

Knock Monograph Procreation - An Automatic Question Paper Generation System

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Abstract: The process of setting a question paper is tedious process which takes a lot of time and energy. Setting question paper involves depth knowledge in the subject and it is a challenge to set a good question paper that tests the intellectual of student rather than students’ memorizing capacity. This system makes that job easier by generating a question paper randomly based on the criteria specified by the teacher. This makes a question paper unpredictable. The existing systems generate only questions based on mark for complete syllabus only. The new system generates question with split up of question into two parts based on the teacher’s opinion and generates a question paper which consist of least similarities between the questions from same unit.

Keywords: Question paper generation, Automation, Random.

I. INTRODUCTION

The traditional method to prepare question paper consumes lot of effort and time. By automating this process an entire question paper is generated in few minutes time. The inefficiency in the existing systems is that all the questions under a section are single question corresponding to a weightage. In this system each question in the section can be split in to two based on the teacher’s choice which adds up to total weightage required for that question. These questions are selected in a random manner ensuring the uniqueness at a click of a button. The uniqueness criteria for the generated question paper are that no two questions corresponding to a same unit is related and they are from different part of the unit. The system eliminates the necessity of solely depending on a person’s knowledge to set question paper for examinations. Also the management of the questions is easily done by the system itself. The generated question paper can be easily saved into a pdf or word format for editing and printing purpose in a single click.

The system has ability to save all the questions in the database and retrieve it based on the subject for which the question paper needs to be generated. The user information is also maintained to authenticate teacher to set question only for their respective department.

A. Stepwise Working

- Step 1: The admin enters the user information or the questions along with the key features into the system.
- Step 2: The system stored the questions by segregating it based on question type into the database and stores the user information also.
- Step 3: The teacher selects required subject and the split-up criteria for the question paper that needs to be created.
- Step 4: The system generates the question paper according to the criteria given by the teacher.
- Step 5: The teacher saves the generated question paper into a format for editing.

II. PROPOSED MODEL

The system gives an easy method for the composing of the question paper. The prerequisite to do so is to maintain an efficient database of segregated questions based on marks and subject with key features to identify the section of the chapter from which it comes from. The system operates on two modes one is admin and the other is staff.

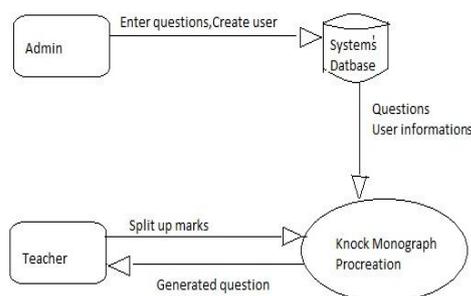


Fig 1: Working of the system

III. SELECTION ALGORITHM

The selecting algorithm works with a combination random algorithm with a dynamically changing looping structure to select the number of questions per unit that may vary based on the teacher’s choice of split-ups. The behaviour of the algorithm as follows

For each question

- 1) Check the split-up array for that part of the unit
- 2) If there is a no split up go to step 6
- 3) Select the first weightage and randomly select question and insert the key and question number to unique array.
- 4) Select a question from the table belonging to second weightage check compare with unique table if matches repeat step 4 else insert into unique array.
- 5) Go to step 2
- 6) Select a question randomly from the table belonging to total weightage of the question.
- 7) Select the questions from database that has index in the unique array.

A. Modules

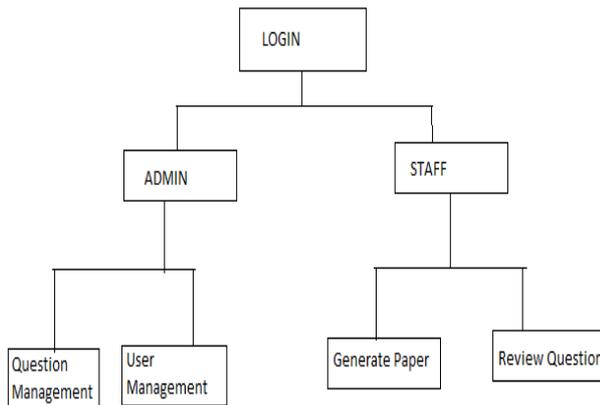


Fig 2: Modules

Admin module: The user privileges are given to the teachers by the admin

Staff module: The staff has authentication to review the questions of the respective departments and to generate the paper.

Login module: Used to login either as admin or the staff and to go to their respective functionalities

IV. FEATURES AND BENEFITS

The system greatly reduces human effort and produces a close to human result in creating a question paper automatically. After the question paper is generated it is easily save to an editable format to add additional information to it. This system reduces time and cost involved in setting up a question paper. A new question paper can be created in seconds in case of last minute changes

A. Features

- 1)User friendly interface to add or update questions to the database.
- 2)Restricts teacher to set question paper for only relevant subjects.
- 3)Option to save generated paper to desire format.

B. Benefits

- 1)Question paper for an entire examination for all the departments in a college can be generated within a day.
- 2)Low cost and low maintenance.
- 3)No installation required since it is an online application.

V. CONCLUSION

The paper gives out the describes how our system is used to generate a question paper where questions are split up based on the users requirement .The system also uses a random algorithm which changes its times of execution based on users requirement.

ACKNOWLEDGMENT

We thank all the authors listed in the references for their valuable study and work which was a great help.

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