

E-Learning for Computer Assisted Training

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Abstract

The project “E-Learning” is a computer assisted training that allows the users to access training materials. The e-learning system is developed using Html and Java with MsAccess as the backend. Java script is used for client side validation. The main benefit of this project is to provide dynamic information and it is widely accessible and it provide search capabilities across an entire course. The user can quickly access the materials ant it provide fast response to the users. The main benefit of this project is cost savings and it can loaded quickly over the internet, generally require less memory.

Keywords: E-Learning, Java script

1. Introduction

E-Learning is related to all training that is delivered with the assistance of a computer. The e-learning is web-based training that distributed online over an Internet. The development of an entire e-learning course revolves of course around the development of learning objects. Learning objects are the basic unit of training. Each learning object is designed to teach or test a series of specific objectives. A Learning Management System communicates with the learning objects as they are run, and keep a track of learning object studies

2. Existing System

E-learning systems are more concentrating on creating login account, and then only it provides the users to access tutorials, so their efficiency level is slightly degrading. It takes more time for users to learn the tutorials .The user does not have much patience to learn the tutorials; Old e-learning system does not make any test to check the user performance. It corrupts the interaction to access those e-learning systems for users. Thus the old e-learning system won't be helpful. Old system disadvantages are tedious, time consuming, more access time and slow response time, number of users to access tutorials will be less, low interaction, increase the cost to learn tutorials and useful for learners only

3. Problem Definition

The development of an entire e-learning course revolves of course around the development of learning objects. Learning objects are the basic unit of training. A Learning Management System (LMS) communicates with the learning objects as they are run, and keep a track of learning object studies. The user and LMS can utilize this document in testing and ensuring the requirements expected by the client are satisfied. The project e-learning is used to reduce the time consumption for users to access the tutorials and it provides fast response to the users. Course designers and users will be able to use any number of learning objects, which are all interoperable, searchable, with any system they choose. Each of the learning objects can be portable and reuse in an effective manner. It provides dynamic information and developer can easily update those information. It's fully based on customer satisfaction to provide maximum service.

4. Proposed System

The proposed systems of e-learning systems are more concentrating on creating tutorials to reduce time consumption for users and make the system more user friendly, efficient and fast processing. Learning objects are the basic unit of training. Each learning object is designed to teach and also test a series of specific objectives. The proposed system is more helpful to test the user level of knowledge that creates more interaction. Proposed system advantages are Quick response, Lower cost, and any level of users can access this tool, less maintenance and less investment and more interaction. Functions are listed as it provides a more high level of interactivity for users. Incorporating pre-test and post-test into a tutorial will help assess the effectiveness of the e-learning, as well as identifying which users having problems. LMS communicates with the database to store and retrieve results. The training can be delivered over an internet. The modules in the e-learning system are broadly classified into four modules. They are Entry, Learning object, Teaching and Testing. Figure.1 represents the product e-learning components.

Entry module: This module mainly describes an idea about e-learning. It also describes the details about the definition and designing about e-learning. A multimedia presentation is also presents to know the worth of learning. It describes the basic concepts in multimedia presentation. With the help of multimedia, it provides a concise about the basic techniques to be used. It is the basic step of the e-learning system. It also provides the information about the history of e-learning. It creates more interaction and response for users. Figure.2 and Figure.3 represents learning model and teaching model of the proposed system.

Learning Object module: A Learning Object is an individual element of learning. The development of entire e-learning course revolves of course around the development of learning objects. Learning objects are the basic unit of training. Each learning object is designed to teach or test a series of specific objectives. A Learning Management System provides an interface between the user and the individual learning objects. With the help of the module to select the learning object as training or testing. Then choosing the learning object, a feedback form is used

to store the user comments in the database. The user can enter the feedback form and also to view the existing feedback form details.

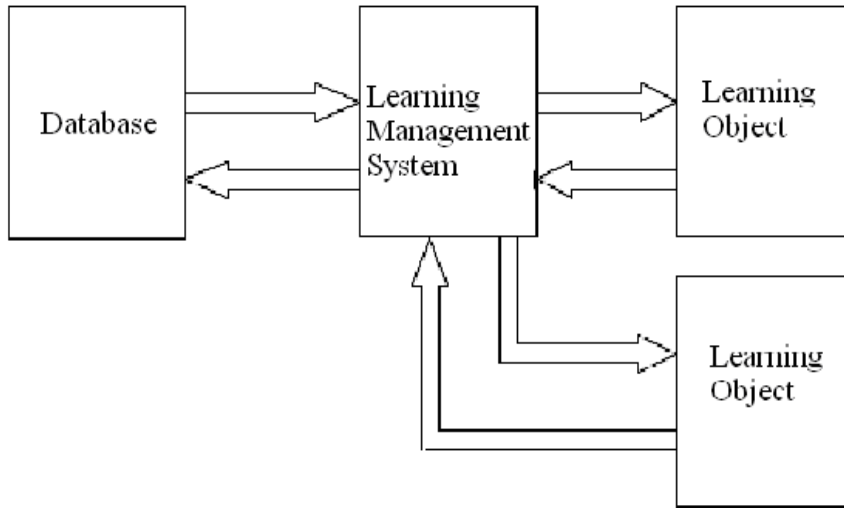


Figure. 1 Product of E-Learning Concepts

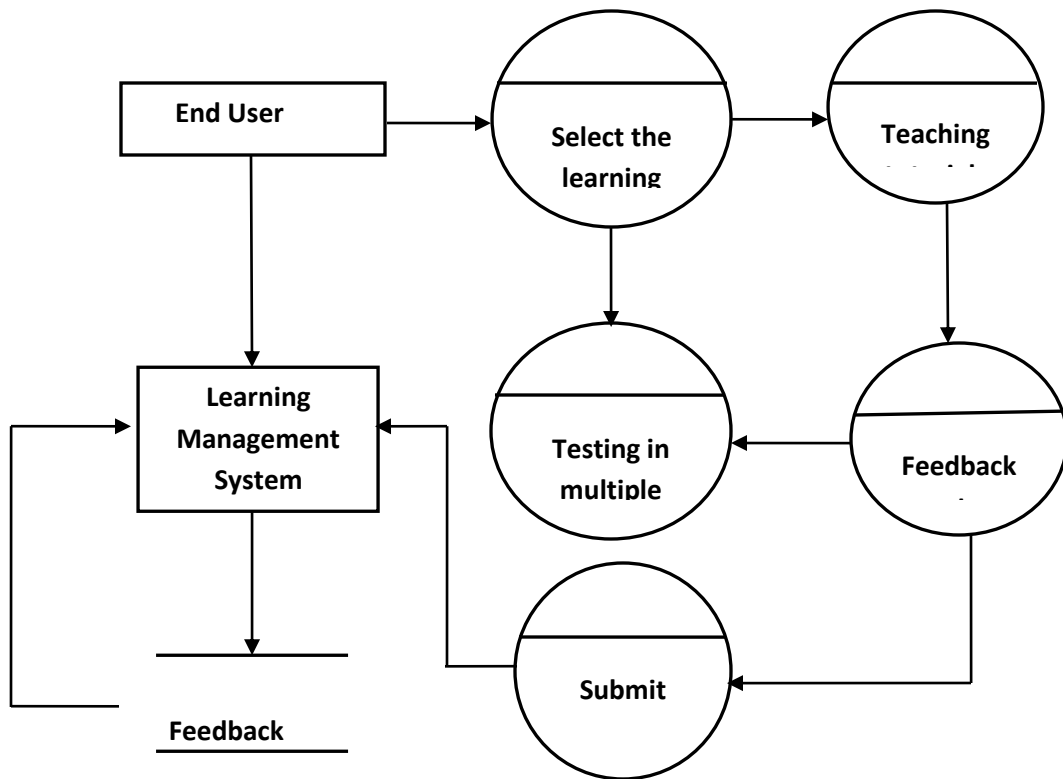


Figure. 2 Learning Object Model

Teaching module: A teaching lesson is designed so that the user actually learns a new concept or task. It contains information about programming languages like c++ and java. The learner can also learn the computer fundamentals and related abbreviations. This module is used to provide several branches like links, FAQ's. It also contains the information about interactive elements like presentation and glossary terms. The learner can use branching in a teaching lesson so that the lesson behaves differently on the user's level of knowledge. The user can also search the list of keywords that are already stored in the database. It can also provide a pictorial presentation about the tutorials to create more interaction. The main is that the student learns.

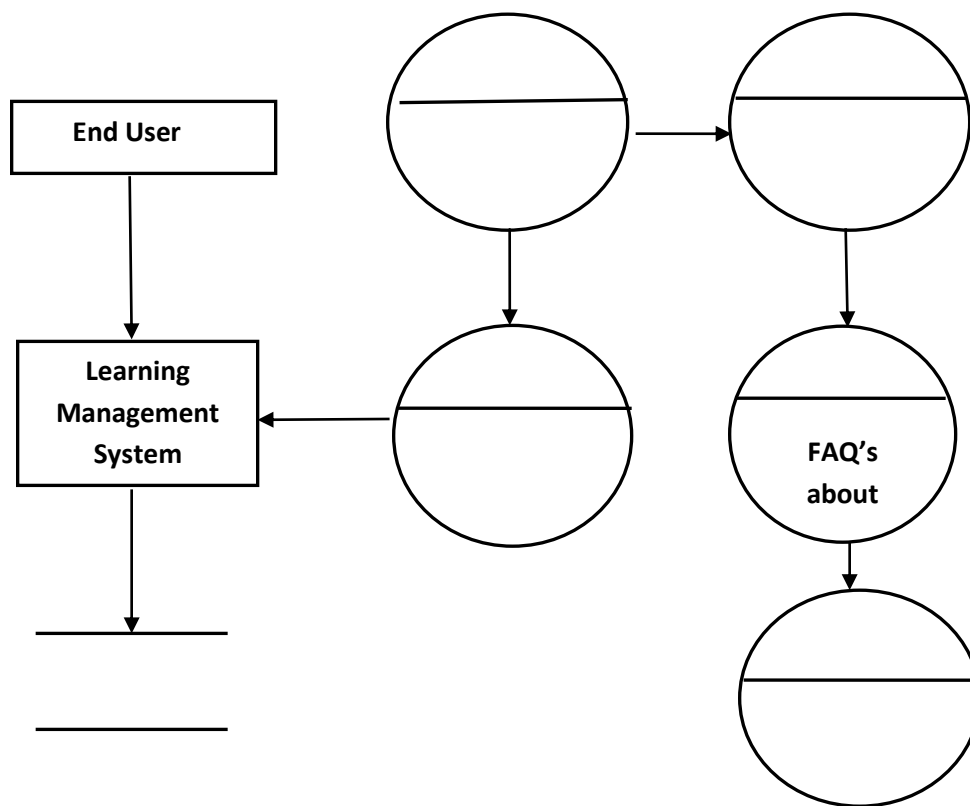


Figure 3 Teaching Object Model

It creates more interactivity for user to answering the multiple choice quiz. After completing the test a multiple choice quiz form can be evaluated. The evaluation can provide the percentage, number of correct answer and wrong to know the performance. A multiple choice quiz can be designed for the programming languages. Normally basic concepts like data types, methods etc., can be provided in the quiz form. The testing module helps for both the pre-test and post-test users to satisfy the needs. A selection process is used to select the concept to answering the quiz form. The feedback form can be used for users to add the comments about the multiple choices quiz form. The user can also view the existing feedback results.

5. System Implementation

Implementation is where the theoretical design is converted into working system. In the e-learning system, all modules are tested and successfully implemented with users' satisfaction. In implementation phase website hosted in the local organization network with the real data. Before hosting the site the server's hardware and software configuration should be noted. Because it might affect the accessibility, programming and development tools that have been used in the web development. A little forethought and planning will make the development and implementation of e-learning a much more pleasant and inexpensive exercise. There are several industry standard means of communication between individual learning objects, and a learning management system. The installation of the software requires some additional resources. The web designing tools are installed in the client side to view the interactive web page design. The web server has to be installed to store and retrieve data in the database. The system also uses some of the existing components such as web browsers in the operating system.

6. Results and Discussions

The test cases are used to provide an easy detection of errors and mistakes with in a minimum period of time and with the least effort. The test condition is add a feedback form, Search a keyword and multiple-choice quiz. Test cases are listed as checks the fields enter in the form are not null checks the field data type and checks the field email-id as in correct form. Searches the keywords that are already stored in the database only. Answering any one question in a quiz otherwise the form does not perform the evaluation. Testing has been done for proper working of different modules separately.

7. Conclusion

The project e-learning system is the training that is delivered with the assistance of the internet. E-learning may constitute the conversion of printed material to be displayed in a browser with a series of linked pages and table of contents. E-learning today allows students get fully involved in the learning information. The accessibility of the world-wide web and the ease of use of the tools to browse the resources on the web have made this technology extremely popular and the means of choice for distance education. The primary motivation for developing the e-learning system is to make it easier for instructors who have little knowledge of HTML and web navigation to put course materials on the web.

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Authors Biography



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