

Smart Learning

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Abstract

Computer programming has attracted a lot of attention in the development of information and communication technologies in the real world. Meeting the growing demand for highly skilled programmers in the ICT industry is one of the major challenges. In this point, online judge (OJ) systems enhance programming learning and practice opportunities in addition to classroom-based learning. Consequently, OJ systems have created a large number of problem-solving data (solution codes, logs, and scores) archives that can be valuable raw materials for programming education research. 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 syntax.

Keywords: Machine Learning, Authentication, Security



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Introduction

Machine Learning is the field of study that gives computers the capability to learn without being explicitly programmed. ML is one of the most exciting technologies that one would have ever come across. Educational data mining to support programming learning As it is evident from the name, it gives the computer that makes it more similar to humans: The ability to learn. Machine learning is actively being used today, perhaps in many more places than one would expect. Machine Learning (ML) can be explained as automating and improving the learning process of computers based on their experiences without being actually programmed i.e., without any human assistance. The process starts with feeding good quality data and then training our machines(computers) by building machine learning models using the data and different algorithms. The choice of algorithms depends on what type of data do we have and what kind of task we are trying to automate.

Literature Survey

- Recommender System for E-Learning based on Personal Learning Style, Nunung Nurul Qomariyah, 2020:
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, Abderrazzak Samadi, El Fazazi Hanaa, 2018: 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, Rani S. Jamuna, 2009: 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 elearning knowledge from multiple knowledge sources [3].
- E-Learning Supporting System (ELS) in Nahda University in Upper Egypt: Case Study, Samia El-Azab, 2015: 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, Tannaz Karimi, Babak Majidi, 2019: 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].

Aim and Objectives

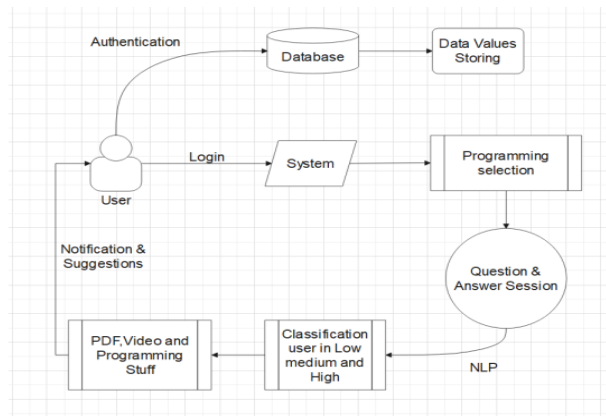
- To reduce the problem of not understanding the programming.
- To become literate through an interactive and enjoyable method without affecting their day to day life.
- To make up for lack of qualified personnel and adequate infrastructure in rural India.

Motivation

PC programming has drawn in a ton of consideration in the improvement of data and correspondence advances in reality. Satisfying the developing need for profoundly talented software engineers in the ICT business is one of the significant difficulties

System Architecture

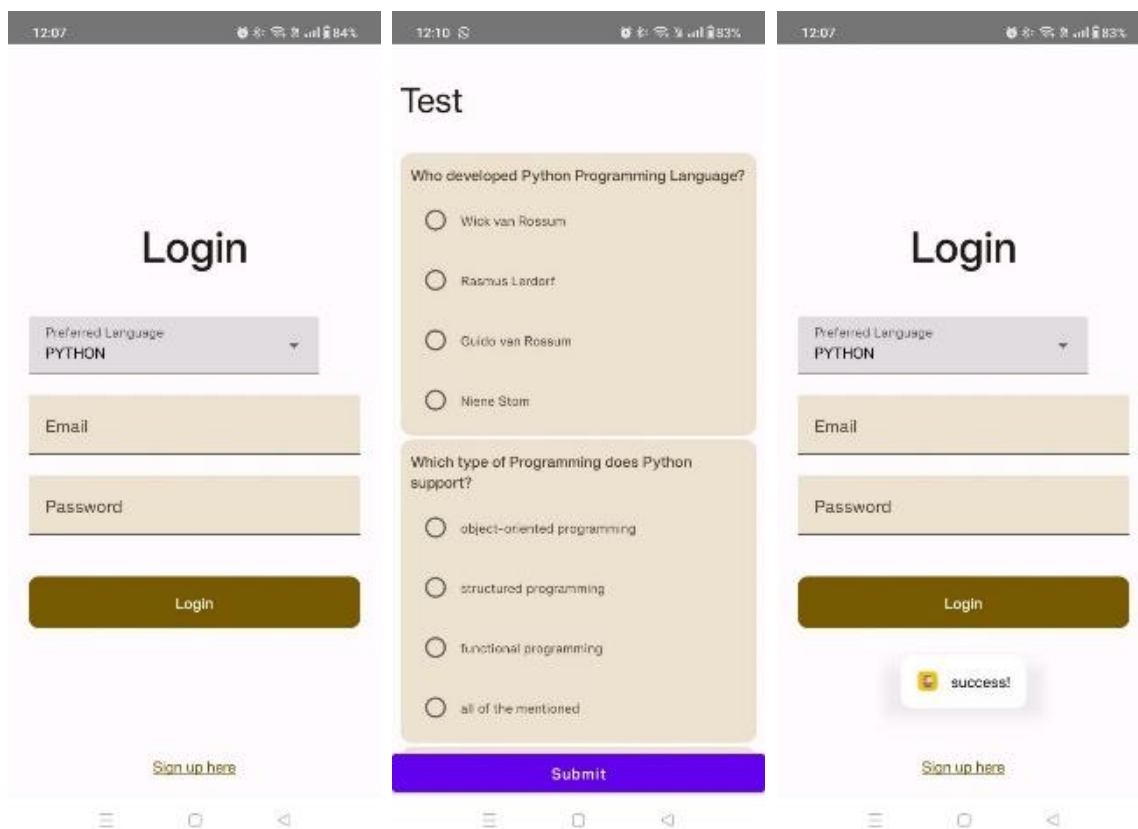
Figure 1: System Architecture Diagram

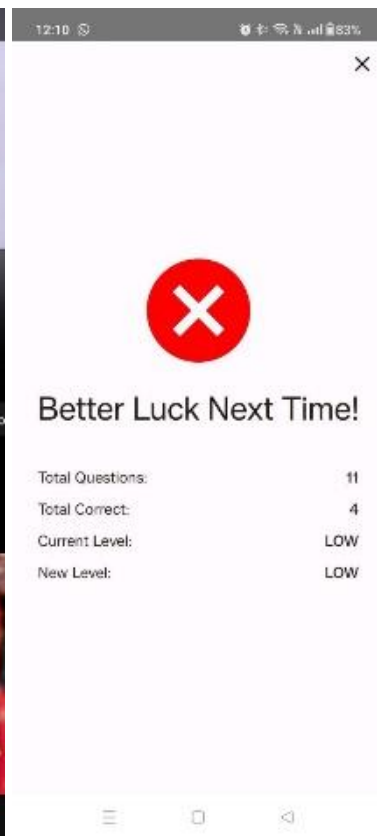
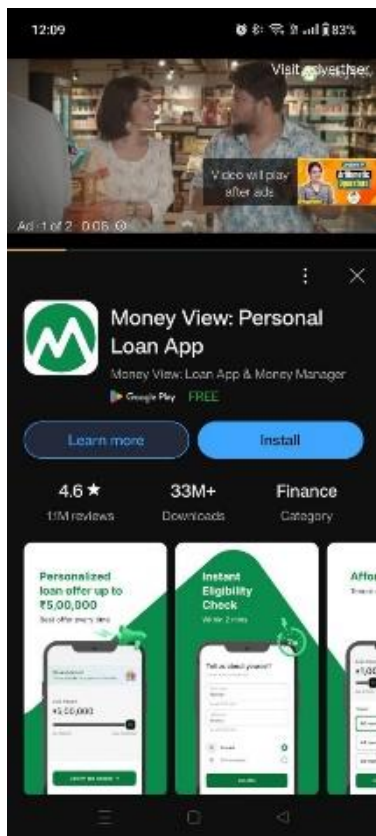


Application

- School
- Collage
- Classes
- Government sector

Result





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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