# QUESTION PAPER GENERATOR SYSTEM

**[1] Mrs. Asha Rawat, [2] Priyesh Solanki, [3] Manish Patil, [4] Shraddha Mhetre, [5] Urvashi Bhadarka**

1,2,3,4,5 Computer Engg., PVPPCOE, Chunabhatti.
mp121995@gmail.com

*Abstract* — **An examination is an important activity and more important and challenging is preparing exam questions paper which is very tedious and time consuming process for the instructors. So to reduce the workload of the instructor and also to increase the security while maintaining the question papers an 'Automated Question Paper System' is proposed. As the name suggest the tasks which were then performed by the faculties now will be carried out by the machine. The Question paper is generated according to the blueprint of the particular subject as specified by the university/institutes.**

**This system also offers choices to select different 'templates' of Question paper and if not comfortable with the predefined templates, customized option is also mentioned. The generated question paper will be in accordance to the modules and templates which is saved in PDF format and uploaded with a 'timestamp'. 'Activty log' is also introduced in this proposedsystem so even small changes done will be recorded and can be retrieved. 'One time password(OTP)' for the examination centre will help in securing the downloading process and thus maintaining the usability,reliability and integrity of the system.**

*Index Terms* —**QPG(Question Paper Generator), QP(Question Paper), Templates, Autocomplete.**

## I. INTRODUCTION

The main objective of Automated Question Paper Generator System is to create a software which not only provides question papers which are generated automatically but also offers a reliability and integrity while using the software. This system helps in reducing the tedious task of the teachers of manually creating the question papers in an efficient manner. As the name suggest the tasks which were then performed by the faculties now will be carried out by the machine. This system consists of Admin Login (the cardinal personality of the whole system), Teacher Login (authorised staff from various colleges), Examiner Login(the person from the exam section) and Student Login(the student can register themselves and practice). The Admin is responsible for registering the Teacher and Examiner. The registered staff i.e Teacher will have the authority of adding the questions in the database by selecting the subject, branch, year, semester, difficulty of the questions and also can perform other activities like View/Update/Delete. Admin will have the authority of generating the question paper. The admin after loggin in will select all the parameters and preview the question paper if the question paper is not as expected, there is option of previewing the next paper and saving it for further uploading. The

questions will be sorted according to the difficulty level and using shuffling and randomize algorithm will generate the question paper. The generated question paper will cover all the module wise distribution of the marks. This system will also allow the admin to choose the templates having marks of various formats. The admin also the choice to have its own set of customized question paper formats. Latter the generated question paper will be stored in a PDF format and will be uploaded using a Timestamp (for eg. If the exam is at 10am the question paper will be uploaded 1 hour prior to exam time). This system also supports the Activity log keeping a check on each and every minor details like who logged in? at what time? Activity performed? etc… The system also offers a security function of One Time Password (OTP) i.e an intended Examiner can only log in and download the question paper by the OTP generated on his/her registered mobile number. This software will empower the universities/colleges/institutes with a powerful tool to generate question papers in a very short span of time thus saving a lot of time.

## II. LITERATURE SURVEY

Previously the examination cell of the college or board needed to prepare question papers manually which was very monotonous and time consuming. There are a few systems in today's market that offered the similar services like the proposed system. Those systems are developed by different developers with different features. The techniques employed by such systems are also different.

Disadvantages of existing system:-

1.    Errors: The demerit of test checking is that errors are not disclosed by it. In the presence of error, true and fair view is not possible.

2.    Frauds: The demerit of test checking is that planned frauds may not be disclosed. The fraud discovers is the responsibility of management.

3.    Responsibility: The demerit of test checking is that auditor cannot shift his responsibility of management.

4.    Report: The auditor report may fail to disclose true and fair view of business matters.
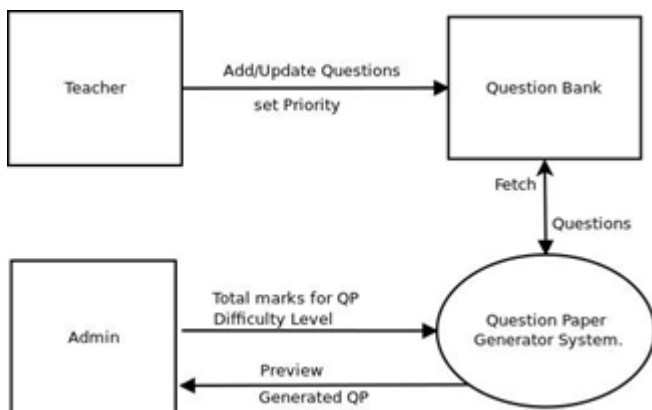
Suraj Kamya, Madhuri Sachdeva, Navdeep Dhaliwa and Sonit Singh proposed a system based on Fuzzy Logic in which all parameters were categorized based upon some logic so that the system can be easily acquainted with them. Drawback of this system was that it could only provide results on the basis of analytical and descriptive format; it could not provide Multiple Choice Questions. [1]

Noor Hasimah Ibrahim Teo, Nordin Abu Bakar, Mohamad Rezduan Abd Rashid proposed a system "Representing Examination Question Knowledge into Genetic Algorithm" in which text matching and question sorting was done by the system itself but one of the major limitations of this system was the total number of questions that could be added. [1] Vijay Krishan Purohit', Abhijeet Kumar', Asma Jabeen,

Saurabh Srivastava, R H Goudar ,Shivanagowda proposed a system "Design of Adaptive Question Bank Development and Management System" that was an adaptive system but the data entered is assumed to be error free which could affect the overall accuracy of the system. [1]

### III. PROPOSED SYSTEM

It mainly deals with the gathering, sorting and administration of a large amount of questions about different levels of toughness from scientific as well as non scientific subjects related to various classes. This project introduces the usage of shuffling algorithm in Automatic Generation of Question Paper (GQS) to overcome the mentioned problem. Also, the system will limit the human intervention to raise the secrecy standards, flexibility in logical selection of questions. The main part of the shuffling algorithms is to provide randomization phenomena in question paper generation system, thus different sets of question paper could be generated with less chances of repetition and duplication.



### IV. ADVANTAGES OF PROPOSED SYSTEM

1. This system is going to save time. It's a very hard when teacher search particular number of paper from bunch of papers. Examiners can generate test papers randomly by using QGS instantly, thus saving a lot of time. QGS can help examiners to generate the question paper based on the learning outcomes elements.

2. Computerization is important for every field because the data is secure in computer and no need to search the data from years of trash.

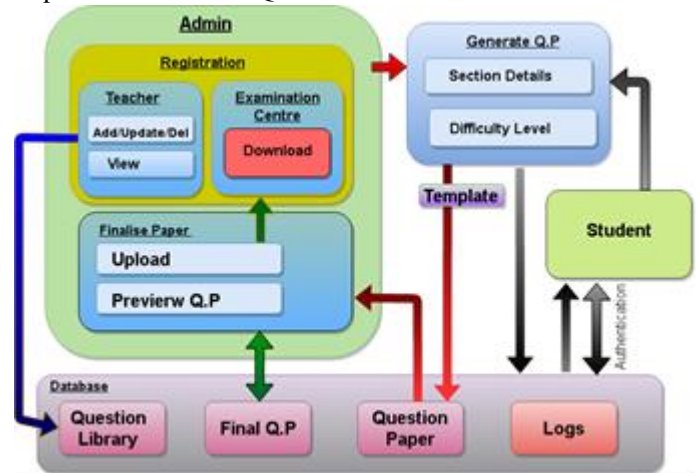3. Wide portion coverage and efficient question paper generation.

4. No chance of paper leaks and the system provides an unbiased result.

5. Thus the system excludes human efforts and saves time and resources. Also the Students are able to practice for the exams, based on their choice of format selection, in
which they want to practice.

6. Until now, none of the systems similar to ours, came up with an idea of predefined templates , which will not only make the work easier and quick, but also reduces a lot of overhead in this process.

7. Autocomplete list will be helpful while feeding the questions into the database, which in return avoids duplication and Repetition.

Implementation of the QPG



SYSTEM ARCHITECTURE

### V. SOFTWARES USED FOR DEVELOPMENT:-

For Frontend:- Software used is JSP java servlet

Servlet is a technology i.e. used to create web application.It is a web component that is deployed on the server to create dynamic web page.[2]



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For Backend:- Since ORACLE is paid, software used is MYSQL(it is the world's most popular open source database.)

Apache Tomcat Server is used for connectivity purpose. The Apache Tomcat® software is an open source implementation of the Java Servlet, JavaServer Pages, Java Expression Language and Java WebSocket technologies.

## VI. MODULES

1)    Admin login:- Every school, college, or institutes, whomsoever using the QPG system will be empowered with an Administrator, the foremost important and responsible person w.r.t to examination section of particular institute. The admin possess two operations viz.,

i. registration of staff members of particular institute, thereby providing login credentials to them.

ii. Generation of QP by choosing essential fields such as type of QP, total marks , difficulty level etc.

2) Teacher login:- Based on the provided login credentials from the respective admin of an institute, teacher will have the responsibility to mainly, Update the database by insertion of questions/modifications if required any.

3) Student login:- students can register themselves, provided with the college enrollment id , in order to check for any updates related to exams

Also students can practise and prepare for examination based on subject-chapter-module wise filtration.

4) Question insertion:-As mentioned above, it is the responsibility of teachers of a particular institute, to add/update questions in the database, question insertion will proceed by filling up required or essential fields(options)

Fields include:-
●   Course
●   Semester
●   Subject
●   Priority of respected Question

5)    Difficulty choosing:- To achieve unbiased as well as expected output, QPG system is introducing a new field named "difficulty choosing" which not only selects questions from the database randomly but also filter those questions based on the priorities defined in various difficult levels. Predefined priorities based on difficulty choosing is as follows:-
●   Easy:- priority ranging from 1-2.
●   Medium:- priority ranging from 3-4.
●   Hard:- priority ranging from 5-6.

6)    Templates:- Since QPG system will be used by any private/public institute, our main purpose for introducing this module, is to get work done with ease and to achieve quick results. This module comprises of various templates.

7)    Generation:-Every public/private institute is assigned with an Admin, which is responsible for Generation of QP for the respective institute.As and when the admin selects the difficulty level and template for desired output, a query will fired into the database wherein, those type of questions which falls under the selected category , will be filtered and get store into an array. An predefined function called "Shuffle()" is triggered on to the array in order to achieve random sequence of questions, which are then reflects into the preview of QP.

8)    System Auditing:- As Auditing is the most important aspect in any system, we do have implemented auditing by storing logs of all operations such as:

i. After signing up or signing in into the system, an entry will be stored into the database with parameters {time, date, Teacher id, }.

ii. As and when addition/updation of any question is done then the essential information such as { time, date, sem, sub, teacher id.} is been stored inside the database.

iii. while downloading the final QP through the website, Timestamp is recorded and stored into the log along with the examiner id.

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