

Designing a Secure Exam Management System

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Abstract- Today there are two forms of training and education. Distance education and Conventional education. It can be used to enhance the overall learning experience of our students and teachers. However, enforcing exam security in open environments where every student has her or his own tablet or mobile devices connected to a Wi-Fi network through which it is further connected to the Internet can be one of the most challenging tasks. This paper discusses the background of mobile learning and how it can be used to enhance the whole eLearning system and introduces the subject of mobile learning for education purposes. The paper also highlights the benefits and future challenges of mobile learning in our educational environments in both online and offline mode. Also we used NPL for verifying the answers.

Index Terms- M-Learning, E-Learning, SEMS, LMS.

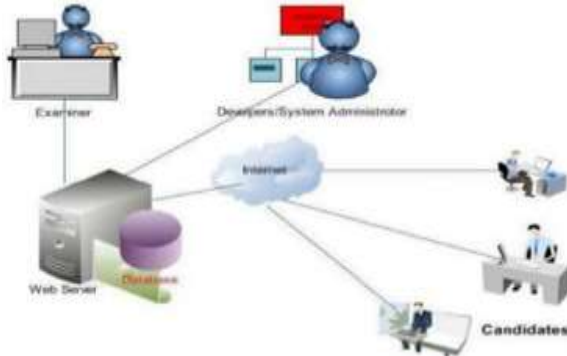
1. INTRODUCTION

One definition of Mobile learning or “M-Learning “is any kind of learning that happens once the learner at a set, preset location, or learning that happens once the learner takes advantage of the training opportunities offered by mobile technologies (MOBIlearn., 2003). In different words, with the usage of mobile devices, learners will learn at any place and at any time. Mobile devices are rather more within your means than desktop computers, and net access is cheaper as compared to. Currently, the pill PCs allows mobile net access with equal or a lot of practicality than desktop computers. The term mobile learning or briefly M-Learning refers to the use of mobile and hand-held IT devices, like mobile telephones, laptops, PDAs and pill computer technologies, in coaching, learning and teaching. Some students could use their mobile devices in foreign language categories. Different students could use their mobile cameras to photograph blackboards,

PowerPoint or the other basic as well as important documents.

Therefore, mobile devices are capable explanatory platforms, because of the actual fact that the doors of mobile phone technology are open to students and supply adequate support for normal net technologies. Victimization upscale strategies and techniques unified in M- learning, facilitate in creating the training of our students with a lot of attention-grabbing and interaction .M-learning is cost-effective that helps students to be told a lot. M-learning systems integrated into existing E-learning systems makes it straightforward to remain involved with the latest advances created in teaching analysis. Mobile and wireless technologies are used in M-learning technique for learning and education purpose. M-learning helps a learner to learn the experience which is available in environment. It is also possible to enable learners to participate in learning activities without the traditional place and time restrictions.

M-learning supports performance with easy access to information, which can directly impact student’s performance in a learning environment, facilitating their education. M-learning manages different learning requirements, where it is ideally adapted for allowing students to get knowledge at their own speed. M-learning enhances two-way interaction where it supports direct communication between students and their respective teachers. M-learning is self-motivated, self-disciplined that support studying anywhere and at any time. There are different researches has been made based on the requirement design, architecture, m-learning model and so on. Such applications are able to support the communication of the user or someone else who uses app or system on mobile devices or personal computer.



1.1 Fig1 Introduction to LAN

II. EXISTING SYSTEM

The examiner Engine fixed in Moodle is not built based on Service Oriented Architecture. It is implemented as a bulk of PHP code which has to be access through standard web browsers that are a bit slow on mobile devices and cannot address the exam security issues that exist in m- learning environment. Moodbile services extension to Moodle does not touch the Moodle's Quiz Engine. Thus, we need to develop a new Quiz Engine that can be deployed as a service learning application, so that its services can be consumed by a mobile application designed to cater to m- learning specific security requirements. As well, it should be Integral table with Moodle/Moodbile in order to have a complete system which suites the learning environment and addresses all of its security issues.

of all the detailed descriptions of the client and the whole details of services offered by the client organization.

III. PROPOSED SYSTEM

This aims to recognize various vulnerabilities that may violate assessment safety in M-learning setting and to deal the suitable security armed forces and countermeasures that can be put in put to make sure exam safety. It also aims to integrate the resultant secure exam system with an obtainable, open source and widely conventional Learning Management System (LMS) and its service extension to the learning environment, namely "the Moodbile Project". To design a Secure Exam Management System (SEMS) that meets the different security requirements of m- learning environments and to

integrate it with the current Moodle/Mobile platform. This will result in a complete LMS that is both equipped with secure exam services and suitable for m- learning. Our intention of integrating SEMS with a well-known LMS such as Moodle is so to get the benefits of Moodle's readymade services in other learning aspects such as course material administration, documentation, etc. which contain been experience and valued for the last 15 years. However, the proposed SEMS can also work as separate secure exam management system for web environment without integration with Moodle. The system highlights the benefits and future challenges of mobile learning in our educational environments in both online and offline mode. We used NPL for verifying the answers.

IV. FUTURE ENHANCEMENTS

There is an inconvenience for the organizer as he has to manually write down the information of the guests by the time they attend it. For this we can develop an android application in the future which can be used to register the attendance of the guests directly to the database and can be easily accessed.

V. SYSTEM ARCHITECTURE

Stepwise working of the system: -

Step1: In this registration phase every candidate or user has to register themselves in order to give an exam.

Step2: After registration the will get a QR code image which is encrypted information of user information. The same information will be stored at the server side for admin/ examiner record.

The secret key is send to admin record, which is used for decryption purpose.

Step3: User will bring that QR code image while coming for exam then, admin. Examiner will scan that QR code image to check whether authenticated candidate has come for exam or not, the verification process done by that user information stored on server or examiner record, upon verified the admin will send the question paper 'Q' to user account.

Step 4: User will login to system.

Step 5: Student will attempt the exam.

Step 6: While ongoing exam, if the student tries to cheat a snapshot of the screen will be sent to the student's as well as examiner's mail.

Step 7: After the successfully completion of the exam the result will be send to the student's mail as well as examiner's mail.

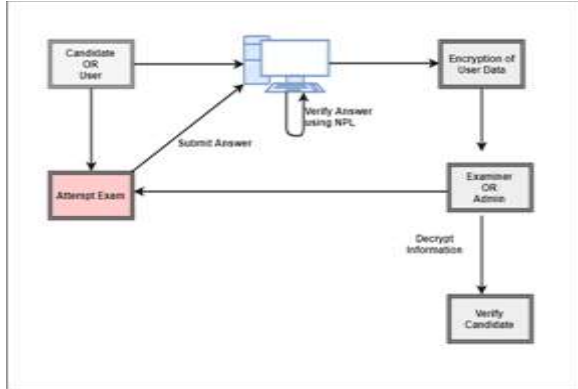


Fig 2:Architecture Diagram

VI. HARDWARE REQUIREMENT

Processor	Intel i3
RAM	4GB
Hard Disk	100GB

VII. SOFTWARE REQUIREMENT

Operating System	Ubuntu 14.04/Windows 7
IDE	Eclipse
Programming Language	Java
Database	MySql
Web Server	Apache Tomcat 7

VIII. CONCLUSION

Secure exam management system is a Web-Application provides facility to conduct online examination World –Wide. It saves time as it allows number of students give the exam at a time securely. The project was successfully designed and is tested for accuracy, quality and security. The system highlights the benefits and future challenges of

mobile learning in our educational environments in both online and offline mod

The learner includes portable, institutional, home, kids and adult users and also the form of learning environments includes networked, internet-based, distance, cooperative, synchronous and asynchronous can arise the interest of the new generation of distance learning. The advantages and also the future challenges of Learning in our instructional environments. Finally, our learners, students and academics should to be ready for consecutive generation of coaching and learning.

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