

# 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

## 1. 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.

## 2. 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.

## 3. PROBLEM DEFINITION

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.

## 4. REVIEW OF LITERATURE

**An 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].

**5. PROPOSED SYSTEM**

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. 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. It may help collecting management in details. In a very short time, the collection will be obvious, simple and sensible .It will help a person to know the management of passed year perfectly and vividly. It also helps in current all the works relative to E-Learning application in a efficient manner. In this system the Garbage pollution monitoring system with Internet of Things (IoT) concept is to be monitor.

**6. SYSTEM ARCHITECTURE**



**Fig -1: System Architecture Diagram**

**7. 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

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- 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.

## 8. ADVANTAGES

- Easy to use
- Security
- High Performance

## 9. LIMITATIONS

- Internet Connection necessary
- Proper Dataset

## 10. APPLICATIONS

- Personal
- Research
- School Colleges
- Provide better solution in Low Cost

## 11. ALGORITHM

The Advanced Encryption Standard (AES), also known by its original name Rijndael (Dutch pronunciation: [ˈrɛinda:l]),<sup>[3]</sup> is a specification for the encryption of electronic data established by the U.S. National Institute of Standards and Technology (NIST) in 2001. AES is a variant of the Rijndael block cipher<sup>[3]</sup> developed by two Belgian cryptographers, Vincent Rijmen and Joan Daemen, who submitted a proposal<sup>[5]</sup> to NIST during the AES selection process.<sup>[6]</sup> Rijndael is a family of ciphers with different key and block sizes.

For AES, NIST selected three members of the Rijndael family, each with a block size of 128 bits, but three different key lengths: 128, 192 and 256 bits. AES has been adopted by the U.S. government. It supersedes the Data Encryption Standard (DES),<sup>[7]</sup> which was published in 1977. The algorithm described by AES is a symmetric-key algorithm, meaning the same key is used for both encrypting and decrypting the data. In the United States, AES was announced by the NIST as U.S. FIPS PUB 197 (FIPS 197) on November 26, 2001.<sup>[4]</sup> This announcement followed a five-year standardization process in which fifteen competing designs were presented and evaluated, before the Rijndael cipher was selected as the most suitable (see Advanced Encryption Standard process for more details). AES is included in the ISO/IEC 18033-3 standard. AES became effective as a U.S. federal government standard on May 26, 2002, after approval by the U.S. Secretary of Commerce. AES is available in many different encryption packages, and is the first (and only) publicly accessible cipher approved by the U.S. National Security Agency (NSA) for top secret information when used in an NSA approved cryptographic module (see Security of AES, below)

## 12. CONCLUSION and FUTURE WORK

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.

In back to learn 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. 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. The rapid increase in Internet connectivity in the last few years has been an important catalyst for the growth of e-learning in India. A robust Internet ecosystem, with a multitude of local and global players, will help online learning make further inroads. Leading companies are adopting E-learning to support both short term courses and qualification-focused learning objectives among their employees.

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