A Virtual Android based Learning Management System for Developing Smart Cities

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Abstract— In this paper, we build and android based Learning Management System that helps students to interactively learn a new course. This android application also allows user/student to take quiz on the course he/she selected, which will help them to test their skill and improve their skill and knowledge. In the current education system, fresher students are facing many problems, that where to get training in which technology. So, for those students can get benefited by learning C, C++, JAVA, Python, PHP, ASP.NET and aptitude test & personality development related training for the betterment of their future by providing them Study material and video lectures. After the LMS is successfully created a positive learning environment through the high level communicative exchanges and instructional purposes as evident in the high frequency of exchanges recorded in the explanatory interactive dimension. The interaction is highly student initiated and mostly directed to the tutor. However, it appears that the interactions observed in this study lack the desired depth imperative for a rich and active collaborative environment that creates meaningful learning experiences among students. In future, this learning management system app will contain discussion forum through which students can interact with each other and discuss about the topics and share their views.

Key words: Android, Online, Learning Management System, Aptitude Test & Personality Development Related Training

I. INTRODUCTION

LMS is an android based Learning Management System that helps students to interactively learn a new course. This android application also allows user/student to take quiz on the course he/she selected, which will help them to test their skill and improve their skill and knowledge [1]. Learning Management System is a broad term used to describe software tools designed to manage user learning interventions and provide access to online learning services for students, teacher, and administrator [2]. A software system that allows the development and delivery of educational courses using the Internet as a delivery system [3]. A Learning Management System (LMS) is a Software application for the administration, documentation, tracking, reporting and delivery of electronic educational technology (also called e-learning) courses or training programs [4].

II. LITERATURE REVIEW

A learning management system is seen as a software platform which automates many of the processes associated with learning. It is a management software package enabling the delivery of learning content, resources and activities and also handles the associated administration tasks [5]. With the extraordinary increase in information, increased student variety, new learning theories and ready access to the internet, teachers in today's classrooms are being presented with an opportunity to transform the learning in their classrooms from a traditional transmission model to a student-centered model, where students are more responsible for their own learning. Many of the papers reviewed suggest that in order to do this, schools need to adopt a student-centered approach where students can become adept at finding, analyzing, organizing, evaluating, internalizing and presenting new information [6]. LMS can provide unprecedented opportunities for this to happen. Computers can support knowledge construction, learning-by-doing, conversing and reflection [7]. But managing all this in a student-centric environment is a complex task that might be made more manageable by the implementation of a Learning Management System [8].

III. OBJECTIVES

In current educational system fresher are facing many problems that where to get training and in which technology. So for the betterment of those our LMS provides C, C++, JAVA, ASP.NET, HTML, CSS, Java Script, Python, and aptitude test, personality development and skill development related training for the betterment of future of student by providing them study material and video lectures.

IV. PROPOSED SMART LEARNING MANAGEMENT SYSTEM

A. What do you mean by smart?

For learner, 'smart' refers to wisdom and intelligence. Wisdom is defined as the ability to use your knowledge and experience to make good decisions and judgments. Wisdom can be achieved by three methods: reflection (the noblest), imitation (the easiest) and experience (the bitterest). In addition, the intelligence is the ability to solve problems that are valuable in one or more cultural settings. According to the concepts of wisdom and intelligence, we comprehend that smart for learner means an ability enabling people to think quickly and cleverly in different situations.

B. What do you mean by smart learners?

Learning is conventionally defined as the process of acquiring competence and understanding. It results in a new ability to do something, and an understanding of something that was previously not understood. Competence is sometimes described in terms of possessing specific skills, understanding in terms of possessing specific knowledge. The 21st century demand skills and competence from people in order to function and live effectively at work and leisure time. Education needs to prepare workforce for the demand. So, the goal of smart education is to foster smart learners to meet the needs of the work and life in the 21st century.

C. Smart Learning

For educational technology, 'smart' refers to accomplish its purpose effectively and efficiently. The technology includes the hardware and software. For hardware, 'smart' refers to the smart device much smaller, more portable and affordable. It is effective to support learner take place the learning anytime and anywhere with smart devices. And some hardware has functions to recognize and collect the learning data to engage the learner into contextual and seamless learning. For software, 'smart' refers to adaptive and flexible. It is efficient to carry out personalized learning for learner according to their personal difference, with adaptive learning technologies. Smart educational environment can provide tailored and personalized learning service to engage the learner into effective, efficient and meaningful learning and the open system architecture is required to better support the integration of increasing interfaces, smart devices and different learning data.

D. Proposed System Architecture

System architecture is a conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system. A system architecture can comprise system components that will work together to implement the overall system.

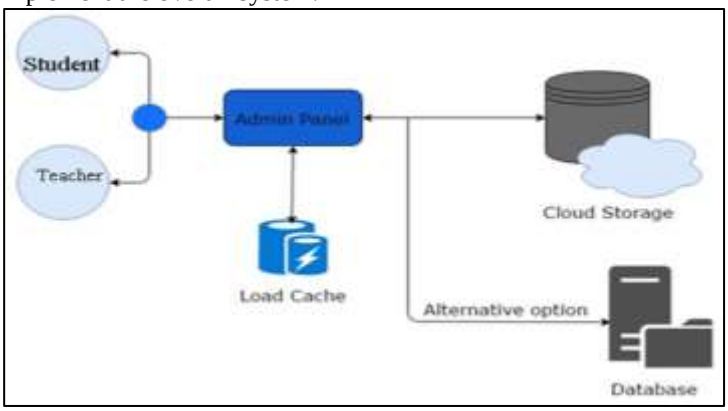

Fig. 1: Proposed System Architecture

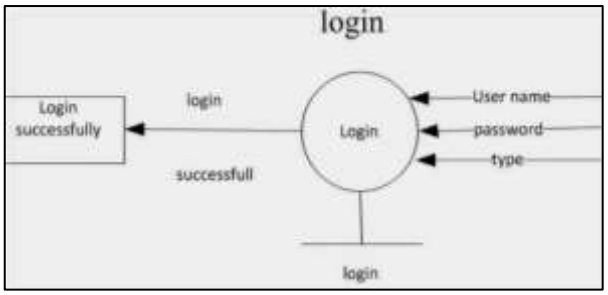

Fig. 2: Project Framework

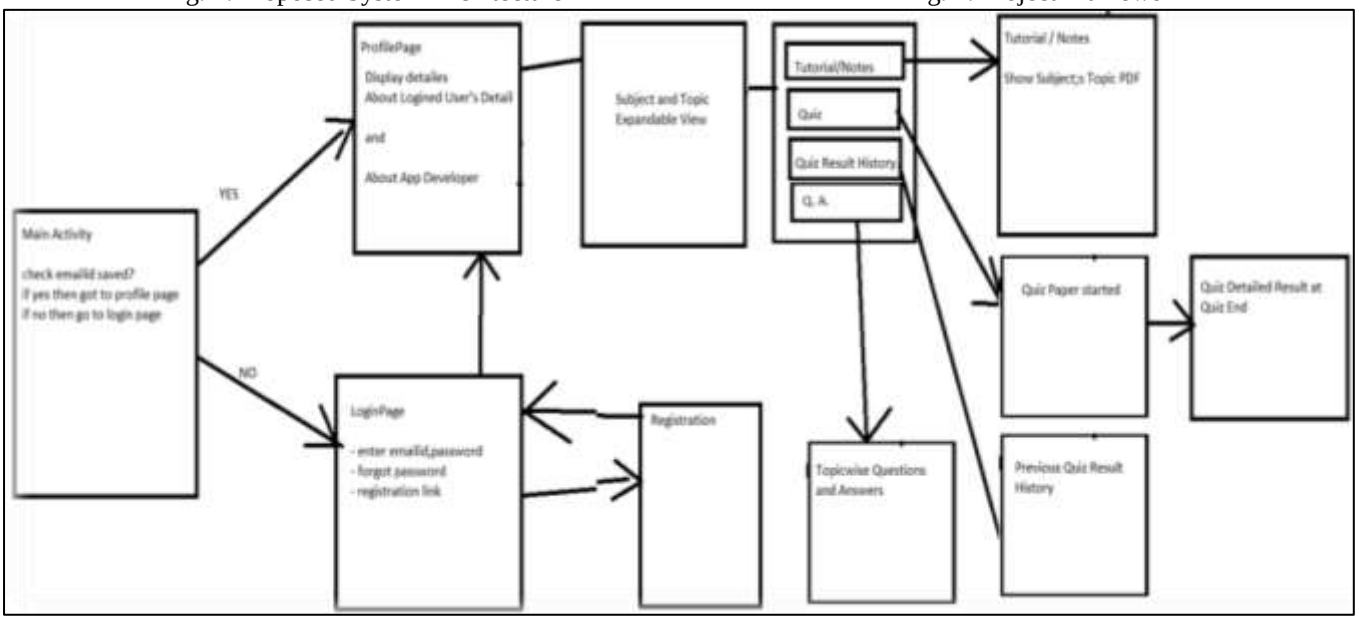

Fig. 3: Internals of proposed LMS

V. SCREEN DESIGNS

Here we will show some system interfaces that have been designed, and named by its function in the system.

A. Subject List Activity

This activity of LMS android app contains the list of all the subjects. After clicking on particular technology tutorials, quiz, Q&A, quiz history can be opened.

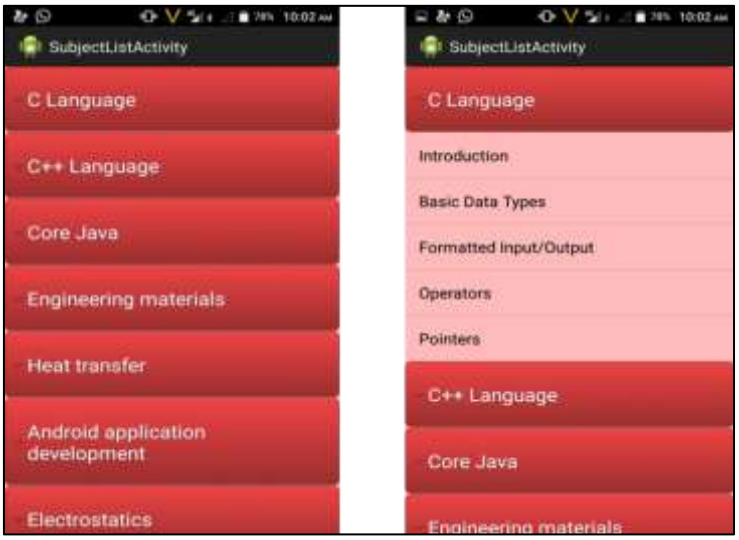

Fig. 4: Subject List Activity

B. Start Paper Activity

This activity contains four buttons Start Activity, Tutorials, Quiz Result History, and Questions & Answers. This activity is opened after clicking on a particular topic from a particular technology.

Fig. 5: Start Paper Activity

C. Tutorial Activity

This activity contains tutorials on a particular topic from a particular technology

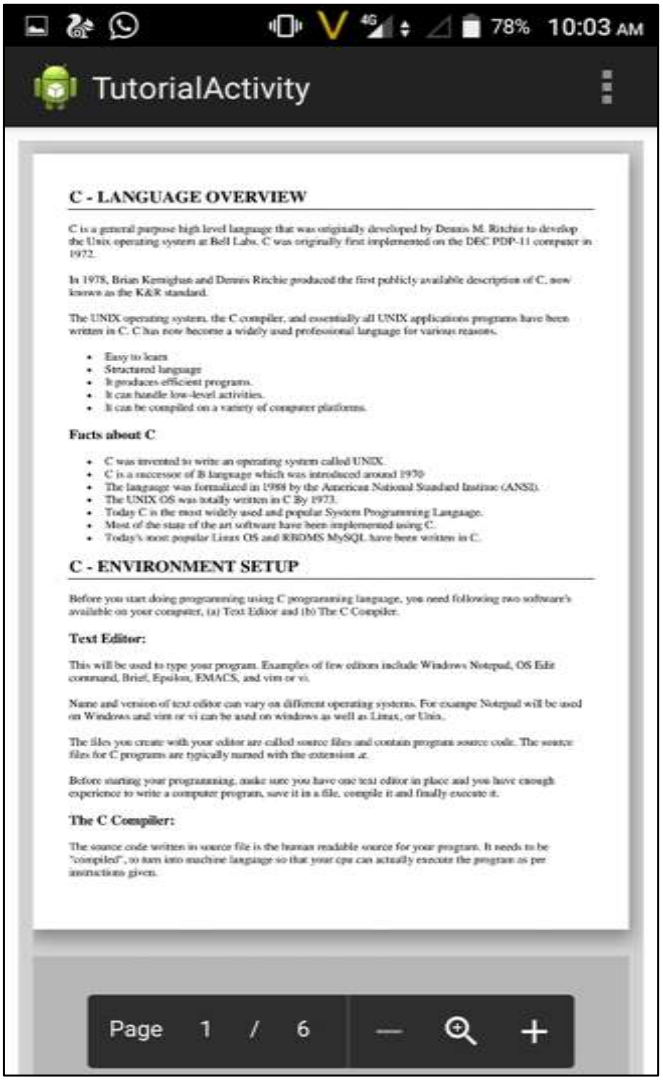

Fig. 6: Tutorial Activity

D. Test Paper Activity

After clicking on quiz from particular technology on particular topic this activity can e opened to perform quiz.In this test every questions will be a random questions and after completing test the will be shown hand to hand and will be saved in the history with the percentage.

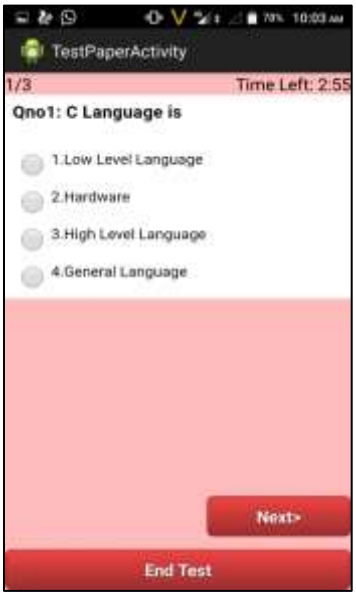

Fig. 7: Test Paper Activity

E. Result Activity

After performing quiz this activity shows the result with the correct answer and the answer given by the student.

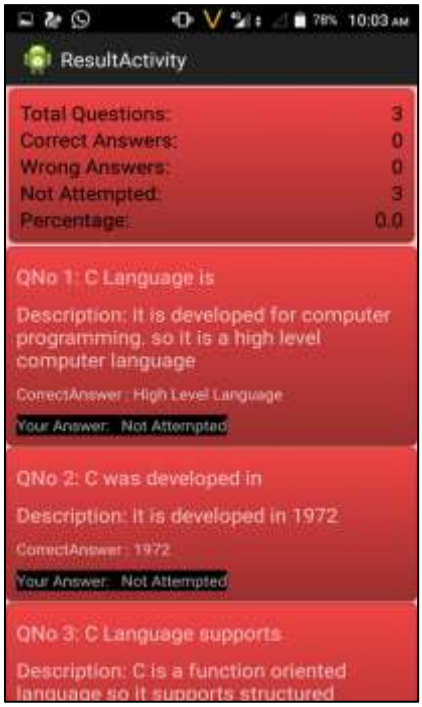

Fig. 8: Result Activity

VI. CONCLUSION

This paper presents the LMS is successfully created a positive learning environment through the high level communicative exchanges and instructional purposes as evident in the high frequency of exchanges recorded in the explanatory interactive dimension. This paper proposes a structural framework for successful application of smart learning environments in the context of smart city governance. It reflects on selected challenges and proposes some future directions.

Open issues.

There are several open issues that need to be further investigated in the current smart technical environment.

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