to the colleges before 4 days of the examination with university supervisors. After it will send to the colleges the principal should receive the papers with university squad with some acknowledgment and locked those papers in college rooms, when they send the paper they can send at least two subjects paper, after completing that exams again the same procedure will continue for another subject paper.

In the time of examination those sealed packets are opened by college principal signature with university squad signature before 10 minutes of the examination, then only it will be distributed to the students. Sometimes they send excess amount of papers and sometimes they send minimum papers comparing to the number of students.

University has an immense task of preparing the exam time table for prescribed courses to be conducted on specific days at colleges. Once the time table is set, at the same time university has a job to prepare question papers of particular subjects and most importantly university needs to take care in circulating the question papers safely to colleges on exam conducting days. Universities need to be very cautious in circulating papers safely. To provide security in circulation of papers, we have proposed a web application entitled as "DIG-QUEPER" which contributes to university helping them to enhance circulation of question papers very successfully.



Our application major objective is to lend a security in distribution of question papers safely within colleges. As project title says that circulation of DIG-QUEPER is carried out using a unique feature called "Image Based Authentication" shortly called as IBA. IBA is a eccentric feature where every user get registered within the application through the image as basic authentication. While user being registered within application through image based.

Our application has utilized the concept of IBA feature to attain the queper circulation effectively. Our application has mainly consists of an admin, his responsibility is very vast and he is playing a major role in our application. An admin firstly adds the colleges that come under that particular university, secondly admin adds the observers who are also called as sitting squad for particular college. Admin needs to handle all the functioning of universities including maintenance of colleges, students, exam time table of various prescribed courses and many more....

Admin makes entry of both colleges and observers into our application. While registering the college, when college makes entry of its college details within application, a mail is sent to their respective college principal consisting of username and password along with the application link to them for further registration. Respective college principal needs to do further registration process based on the username and password sent via mail and by clicking onto the link provided. College principal needs to login to the link provided using given username and password and when registration process is carried out when clicked on register button, there will be displayed five images on application screen, college principal need to select a single point in every five images, once image is clicked on any order, image coordinator points are displayed, then the college principal gets registered within application. Registration is carried out based on IBA feature.

Admin also makes an entry of observers within application. Registration process for observers also remains same as that of college principals. While registering an observer, admin also allocate observers to specific colleges. Observers also get an email containing username, passwords and a link for registering by entering his details. Further, Observers open link and enter the given username and password and carry out registration by selecting image coordinator points of selected 5 images of any order and gets registered within our application successfully. Here both registration of colleges and observers follow IBA feature effectively and is a unique concept implemented in our project.

Admin has major tasks of entering subject codes of a various subjects under prescribed courses into application. Later, admin entries the exam time table of subjects along with the subject codes based on morning or afternoon sessions along with date and time for endorsed courses within application. Entered scheduled details of exam time table is viewed in application so that this exam time table is circulated to various colleges to conduct exams in their respective colleges.

Furthermost, admin adds the 3 paper setters within application, where the paper setters gets login to the application through the username and password being sent to them via provided email. Paper setters gets into the application by entering the given username and password and has a job of preparing the question paper for various subjects of particular course under specific queper format. In this 3 paper setters can prepare a separate queper of same subject.

Paper setter after his login to the application, he is going to upload the question paper format based on this he has to design the question papers. Once format of queper is added, paper setter is going to make entry of questions into the application based on the format entered into the application. The questions entered into application will be stored into the database in the encrypted form. Database containing encrypted form of questions is an also a key feature of our application. The question paper stored in the database can be viewed and to make any modification like adding or deleting questions from question paper is permitted within application.

College principal and observers who got registered into our application needs login to the application for accessing the specific subjects quepers of a course on the day of commencement of that subject in the college. Our application implemented a concept for logging of both college principal and observers. To download the subjects queper from application, both the college principal and observers need to login to the application at a time with the given username and password and also must click the same point in any of the five image coordinator points being selected by both college principal and observers in the same which was entered during their registration process into the application to complete login process for downloading the specific question papers.



Once both college principal and observers of that specific college login to the application, they can download the specific subjects queper from application within the time slot provided in application. On the day of commencement of that particular subject exam, quepers will be available on the application till that particular session time slot. During the session time slot colleges can download the subjects quepers from website before commencement of exam. Quepers which are available on the day of exam, will be in the decrypted form. Colleges will download the decrypted form of question papers from application before session gets time out. Once the session gets time out, question papers will not be available in the application for downloading. While downloading the queper, nobody can know, even queper setter also don't know which paper will be downloading, the paper will be generated randomly, This is the main advantage of project.

Admin will get the list of all colleges which have downloaded the subjects question papers during that subject exam being carried out at their respective colleges on that thus helping them to have complete details effectively.

Our application "DIG-QUEPER" is a web application being designed in a such way that it is an user friendly application helping universities to circulate the question papers to various colleges that come under that university for conducting subjects exams on the specific day provided the time table by the university for conducting exams for the prescribed courses. Our application is being implemented the concept of encryption and decryption mechanisms to keep the subjects question paper confidential and safe thus reducing the risk, moreover cost and of malpractices carried out during exam conduction. Most importantly, application incorporates the concept of IBA which is providing authentication to the colleges and observers based on image coordinators points. IBA is a key feature of our application which provides authentication to be carried out safely and this in turn help the university to maintain and to carry out exams smoothly and effectively at colleges.

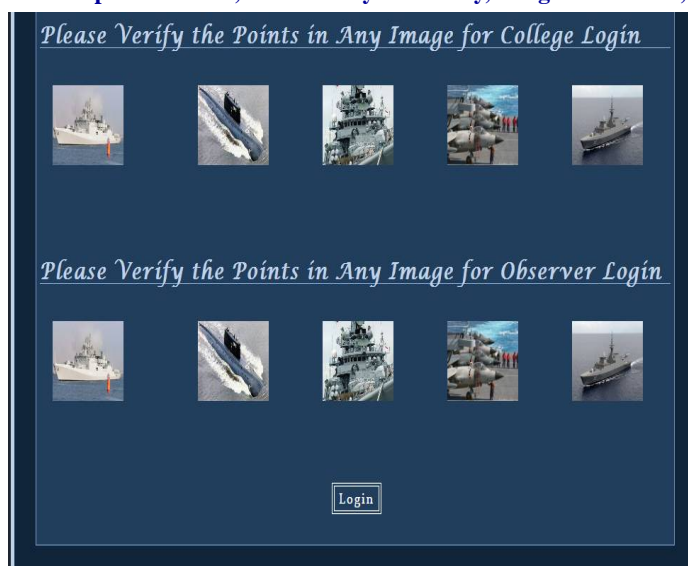
Our application designed for the use of university, thus application can be implemented at the University for having circulation of question papers within colleges safely and at minimum time and can avoid various malpractices being carried out during exam session at colleges.

II. IBA TECHNOLOGY

User authentication is one of the most important procedures required to access secure and confidential data. Authentication of users is usually achieved through text based password. Attackers through social engineering technology easily obtain the text based password of a user. In addition IBA is more intuitive and user friendly and we are using ccp here.

Cued Click Point (CCP) in this method user selects one point per image for five images. The interface displays only one image at a time, the image is replaced by the next image as soon as a user selects a click point. The system determines the next image to display based on the user's click-point on the current image. It now presents a one to-one cued recall scenario where each image triggers the user's memory of the one click-point on that image [2]. Secondly, if a user enters an incorrect click-point during login, the next image displayed will also be wrong.

This research presents and analyzes a user authentication technology but in our project, we are using images by clicking some points in the particular image, and the data will be more secure. In this image based authentication, when observer and college principal are going to register we are going to use 5 images and wants to click one of the point in every image along with their username and password. Again the same IBA is used when both principal and observer were going to login the registered page at a time they must click same point in any of those 5 images has previously which point they are clicked in those images along with their username and password.



III. RELATED WORK

Encryption and Decryption of the Data:

In [2,3,4,5] database encryption mechanism could provide the following security. Encryption mechanism can prevent users from obtaining data in an unauthorized manner. Encryption mechanism can verify the authentic origin of a data item. Encryption mechanism also prevents from leaking information in a database when storage mediums, such as disks, CD-ROM, and tapes, are lost. We are using encryption algorithm, "Reverse Encryption Algorithm (REA)", because of its simplicity and efficiency. Reverse Encryption Algorithm limits the added time cost for encryption and decryption.

In this section they provide a comprehensive yet concise algorithm. This Reverse Encryption Algorithm is a symmetric stream cipher that can be effectively used for encryption of data. It takes a variable-length key. The REA algorithm encipherment and decipherment consists of the same operations, except the two operations: 1) added the keys to the text in the encipherment and removed the keys from the text in the decipherment. 2) Executed divide operation on the text by 4 in the encipherment and executed multiple operation on the text by 4 in the decipherment. And execute divide operation by 4 on the text to narrow the range domain of the ASCII code table at converting the text [6].

IV. CONCLUSION

In this competitive world, faster execution, user satisfaction timely and accurate information have become valuable pre-requisite. This software is developed with the fact in mind, that web based application, are becoming more and more popular.

Our application "Dig-Queper" is a web application developed using, which is developed for the use by the university in circulating the question papers to various colleges which are under that university safely without any risks. This application designed in a way as for helping university for question paper circulation by implementing unique feature called image based authentication. Our application also incorporates the concept of encryption and decryption mechanism avoiding the malpractices to be carried out during downloading the question papers at the colleges on the day of exam.

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