

E – LEARNING SYSTEM FOR EDUCATION USING UML MODELS

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Abstract: Project aims at extending educational option to the adults, who have lost the opportunity and have crossed the age of formal education, but now feels to learn. So to fulfil their dreams we have taken a small initiative with the help of mobile application. In our system we have categorized whole system into three levels which we will be focusing. First level (Start) will be of People who never went for the schooling our application will teach them the basic education like word, alphabets, numbers. Second level (Moderate) will be of people who went for the regional schools of their mother tongue like Hindi, Marathi etc. Our application will teach them the information of preposition, sentence formation, word completion. Third level (Expert) will have English grammar like tenses, paragraph. At the end the user (illiterate adult) will be able to read and write at least basic words and sentences of English and Marathi this would be small step to increase literacy rate of India.

Keywords: Machine Learning, Processing, Dataset, Education, Database, English, Marathi

INTRODUCTION

India has a total literacy rate is about 74 percent. Male literacy rate is 82.14 percent and female literacy rate of 64.46 percent according to the 2011 census. Thus it can be concluded that the literacy rate is far short of the international standards. Thus India should be a major region of focus for any project aiming to improve the global literacy scenario. India is the country where the problem of adult literacy still prevails. Most of the illiterate people of rural India rely on manual labor for their living and are unable to attend regular study classes. It empowers individuals to be active members of the local, national and global community. Back to learn aims at extending educational option to the adults, who have lost the opportunity and have crossed the age of formal education, but now feels to learn, so to fulfill their dreams we have taken a small initiative with the help of mobile application provides this information to the user. Term describe packaging with enhanced functionality through technology. Intelligent Packaging: Contains sensors to determine the condition (e.g., freshness or temperature) of the product. Primarily used in food and beverage applications. Storing and transporting food is a special challenge. This is due, among other things, to the perishability of fresh food products and the special requirements for ambient temperatures.

There are a number of legal regulations and hygiene rules that must be observed during storage and also during transport. Ultimately, the aim is to ensure food safety for consumers. In the warehouses, suitable environmental conditions - especially with regard to temperatures - must be established for different product categories. In addition, there are requirements for humidity, CO2 content (for ripening warehouses), air circulation, and much more. In addition, precautions and defense measures against pest infestation must be taken.

MOTIVATION

This project to implement a android application Back to learn aims at extending educational option to the adults, who have lost the opportunity and have crossed the age of formal education, but now feels to learn. So to fulfill their dreams we have taken a small initiative with the help of mobile application. In back to learn we have categorized whole system into three levels which we will be focusing.

LITRATURE SURVEY

This chapter contains the existing and established theory and research in this report range. This will give a context for work which is to be done. This will explain the depth of the system. Review of literature gives a clearness and better understanding of the exploration/venture. A literature survey represents a study of previously existing material on the topic of the report. This literature survey will logically explain this system.

Recommender System for E-Learning based on Personal Learning Style We propose an implementation design of E-Learning recommender system based on a logic approach, APARELL (Active Pairwise Relation Learner), which has been implemented for used car sales domain. There is an opportunity to apply the same procedure for e-learning system to help the student to choose the best material according to their preferences. We also propose an ontology of material content based on the different learning styles. In this paper, we show that there is a big potential to implement a personalized recommender system in e-learning based on the students learning style [1].

A syntactic and semantic multi-agent based question answering system for collaborative e-learning The task can take up a considerable amount of the time they spend each day on teaching if the number of students is high and the tutors have a narrow time frame in which to reply to them all. In this paper, we present a Question Answering System (QAS) that helps learners to find

the best answers to their questions and helps tutors to answer questions asked by their students in an e-Learning environment. We present a syntactic and semantic multi-agent approach to question answering in e-learning platforms. We try to improve existing approaches by using multiple techniques in a multi-layer system where learners and tutors with the help of automatic agents collaborate to find the best answer to the submitted question[2].

A survey on service-oriented architecture for E-learning system E-learning refers to learning that is delivered or enabled via electronic technology. E-learning is classified as synchronous or asynchronous. Service based technology in e-learning provides a common infrastructure to integrate heterogeneous software components, thus enhancing interoperability between different components. Service oriented architecture for e-learning provides adaptable, interactive, extensible, distributed, collaborative and intelligent e-learning system to effectively realize the learning anytime and anywhere to instructors and learners. This paper presents a detailed analysis of well-known architectures for service based e-learning system. The architectures that surveyed here gives users the ability to collect, analyze, distribute and use e-learning knowledge from multiple knowledge sources[3].

E-Learning Supporting System (ELS) in Nahda University in Upper Egypt: Case Study Nahda University is the first private university in Upper Egypt in Banisuiif. As the direction for Nahda University is to be paperless, there is the E Learning Support System (ELS) for the undergraduate students of the six faculties of the university; which includes Oral and Dental Medicine, Pharmacy, Business Administration, Engineering, Mass Communication and information Technology. The ELS is considered the communication tool between students and the academic staff members and this is available anywhere and anytime across the internet in different ways to be suitable with variable situations and student abilities. ELS is considered Learning Management System LMS and e learning and it is not a substitute for the traditional learning but it is a blended learning. Generally, ELS is the bridge connecting between students and university[4]. **Deep E-School-Nurse for Personalized Health-Centered E-Learning Administration:** As a case study, the deep neural networks are used for automatic profiling of students with diabetes. Based on the student diabetes profile a personalized curriculum is designed for the students which includes physical activity and a healthy diet at appropriate intervals during the study. The proposed e-school-nurse can help students to have a healthier e-learning experience[5]

LIMITATION OF EXISTING SYSTEM

- **Costing:** The Existing system is high cost and this is main reason most of the system is failed.
- **Technology Complexity:** Most of system is the complex to understand, not user friendly as compare to our proposed system
- **Time Consuming Feature:** In existing system, the performance is low and most of the time system gets hanged due to load.
- **Not Easy to Understand:** Systems re complex to understand and they were not user friendly

EXPERIMENTAL SETUP

Android Studio is the official[7] integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development.[8] It is available for download on Windows, macOS and Linux based operating systems or as a subscription-based service in 2020.[9][10] It is a replacement for the Eclipse Android Development Tools (E-ADT) as the primary IDE for native Android application development. Android Studio was announced on May 16, 2013, at the Google I/O conference. It was in early access preview stage starting from version 0.1 in May 2013, then entered beta stage starting from version 0.8 which was released in June 2014.[11] The first stable build was released in December 2014, starting from version 1.0

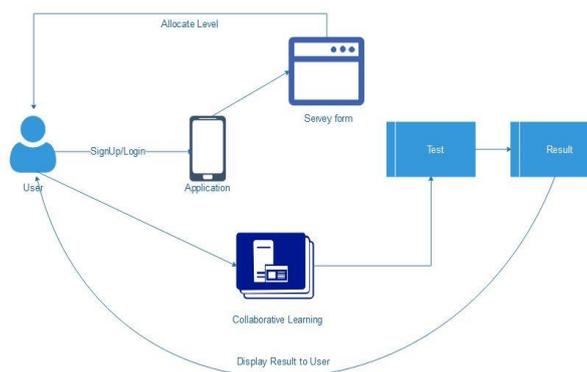
MySQL 5.1: MySQL provides our small, medium and large enterprise customers with affordable, open access to their web data warehouses. MySQL allows us to offer our SystemAdministrator low cost, low maintenance database solution for applications without sacrificing power, performance or scalability. It seems to be developed iteratively, and the features are very stable when they ship them. It is a relational database. Over the past several years, this relational database management systems have become the most widely accepted way to manage data.

SCOPE:

This project is presenting education content, and facilitating education processes. E-Learning tools can operate effectively operate within both carefully selected and optimally integrated course design model and as emergent facilitators of communication and learning in informal contexts..

PROBLEM STATEMENT:

We are creating an android application that allows user to provide as well as get the knowledge videos, audios and documents, Each user has to register to use our application, after registration user will create unique id and password that allows user to login to the system, each user can select multiple courses videos, audios, or documents. Admin will have separate login, admin able to see no of users info, admin also able to modify user, admin able to add documents, videos and audios. Our aim is to provide knowledge accessible to everyone. We are also adding feedback system which will help admin to improve the content in application.

SYSTEM ARCHITECTURE:**Fig -1: System Architecture Diagram**

Back to learn targets loosening up enlightening decision to the adults, who have lost the entryway and have crossed the hour of formal tutoring, yet as of now feels to learn. So to fulfill their dreams we have taken a little drive with the help of adaptable application. In back to learn we have arranged whole system into three levels which we will focus. First level (Start) will be of People who never went for the coaching our application will show them the central preparing like word, letters all together, and numbers. It may help assembling the chiefs in nuances. In an extraordinarily short time, the arrangement will be plainly obvious, direct and sensible .It will help a person with knowing the organization of gone through year immaculately and obviously. It moreover helps in current all the works similar with e-learning application in a capable manner. In this structure the Junk pollution noticing system with Internet of Things (IoT) thought is to be screen.

MATHEMATICAL MODEL

$$S = (I, O, F)$$

Where,

S: System

I= {UL , QA , ST} are set of Input

Where,

UL : User Login

QA : Question Answer session

ST : Survey Test

F = {A, PU, LA, L} are set of Function

Where,

A: Authentication

PU: Processing

LA: Level Allocation

L : Learning

O = {N, E, ED} are set of Output

Where,

N: Notification

E: Exam

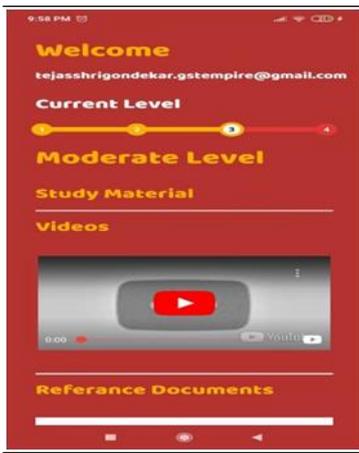
ED: Education

Success Condition: Proper database, Survey exam.

Failure Condition: No Database, No Internet Connection.

Screenshots:





ADVANTAGES:

- Variety of programs and courses
- Lower total costs
- More comfortable learning environment
- More interaction and greater ability to concentrate

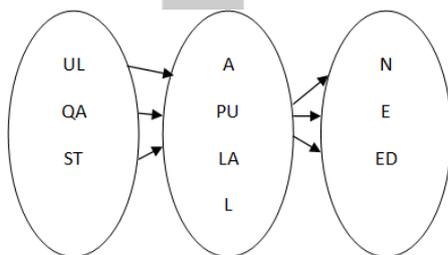
APPLICATION:

- Personal
- School
- Colleges

METHODOLOGY

The algorithm in which every operation is uniquely defined is called deterministic algorithms. The algorithm in which every operation may not have unique result, rather there can be specified set of possibilities for every operation, such algorithms are called Non deterministic algorithms. Non deterministic means no particular rule is followed to make guess.

Figure 2: Venn Diagram



1. P Class: This group consists of all algorithms whose computing times are polynomial time that is there computing time is bounded by polynomials of small degree. Eg. Insertion sort, Merge sort, Quick sort have polynomial computing time..

2. NP Class: This group consists of all algorithms whose computing time are non- deterministic polynomial time. Eg. Traveling salesman problem. The NP class problem can be classified into two groups the process of constructing Problem Solving Methods is assumption-based. During this process assumptions are added that facilitate efficient operationalization of the desired functionality

(a) NP Hard Problems: Normally optimization problems are NP-Hard problems. All NP complete problems are NP hard but some NP hard are not NP complete. A problem is NP hard if and only if its at least as hard as NP complete problem.

(b) NP complete problems: Normally decision problems are NP-Complete problems. Non deterministic polynomial time complete problems. Decision Problems: Any problem having the answer either zero or one is called decision problem

CONCLUSION:

The device proposed here is an interactive Application, which is capable of teaching multiple languages. We propose to develop interactive educational application which can run on the mobile. The application helps the user to learn to write as well as spell the alphabets. Initially the application teaches alphabets and then moves onto words and sentences. Most of the illiterate people of rural

India rely on manual labor for their living and are unable to attend regular study classes. So, our system can be a convenient method for the users of rural India to become literate.

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