

Question Paper Generator System

Rutuja Galande¹, Ashish Makwana², Kalindi Joshi³, Sujla Joshi⁴, Amit Kukreja⁵

^{1,2,3,4}Student(B.E), Electronics & Telecommunication Engineering, K.J. Somaiya Institute of Engineering and Information Technology, Maharashtra, India

⁵Professor, Electronics & Telecommunication Engineering, K.J. Somaiya Institute of Engineering and Information Technology, Maharashtra, India

Abstract - Examinations serve a crucial purpose in the field of education. The conduction of exams and preparation of papers that help evaluate a student's growth and learning capabilities can sometimes be inaccurate, inefficient, time consuming and an arduous task for the professors. Therefore many applications, software and databases have emerged to combat the situation. In this project we have strived to design a question paper generator system that is based on the different course outcomes & guidelines set by the university.

Key Words: course outcomes, guidelines, arduous task, paper generator system.

1. INTRODUCTION

In this world of extreme competitiveness, an exam is the most important parameter to test the skills of a student. It is the only metric by which a student's excellence is judged. So, the nature of the question paper becomes of extreme importance. The process of generating a question paper is a very tedious process for the faculty of an Institution using traditional means. It is a cumbersome and time consuming exercise. Also, given the different parameters and guidelines set by the universities, it becomes more difficult for the faculty to design a well-balanced and challenging question paper to test the skills of the students. Our project has the potential to eliminate these drawbacks and help the professors to generate a question paper with ease. It helps them save a lot of time and energy, which could be dedicated to other useful tasks. Here, the question paper is generated according to the specifications entered by the admin and the pattern in accordance with the guidelines set by the university. We have strived to overcome the drawbacks presented in existing systems such as non-portability, static databases and much more.

1.1 Literature Review of Existing System

Many existing systems support tagging features but users are not able to utilize this feature fully. The comparative study shows that Moodle[3] is the best Learning Management System to support a large number of users and also for any educational institution. But it allows users to define only question types. Hence the questions in the repository have only basic tags or no tags at all. So, it becomes difficult for users to tag these questions before

using them..Our system can add faculty, assign the subject in particular academic year, course, course outcomes. A database contains a number of questions subject wise which can be used for the selection of questions as per requirement. Apart from this, users can edit and add new questions into the database. After selecting all such parameters the required question paper will be generated at last.

1.2 Disadvantages to Current System

1. It is less accurate.
2. Requires a lot of time.
3. Traditional approach includes a lot of manual work.
4. Paperwork is always a requirement with the manual approach.
5. The existing online systems are less flexible.
6. The existing systems only support objective type of questions like MCQs and are randomized.

2. Proposed System

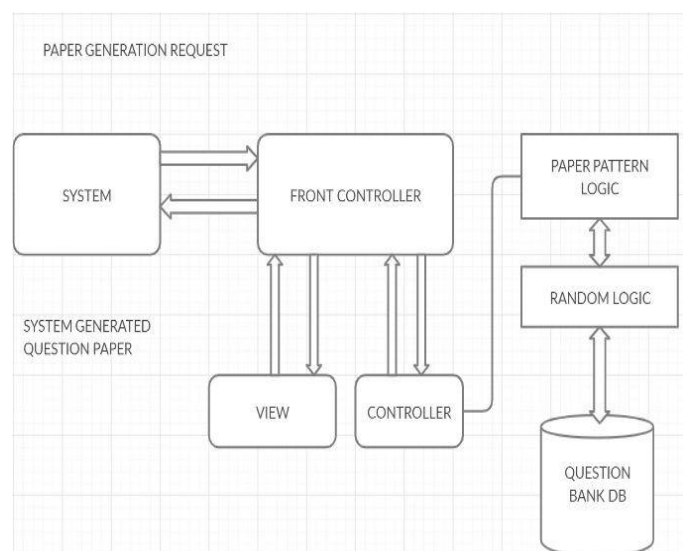


Fig -1: Block Diagram of the Proposed System

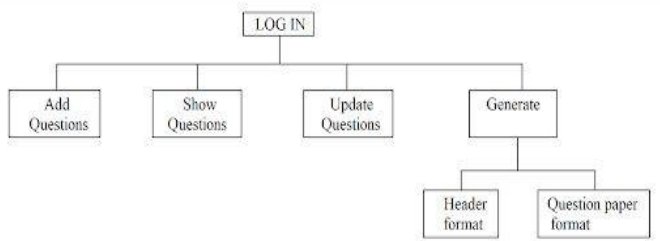


Fig -2: Flow of the Application

This project consists of several modules which are essential for the generation of question paper.

1. Admin: Firstly the user has to register himself/herself and then login with his/her credentials. One can always add another user whenever needed. After this user will be able to add, update, delete the questions according to the need.
2. Input Database: It is the database which contains the questions which are to be selected by the administrator.
3. Add: At first the faculty will need to enter the questions once for different subject according to his/her requirement. The attributes include question id, module, topic, difficulty level, question text and maximum marks allotted to the question. The user can always add and edit questions of his/her course according to course outcomes.
4. Update/Delete: This is for any changes in the existing questions or to delete any of the questions that are not required anymore.
5. Generate: Here, the user would have to enter all header specifications such as course, course year, semester, subject, total marks, date of examination and notes if any. After all the parameters are entered the paper will be generated.

We are using SQL for input databases, PHP, HTML, JavaScript, CSS for frontend work and Xampp local host for websites[4][5][6]

2.1 Implementation

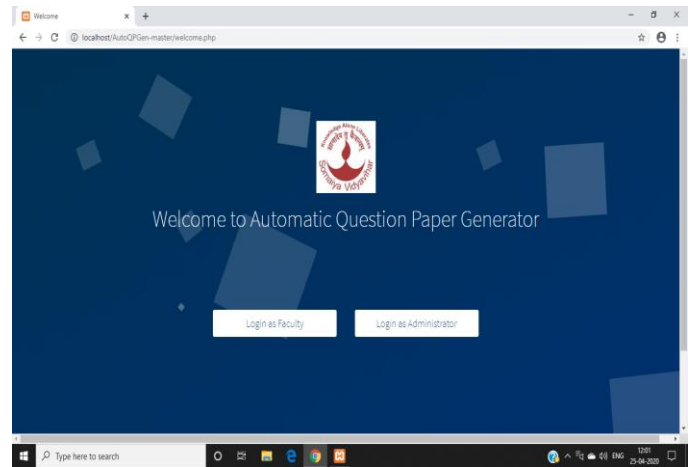


Fig -3: Homepage1 of the Web Application

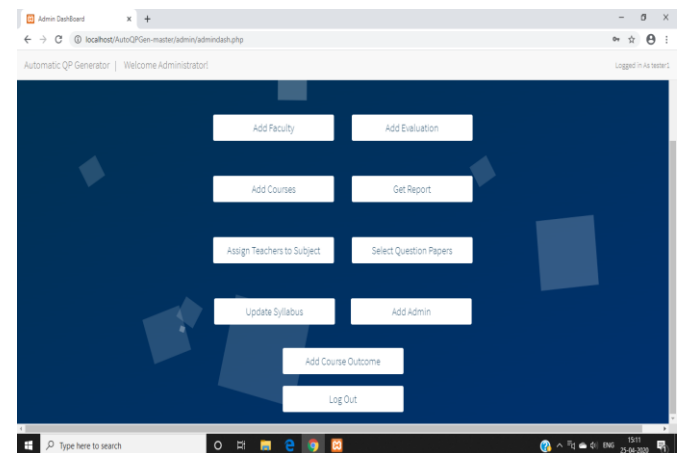


Fig -4: Homepage2 of the Web Application

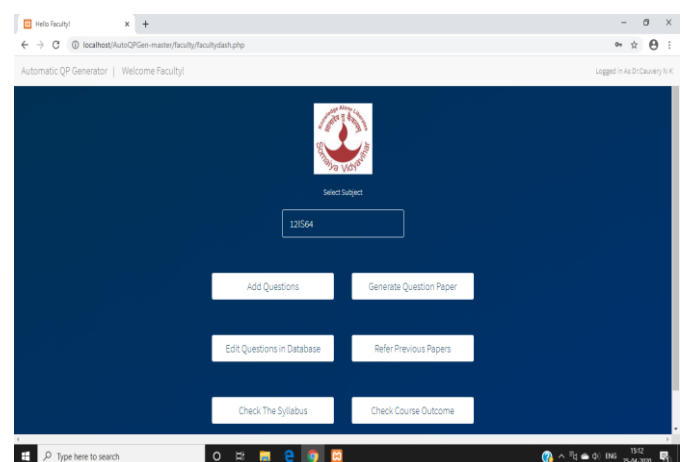


Fig -5: Homepage3 of the Web Application

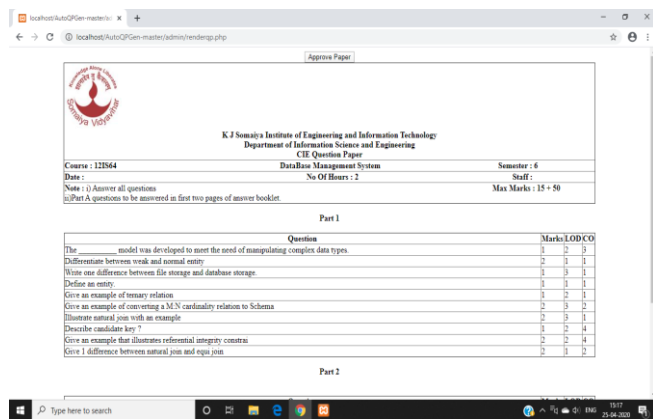


Fig -6: Final Result format of the Web Application

2.2 Algorithm

To improve the security of the system, we are using AES secure encryption algorithm for encrypting/decrypting the questions. AES-Advanced Encryption Standard is a symmetric encryption algorithm. Passwords are hashed using the MD5 hashing algorithm. The MD5 message-digest algorithm is a widely used hash function producing a 128-bit hash value. We use update and login history with re-captcha from Google session timeouts.

2.3 Advantages of the System

The most important advantage of this system is that it is designed in such a way that the questions meet the respective course outcomes they are supposed to as decided by the guidelines of the university. This system could be merged with the official college website to make it more accessible. This project follows a very modular approach, so the addition of more modules is possible in this without disturbing the existing central system. With this we will be able to provide a computerized evaluator which works on the keywords listed and standard definition. Also, with added security i.e. due to the login procedure of the webpage and use of secure encryption/decryption algorithm it is not possible for anyone to meddle with the system. It saves a lot of time for the professors as compared to the traditional approach.

3. CONCLUSION

Along with engineering institutes, this application can be developed for important milestone exams such as 10th and 12th boards. They get a boon to solve multiple question papers. With this we will be able to provide a computerized evaluator which works on the keywords listed and standard definition. Our system is very helpful for the professors in generating question papers automatically. To frequently generate good question papers which meet the learning objectives of the course, we need expert professors to collaborate with us. This system will save a lot

of manpower and efforts across different streams. Once this system is up and running, we will be aiming to improve the accuracy of the system furthermore.

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