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Theoretical Aspects of Learning Software State and Development Trends

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Annotation: In this article, students are provided with information about the preparation of the project "Analysis of LMS systems" for the course "Informatics and Information Technology", types of LMS systems, standards of LMS systems, advantages and functions of LMS systems, methods of their use, which universities use LMS systems, Analyzed data on sites created on the basis of LMS systems. This article analyzes LMS systems and focuses on solving learning management problems using the Moodle platform, which is the most popular of them.

Keywords: informatics, ICT, LMS, LLC, information, technology, competence, project, method, analysis, resource, tool, teacher, specialist, education, process, institution, science, system.

I. Introduction

The development of computerization and the use of information and communication technologies is one of the priorities for Uzbekistan. Today, it is necessary to form a national informatization system, the widespread use of modern information technologies in all spheres of the economy and society, the creation of conditions for access to the global information society and access to global information resources. Recognizing the importance of ICT in the development of the state, the Government of the Republic makes appropriate decisions on the widespread use of information technologies in all spheres of society and the intensification of the development of the information society.

Consequently, it is necessary to effectively explore the conditions and opportunities created, explore new topics and disciplines, and develop and implement new teaching methods and technologies.

II. Literature review

Sydney Pressy invented the first teaching machine in 1924. This device was similar to a typewriter and could handle many types of questions.

In 1929, ME Lazerte invented the Problem Cilender mechanical device. This device presents the problem to the student and explores the solution steps to be performed by the students.

Discovered by Cordon Pasque and Robin McKinnon_Wood, SAKI is an adaptive learning device that automatically increases the difficulty of questions based on student level.

Urbana-Campaign ILLInois University has developed the PLATO (Logic Programming for Automated Learning Operations) system. This system has a unique impact on different users, including authors and instructors who create course materials, as well as users who completed those materials.

ARPANET was created in 1969 by a commission of the US Department of Defense and led to the creation of today's World Wide Web.

In 1970, Hewlett-Packard introduced the first personal computer, enabling e-learning to be created on a large scale.

In 1982, TCP / IP was introduced. This led to the creation of an online learning system.

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In 2002, the free open source **Moodle LMS** internal networking system was introduced **to the** public .

In 2004, the SCORM 2004 standard was introduced to the public. These are the same standards that are used in today's LMS systems.

In 2005, NACON Consulting introduced distance learning to the public. Virtual On Demand could work with software and a web browser. It was later used to support IT personnel in the army.

In 2008, the first open source platform called Eucalyptus was introduced. Launched on the basis of cloud-based AVS API technology. One of the brightest explosions in cloud computing has been the LMS, which is not installed on the Internet.

Many modern LMS systems today are cloud-based, freeing businesses from the hassle of running and booting at home.

III. Analysis

In the 21st century, distance education is one of the most effective ways to train qualified personnel. It is not news that today distance learning attracts the attention of students not only from other countries, but also from our country.

Until recently, this type of training was not used in many countries due to the underdevelopment of information and telecommunication technologies in the country. But these days, online education is developing rapidly even in Uzbekistan. It is generally assumed that all e-learning phrases are taught electronically over the Internet or intranet. E-learning software ranges from simple HTML pages to complex LMS or LSMS (Learning Content Management System).

In addition to the content part of e-learning, it also includes the organizational part. The e-learning function is insufficient to implement the course format in various electronic libraries.

In addition to the usual functions, to familiarize students and teachers with the content of the curriculum, control the use of educational resources, individual audience management, organize interaction with the teacher, reporting, etc.

These functions realize education management by further expanding the e-learning platform, including the administration of the traditional learning process.

What is LMS? This system helps each student to work with the materials, expanding his personal capabilities. Provides teachers with the necessary equipment to organize the curriculum, organize reports on the effectiveness of teaching, establish collaboration between the group and the teacher. The student gets access to the educational portal from the LMS, which allows him to act as a referral point, deliver the content of the entire educational process, choose the desired educational project based on assessment and testing, and use additional materials. on special links.

The administrative functions of the LMS include several areas. Student management is control over the use of the system and the educational process, access to the system. The LMS also includes elements of the educational process (workshops, labs, tests, links to external materials).

In addition, the LMS is responsible for the use and distribution of educational content. These tasks include: the correct organization of the search system for the course, the distribution of courses according to their potential, the development of private learning paths, other target mechanisms for the content of training, the teacher. Synchronous and accurate calculation of the potential of users in e-learning.

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The LMS report includes: the effectiveness of user training, the application of the knowledge gained in practice, etc.

When teaching students to organize the educational process using LMS systems, we must first of all develop their ability to work on the Internet and local computer networks.

Popular open online courses.

Over the past two centuries, the knowledge being studied has expanded to such an extent that we are forced to call former scientists encyclopedists, scientists-encyclopedias. Why? Now he could never study astronomy, geography, physics, chemistry, medicine, mathematics, philosophy, and so on.

Along with the fundamental sciences, knowledge about the humanities, humanity and society has expanded. Everything is aimed only at the development of mankind, its convenience, and the lightening of its burden.

The XXI century can be safely called the century of technologies and related knowledge. The century that expanded the types, methods and methods of studying knowledge. Several prestigious universities like Stanford University and Massachusetts Institute of Technology (MIT) offer free online courses. For the first time, as an experiment, these courses are open to students from all over the world. Interestingly, these courses are completely free and those who successfully complete them are awarded a diploma (certificate) (some courses provide a free certificate, but in many courses you can get a certificate for a fee). An electronic system called Open Sourceware, which provides free and open distribution of educational materials over the Internet, was created by MTI ten years ago. Since then, hundreds of other colleges and universities have posted free and open source educational materials on the Internet. Today, MTI and Stanford University have decided to take this practice to the next level.

They now provide not only course materials for free, but the course itself. At Stanford, two computer scientists first ran a free online course called Introduction to Artificial Intelligence.

In total, over 160,000 students from over 190 countries have enrolled in the course. With the help of volunteers, the course materials were translated into 44 languages in a short time. 23,000 participants successfully completed the course materials, passed exams and received a certificate of completion.

The above systems and literature were analyzed and the following cluster analysis of software products was carried out.

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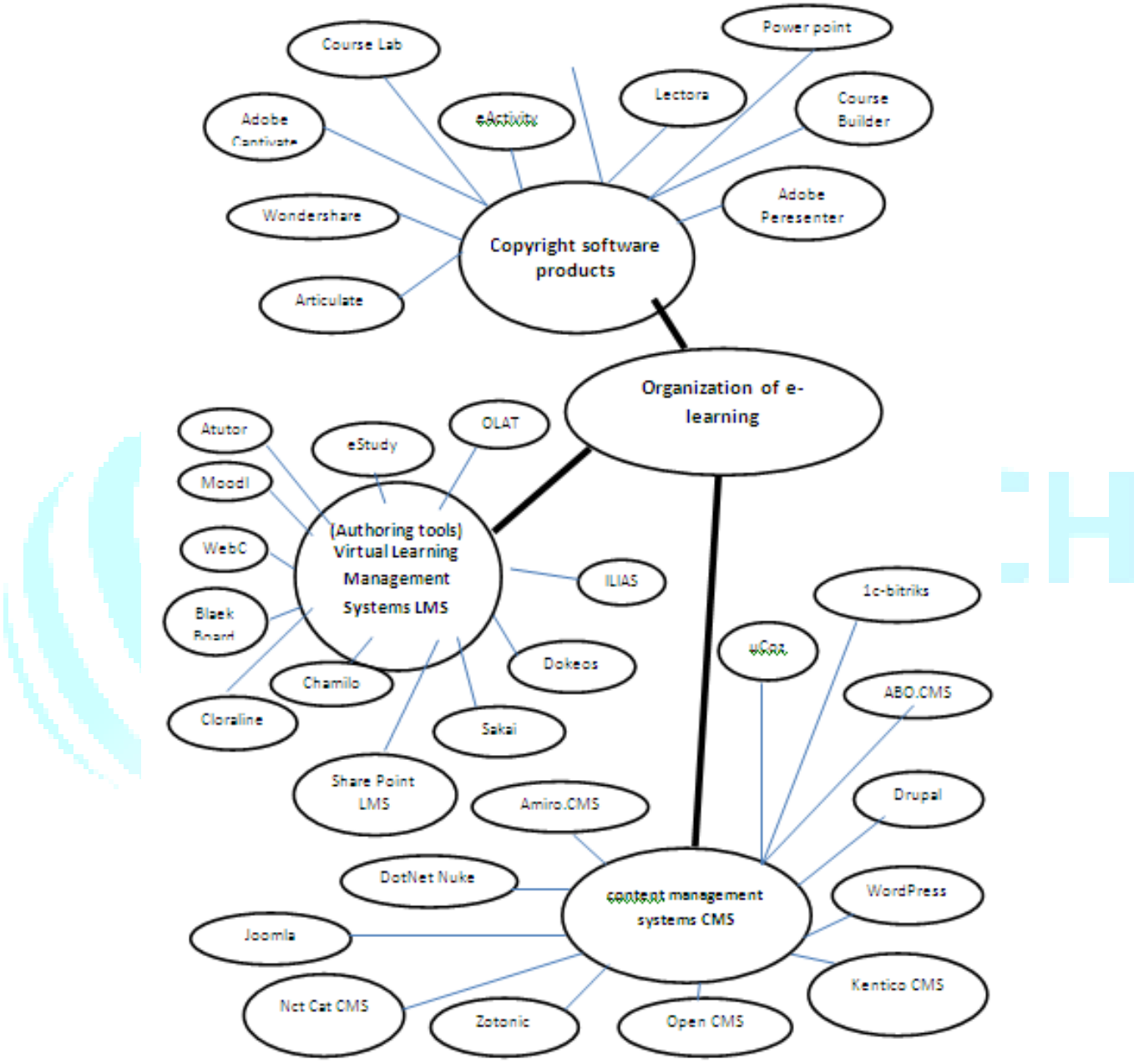
Cluster Analysis



IV. Discussion

Software products are developed on the basis of industrial technologies for performing design work using modern technical programming tools. Its uniqueness lies in the uniqueness of the process of developing algorithms and programs, depending on the nature of information processing and technical means. The creation of software products requires large labor, material and financial resources, as well as the need for highly qualified specialists.

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CONCLUSION

In today's era of rapid development of information technology, every organization needs to have a "virtual face" on the Internet, especially in educational institutions where the development of virtual universities has led to learning. the most pressing issues today due to the growing demand. The site now solves many problems, becomes an invitation card, performs educational functions and attracts new users or clients. There are many educational websites today. However, with the creation of the educational site and its placement on the Internet, the work on the educational site will not be completed. The internal content of an educational site that does not meet the user's requirements is one of the most common problems today.

Several educational sites are available today. One of them is LMS systems, and this article provides guidance on how to use these systems to manage the learning process and how to create learning modules that are an integral part of distance learning.

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