1. **Title of the Project:** Revisiting Automatic Question Paper Generation Systems

2. **Name of the College and Department:**
   Vidyavardhaka College of Engineering
   Department of Computer Science and Engineering

3. **Name of the students and Guides**
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4. **Keywords:** Questions, Answer cues

5. **Introduction**

   Tests and examinations are part of competence and performance evaluation of learners in both formal and informal institutional setups. They are generally used to determine an individual’s potential, suitability, and also as means to assess learning outcome. The university guidelines concentrate only on the format of question paper rather than on the quality of the question paper. It is very challenging for the teachers to cover all the aspect of the course objective and avoid duplication of questions. Hence this Project Provides user-friendly approach of generating question paper. The following projects described below gives a background/reference for our system.

   The Existing Automatic Question Paper Generator System uses a Randomization technique as a shuffling algorithm to generate the question Paper. It consists of three phases viz., Selection of Parameters, Formation of Question Bank and Generation of Question Paper. Question Paper will be prepared based on the Difficulty Level set by the Admin.

   A project by name multipurpose Evaluation System developed by National Testing Service-India, helps to construct language tests from primary to research level for various Competitive Examination. The mechanism consists of two components: Comprehensive Database and Retrieval System. The Comprehensive Database consists and cover the major and minor components of languages and literature based on linguistics. The Database consists of both
objective and subjective type of questions. This project was developed for Hindi, Urdu and Tamil languages.

6. Objectives

Examinations have been used as a means of performance evaluation since ages. They are used to determine an individual’s potential, suitability, and also means to assess learning outcome. The main objective of the system is to avoid human intervention in setting the question paper. This system provides automated fast and secure way of generating Question Paper and Answer cues. It facilitates easy Evaluation to the evaluator by providing answer cues for the Respective Question paper. A new question paper may be generated within a very short time, this greatly reduces the possibility of an examination that is usually postponed or cancelled when a question paper gets leaked or is tampered with.

7. Methodology

The system consists of three modules namely Login module, Question Input Module and Question Retrieval Module

The system uses C#.NET for user interface design. SQL server 2017 is used for database storage, and SAP crystal report 2016 is used for generation of the question paper. The question paper is generated using an efficient algorithm with the high possibility of minimum redundancy. Since the inputted question items are marked for their difficulty index, the paper may be customized as per testing requirement, i.e., basic to advanced level of difficulty.

The Question Input Module is the part of the system where questions are inserted into the database by the item writer (the faculty). Each item writer will be identified by a unique ID denote and the details of the item writer such as email ID, etc. are also stored.

These questions are given to a data entry operator who inserts these questions into the database. The details of the data entry operator is also stored in an exclusive table.

The Question Retrieval Module takes in different inputs to output a ready question paper.

This module takes in the name of the subject, type of question, no. of questions, marks allotted to each question.
The below flow chart gives a detailed view of the logic behind the question paper generation.

Fig 1: Retrieval System

8. Results and Conclusion
The system reduces the human effort by a great margin. Since the question paper is generated using an efficient algorithm with high possibility of minimum redundancy, different set of question paper for same subject can be set. It avoids the possibility of examination being postponed due to question paper being leaked. The generated Question Paper can be converted to doc or pdf format and can be mailed to the institutions.

9. Scope for future work
The system can be made to have an Evaluation System. The Answer cues generated can be used to make Evaluation Automatic. Our System has been designed as a proprietary software which can be converted to an open source.