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DIGITAL EXAMINATION SET-UP

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ABSTRACT

The system entitled "DIGITAL EXAMINATION SET-UP" is mainly used to solve various problems regarding examination preparation and implementation, faced by the students, teachers during COVID19. The main aim of this project is to develop a system through which students can take their objective exams online. With this system, we have implemented the mock preparations for the placement trainings. As we all know, COVID19 scenario has taken a toll upon the education sector too, especially in conducting exams, which is one of the main reasons why the graduation dates are sliding away. Taking this as a challenge, we are implementing this project that provides users with the specialized set of questions upon each course that are designed by our expert teachers. Once the exam is taken by the students, the system evaluates the responses and generates the result automatically. Our expert teachers monitor the results, and send the necessary course pdfs to the poorly performed students to improve their performances. So, our system helps the students to develop skills, and make them ready to take online examinations with the same enthusiasm with which they take the offline exams. This project is our team's step forward contribution towards Digital India

1. INTRODUCTION

1.1 PROJECT OVERVIEW

Digital Examination Set-up is a web application developed to automate the objective examination take-up digitally in this new normal. Like we discussed in the abstract, we are implementing this project that provides users with the specialized set of questions upon each course that are designed by our expert teachers. Once the exam is taken by the students, the system evaluates the responses and generates the result automatically. Our expert teachers monitor the results, and send the necessary course pdfs to the poorly performed students to improve their performances.

This whole project is divided into three modules. This system consists of students' accessing various courses, giving exams with questions that are specially designed by our expert faculty who maintains the challenging environment around the system. The expert teachers are hired by our admins who will go for a thorough background check about the teacher before hiring him/her to maintain the quality, as we consider the faculty to be the backbone

of our system. Faculty constantly keep a check on students' performance, and help them in improving their skill by sharing the needed knowledge sources. The data of the users of the system are well protected for personal use/as well as per institutional use and makes the processing very fast.

This software is very flexible and easy to use and is designed for Institutional purposes. This web application contains Login page for the superuser, and registration and login forms for users (student, faculty). Admin manages the users.

1.2 EXISTING SYSTEM

In most of the existing systems available in the market today, are automatically evaluated. But there is no such system that constantly monitors the student's performance on the subject, and help him/her in increasing his/her skill, performance by sharing some knowledge sources. If evaluation and monitoring is the game, the available systems take time to release the result and help the student. In addition, if any proper guidance is needed, one need to pay bucks to access

the support line. Sometimes, the users worry about the confidentiality.

1.3 PROPOSED SYSTEM

In the proposed system, we wish to increase the employment opportunities, as well as to create such an examination system where students will take clearing the exams as a challenge leading themselves in a way to improve their skill. As admin hires the expert teachers specially for this purpose by doing a thorough background check; our expert teachers keep on adding the logical, brain teasing subject question making the exams look fun.

2. LITERATURE SURVEY

2.1 ABOUT LITERATURE SURVEY

The literature survey is incredibly essential for any project development. Extension of the project from previous models to new models. Well returning of recent technologies and upgrading of recent technologies while not heavy its application at the side of increasing of its overall performances. The literature survey can totally fill the whole information of the domain.

It additionally provides author analysis, erudite work, and its future work yet to finish additionally, provides info regarding the benefits disadvantages and limitations of the most domain. thus, the literature work is crucial to supply a replacement idea for this technology world. The literature survey is incredibly essential for any project development. Extension of the project from previous models to new models. Well returning of recent technologies and upgrading of recent technologies while not heavy its application at the side of increasing of its overall performances. The literature survey can totally fill the whole information of the domain. It additionally provides author analysis, erudite work, and its future work nevertheless to complete. It additionally

provides info regarding the benefits disadvantages and limitations of the most domain. thus, the literature work is crucial to supply a replacement idea for this technology world.

2.2 RELATED PAPERS

1. Abhirami Sivaprasad, Anuj Shah, Dr. V. C. Kotak, Khushali Rathod, Pradnya Ambre, Riddhi Chedda - "Online Examination System with Adaptive Tests and Learning Structure Analysis for Performance Enhancement using MVC Architecture" (2016).

Today internet has flourished exponentially and is doing wondrous modifications in the daily living of the common man. It has incredibly revolutionized the way education is being offered to most people. This supports the computerized adaptive test pattern and consists of functionalities like random question generation, group and test wise analysis of student performance, setting of difficulty level, and text-to-speech for visually challenged people. Our system integrates the Markov chain with the adaptive test. It is highly reliable, user-friendly, flexible, and cost-effective.

2. Olawale Adebayo, Shafi'i Muhammad Abdulhamid - "E- Exams System for Nigerian Universities with Emphasis on Security and Result Integrity" (2008)

The recent employment and eventual widespread acceptance of electronic test in examining students and various classes in Nigeria has created a significant impact in the trends of educational history in the country. In this paper, we examined the impacts, associated challenges and security lapses of the existing electronic-examination system with the aim of ameliorating and developing a new acceptable e-Exam system that takes care of the existing system's challenges and security lapses. Six Universities that are already conducting e Examination were

selected across the country for this research work. Twenty (20) students that participated in the e-exams and five (5) members of staff were selected for interview and questionnaire.

3. KanithaHomjun, NongnuchKetui, PrasertLuekhong - "Itembased approach for online exam performance and its application" (2016) Advantage of online item bank can be used to develop effective and efficient systems of examination and tests for assessing the achievement students. In this paper, we introduce a computer system designed to evaluate the quality of online multiple-choice items and present our online item exam framework, i.e., building online multiple-choice item, testing online item examination, analyzing the performance of item with item-based approach, classifying the good item into online exam, and reporting the statistic values.

3. DESIGN AND DEVELOPMENT

3.1 SYSTEM DESIGN

System design is transition from a user-oriented document to programmers or data base personnel. The design is a solution, how to approach to the creation of a new system. This is composed of several steps. It provides the understanding and procedural details necessary for implementing the system recommended in the feasibility study. Designing goes through logical and physical stages of development, logical design reviews the present physical system, prepare input and output specification, details of implementation plan and prepare a logical design walkthrough.

3.2 SOFTWARE DESIGN

In designing the software following principles are followed:

➤ Modularity and partitioning: software is designed such that, each system should consist of hierarchy of modules and serve to partition into separate function.

➤ Coupling: modules should have little dependence on other modules of a system.

➤ Cohesion: modules should carry out in a single processing function.

➤ Shared use: avoid duplication by allowing a single module be called by other that need the function it provides.

4.3 UML CONCEPTS The Unified Modeling Language (UML) is a standard language for writing software blue prints. The UML is a language for

- Visualizing
- Specifying
- Constructing
- Documenting the artifacts of a software intensive system.

The UML is a language which provides vocabulary and the rules for combining words in that vocabulary for the purpose of communication. A modeling language is a language whose vocabulary and the rules focus on the conceptual and physical representation of a system. Modeling yields an understanding of a system.

Building Blocks of UML

The vocabulary of the UML encompasses three kinds of building blocks:

- Things
- Relationships
- Diagrams

3.3.1 THINGS IN UML

Things are the abstractions that are first-class citizens in a model; relationships tie these things together; diagrams group interesting collections of things. There are four kinds of things in the UML:

- Structural things
- Behavioral things
- Grouping things
- An notational things

4. PROJECT DESCRIPTION

4.1 PROJECT DEFINITION

Digital Examination Set-up is a web application developed to automate the objective examination take-up digitally in

this new normal. Like we discussed in the abstract, we are implementing this project that provides users with the specialized set of questions upon each course that are designed by our expert teachers. Once the exam is taken by the students, the system evaluates the responses and generates the result automatically. Our expert teachers monitor the results, and send the necessary course pdfs to the poorly performed students to improve their performances.

4.2 PROJECT OVERVIEW

This whole project is divided into three modules. The proposed system not only overcome the loopholes of the existing system but also provides additional features like accessing from anywhere. The system consists of students' accessing various courses, giving exams with questions that are specially designed by our expert faculty who maintains the challenging environment around the system. The expert teachers are hired by our admins who will go for a thorough background check about the teacher before hiring him/her to maintain the quality, as we consider the faculty to be the backbone of our system. Faculty constantly keep a check on students' performance, and help them in improving their skill by sharing the needed knowledge sources. The data of the users of the system are well protected for personal use/as well as per institutional use and makes the processing very fast.

4.3 MODULES

The system should be designed in such a way that only authorized people should be allowed to access some particular modules. The records should be modified by only administrators and no one else. The user

should always be in control of the application and not the vice versa. The user interface should be consistent so that the user can handle the application with ease and speed. The application should be visually, conceptually clear.

➤ Administrator Module

➤ Faculty Module

➤ Student Module

4.3.2 FACULTY MODULE

This module makes the faculty to enter into system with specific login id and password once the validation is provided by the admin. They add courses, questions and the respective answers into the system. They can monitor the students' performance. The certain functions performed through the admin module are:

- Add exam: Faculty can add their respective expertized course exams.
- Upload the questions: They can upload all the questions regarding that course and allot marks for each question for the correct answer.
- View results: Here faculty set the correct answers for the questions and the system checks with student's responses, generates result automatically. Faculty can view the results. 45
- View student: Faculty can see the basic details of the student.
- Provide feedback, share sources: By using the mail id details shown, the faculty sends the feedback and shares needed sources to the students' based on the performance monitored, externally.
- Logout: They can logout from the system.

5. OUTPUT SCREENS

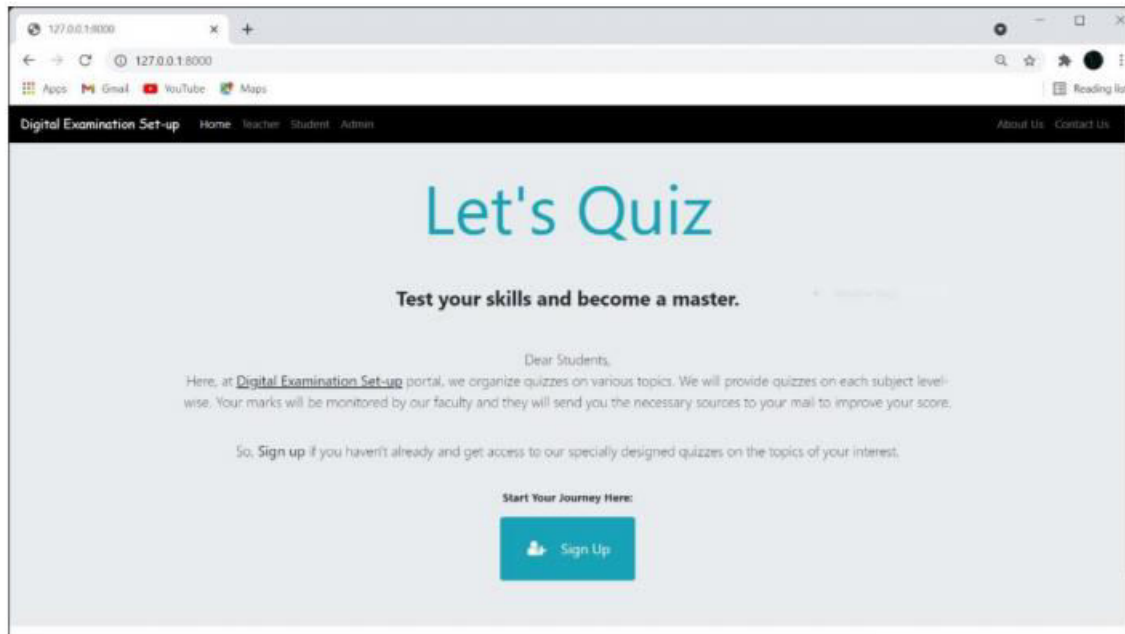


Fig.5.1 : Home page of Digital Examination Set-up

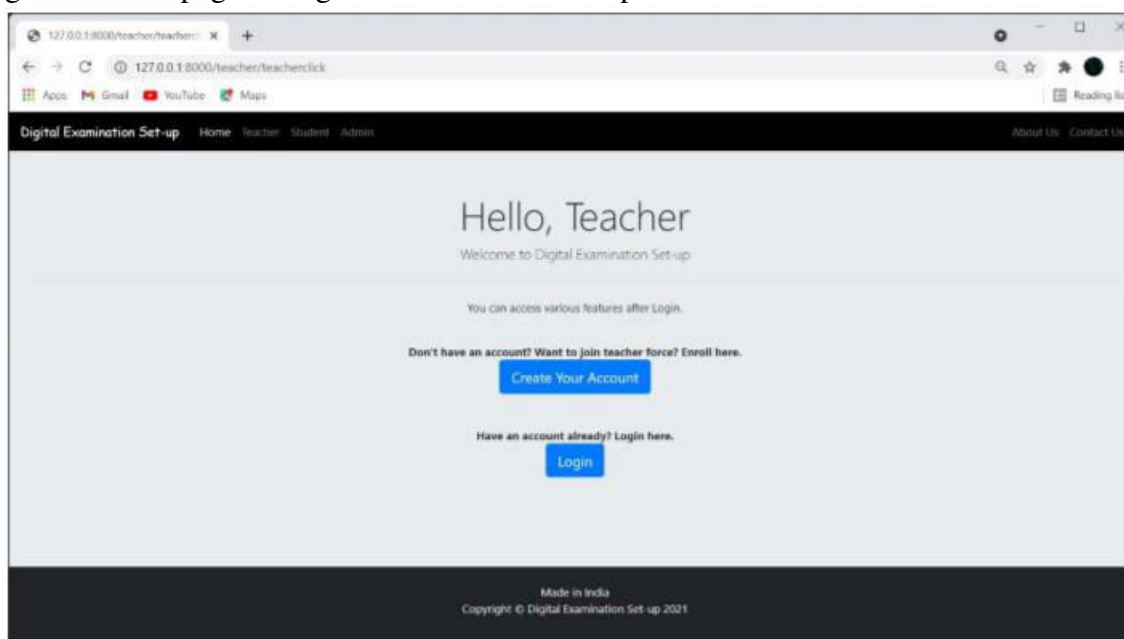


Fig.5.2 : Login, registration options display page

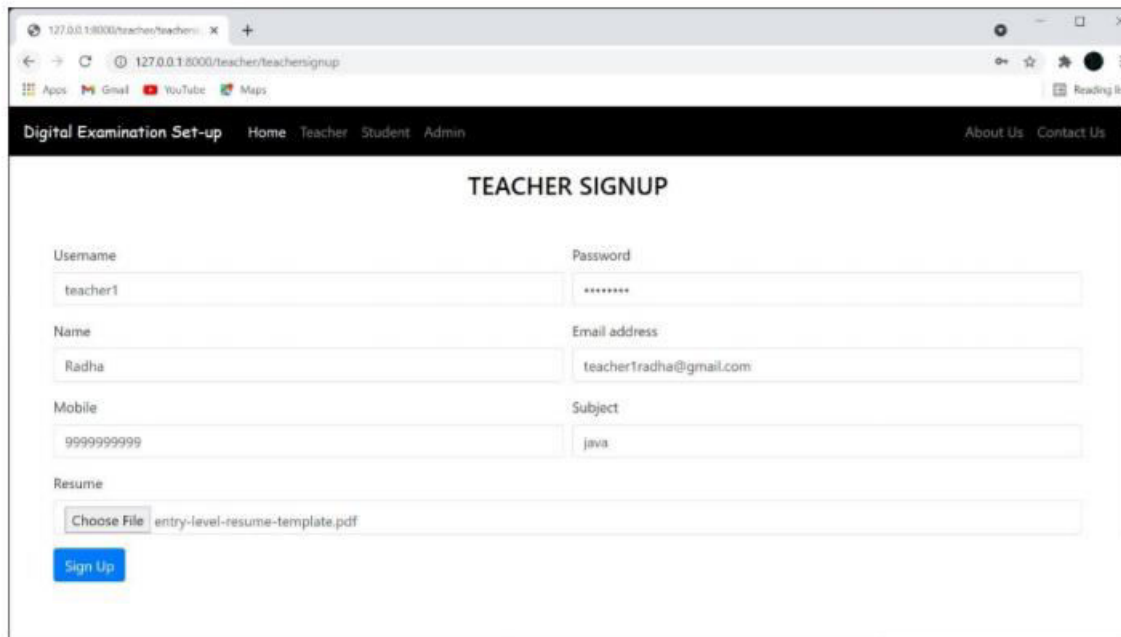


Fig.5.3 : Teacher Registration

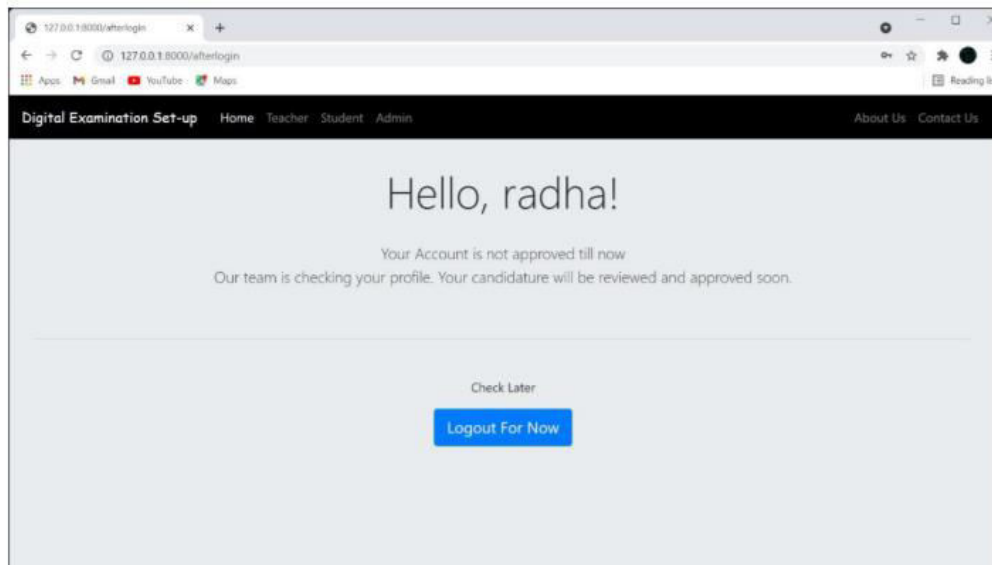


Fig.5.4 : Waiting for approval

CONCLUSION

Taking in to account the above-mentioned details, we can conclude that the Digital Examination Setup system is the inevitable part of a modern institution. This system developed will reduce the manual work and automate the work. Today, due to the alarm increase rate in the cases of COVID19, it is getting tough for the educational institutions to conduct exams

offline. Students need to wait for their results a bit more than they usually do. Examiner is not able to maintain the student records in large quantity manually. It is a time taking process. Transportation of the paper from one place to another is difficult.

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4.Python documentation

<https://docs.python.org/3.7/>

5.Django documentation

<https://docs.djangoproject.com/en/3.2>

6.SQLite Documentation

<https://www.sqlite.org/docs.html>