AUTOMATED QUESTION PAPER GENERATING SYSTEM

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ABSTRACT

Examination process is an important activity for educational institutions to assess the students performance. Thus the nature of the exam questions would determine the quality of the students produced by the institutions. Preparing the exam question paper is very challenging, tedious and time consuming task for the instructors. In the proposed Bloom's taxonomy level of each question will be detected automatically, to aid educators in preparing examinations that are aligned to learning outcomes. shuffling algorithm and randomization technique will be used to select the questions. In this system, the user needs to specify the subject code and the question Pattern. An examination question paper will be generated automatically by randomly selecting the questions from the question pool and also getting the questions without repeatation. The final question paper will be stored as a pdf file.

Keyword: - *Shuffling , Randomization, Bloom's taxonomy, and automated etc….*

1. INTRODUCTION

Traditionally question papers are prepared by the faculties of the college using their experience and knowledge. This process consumes a lot of time for setting a question paper main problem in traditional approach is a chance of getting flawed question papers because of instability of setting the topics, narrow syllabus, etc. To generate these question papers, one has to put lot of effort and it is more comprehensive. In the proposed system a novel approach of generating question paper is introduced in which a computer is involved instead of teacher. Automatic Generation of question paper plays a vital role in achieving grades to the students as well as to the institution.

In existing question paper generation system, questions will be selected from the database not analyzing the question type and also the previous year question papers will not be taken into account. In this system, analyze the question type using Bloom's Taxonomy and also compared with three set of question papers that are stored in database. These all process are performed and then generating the new question paper. In this paper, security of the generated question paper is concerned. So whenever a staff prepare question paper and system convert PDF file will be sent to the administrator. Even staff doesn't know what are the questions are present in the question paper.

1.1 Existing System

As the manual generation of a balanced question paper by an individual is quite complex, the blending of technology into teaching and learning process is inevitable. A simple and efficient way for an examination paper generation is provided. A three tier model is provided in this framework. Generation of Examination Papers is governed by the Syllabus Engine, Pattern Composer and Question Aggregator[4]. The generated question paper is based on the pattern or skeleton of the course. In another system Questions are entered through the Question Aggregator. The attributes related to questions are type, marks and complexity. All these attributes are efficiently used during Question Paper Generation. The paper generator selects a question according to the pattern and complexity. This engine also introduces a marking systems wherein any selected question is marked so that it might

not be selected again. Another paper has implemented a complex but highly efficient Ant Colony Algorithm. It requires building of a mathematical model of constraint according to the requirements of the paper. This paper provides an efficient solution with their algorithm. The importance of automation is very well documented in the context of Task Engineering.

1.2 Proposed System

This system introduces the usage of shuffling algorithm in Automatic Question Paper Generating System (AQPGS) to overcome the issue stated. The main role of the shuffling algorithms is to provide randomization technique in AQPGS thus different sets of question will be generated without any duplication. AQPGS is the system that has features for keeping test bank question and produced exam paper. This is an automatic process of exam paper generation together with answering scheme. It uses a huge question bank based on the learning outcomes elements which refer to the Bloom's Taxonomy. Bloom's Taxonomy includes 6 elements of learning outcomes which are knowledge, comprehension, application, analysis, synthesis and evaluation. Bloom's Taxonomy divides the way people learn into three domains. One of these is the cognitive domain which emphasizes intellectual outcomes. This domain is further divided into categories or levels. The key words used and the type of questions asked may aid in the establishment and encouragement of critical thinking, especially in the higher levels. This system is very useful for lecturers. Lecturers also will be free from tension of collecting all questions to generate single question paper for the examination. The functions in AQPGS are embedded with learning outcome measures that would help lecturers to produce quality exam question paper according to learning outcome objective for each course. Lecturers could also generate different sets of question papers from the same database with just one click by selecting all the requirements needed. The option to choose shuffling algorithm for randomization is because of simplicity. All the questions are picked randomly from the database. The Final question paper set will be generated in pdf format.

2. SYSTEM DESIGN

In this Flow diagram staff must be login/register for authentication. If new staff is login must be register their details in the database then admin approve/reject the staff .Admin also be authenticated. After the admin approve the registered staff then only the staff is authenticated. In the staff allocation module allocate the staff members for each subject. Once the staff is to be allocated it enable the option to upload the question by the authenticated staff. After upload 3 set of question papers all the questions are stored in the database system will generate the final question paper with the question type by using blooms taxonomy technique. Questions are shuffled and get the random question from the database. admin click the view question button it display the final question paper if admin wants to that question paper in pdf format just click the pdf button final question paper is download.
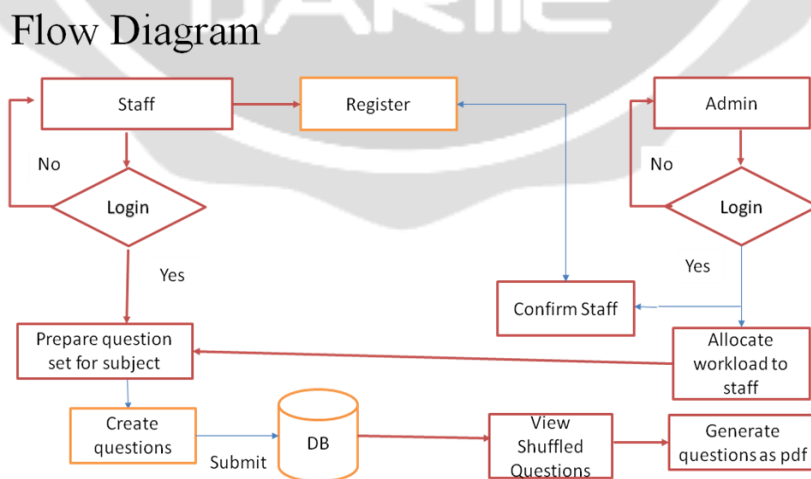

Fig -1 Flow Diagram

3. MODULE DESCRIPTION

3.1 Question Set Acquisition

Existing staff must be login to the system by entering staff id and password after the authentication process the staff will be select any one of the question pattern for adding the questions. Pattern selection is based on the admin instruction. Staff entered question and their question type will be stored in the database for further processing.
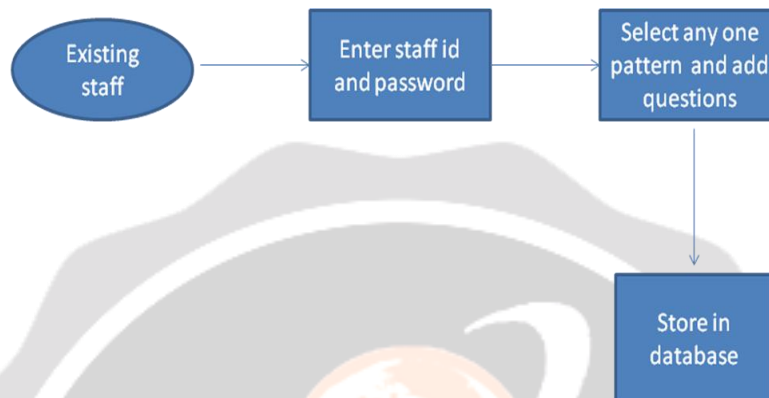

Fig -2 Question Set Acquisition

3.2 Identification And Classification

Only authenticated staff is add the questions to the particular subject. If the staff is allocated and also authenticated then the staff have the permission to add the questions one by one it display the type of the question and the question as well as the type are stored in the database.
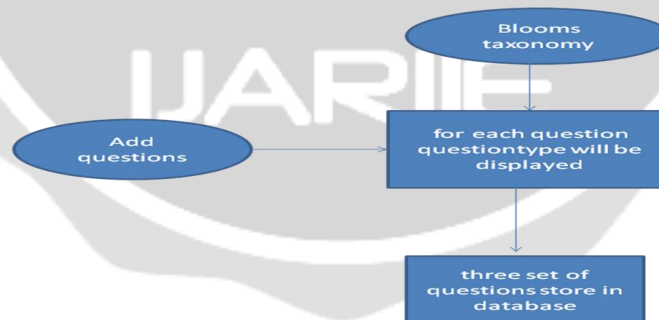

Fig -3 Identification And Classification

3.3 Question Set Generator Module

Get all the set of questions in the database for getting the single set question without the repetition .Shuffle all the questions and get the random question for getting the new question paper without any duplication in that new question set contains the subject name, subject code and questions are arranged in the selected pattern question and the type of the question in pdf format.
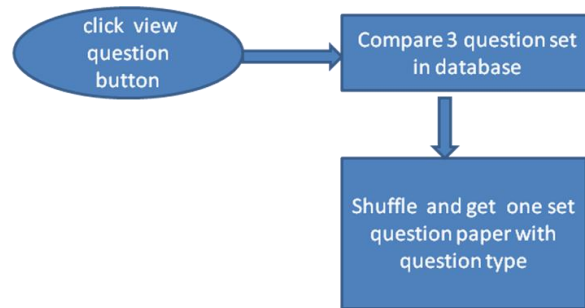
Fig -4 Question Set Generator Module

3.4 Question Set Evaluation

Staff given questions are stored in database then system get the random question by using the shuffling and randomization technique. finally the shuffled questions are gathered then the system will check if any duplication of the questions present in the question paper then admin view the generated final question paper in the window.

Fig -5 Question Set Evaluation

3.5Generate Question Paper In Pdf Format

If admin wants to get the final question paper in pdf format admin click the pdf download button. After clicking AQPGS will download the final output question paper in pdf format locally .downloaded pdf file contains subject name ,subject code and set of questions that are generated by the system with the question type.

Fig -6 Generate Question Paper In Pdf Format

4. CONCLUSIONS

A novel approach for the categorization of questions according to bloom's taxonomy is proposed. This application works as a web application with several features like authorization of users, security of questions and question papers. The results show the potential proofs of implementation of the proposed system.

5. REFERENCES

[1]. Automated Question Paper Generator System using Apriori Algorithm and Fuzzy Logic.
[2]. Design For Semi-Automatic Generation Of Question Paper From A Semantically Tagged Distributed Question Repository.
[3]. Automatic Generation of Question Paper from User Entered Specifications using a Semantically Tagged Question Repository.
[4]. Automatic Question Paper Generation System Using Randomization Algorithm.