



An Role Based Hierarchy Model for Quality Question Paper Generator

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ABSTRACT: Nowadays the era is very challenging era where education is most vital way of accomplishing success. In education, test and examination play a dynamic role in testing student's recital. Hence it is imperative to have smart development question model for enhancing the competences of student as well as to test their learning skill to check student performance. The customary method i.e. Bloom's Taxonomy in which the questions or topics are extricate with different stages which are as R(Remember), K(Knowledge), U(Understand), A(Application, Analysis, Apply), E(Evaluate), C(Create). So the paper setter has to do all the manual work which very tedious challenging and require human devotion. Hence we present the solution in form of Quality Question Paper Generator System.

KEYWORDS: Bloom's taxonomy, Curriculum, Examination, MSBTE, Quality Question paper.

I. INTRODUCTION

In today's era, time is foremost concern. To save time and reduce power consumption we are introducing a Quality Question Paper Generator System. The resultant formatted system for Question Paper Generation provides improvement in the terms of controlled access to the resources, generation of quality question paper and a secure platform. We have introduced a system that stores questions as per course and its syllabus and curriculum. We have applied role based hierarchy which limits access to the user. The system also deploys security mechanism that avoids redundancy of questions in question paper. There is provision to enter and edit data suitable to any educational organization for specific courses, semesters, syllabus and pattern. This enables an educational institute to generate question paper during security and non-redundancies of questions. And as per level established by Bloom's taxonomy question paper is generated with preserving its quality. Consider an example: "What are the features of java?" Students will get jumbled to answer this question. Instead of this, if we can write it as: "List the features of java." OR "Explain any four features of java." Then students will get accurate idea to answer this type of questions.

II. RELATED WORK

We are discussing about technical education. In Diploma the curriculum i.e. the syllabus is designed by MSBTE (Maharashtra State Board of Technical Education). Every curriculum has head, in that TH(Theory), PR(Practical), TW(Term Work), OR(Oral). In every Subject, there is weight age for each chapter and from this total become 100. So the Question Paper for the particular subject is created or set with 'WH' Questions. In that they use the basic concept i.e. Bloom's Taxonomy in which the questions or topics are characterized with different levels which are as R(Remember), k(Knowledge), U(Understand), A(Application, Analysis, Apply), E(Evaluate), C(Create). So the paper setter has to do all the labour-intensive work. And it is a very frenzied or tiresome work so to devastate this we are introducing the An Role Based Hierarchy Model for Quality Question Paper Generator.



International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Website: www.ijircce.com

Vol. 5, Issue 1, January 2017

Some existing systems are as follow:

Moodle:

Moodle was formerly developed by Martin Dougiamas to assist educators to generate online courses with an emphasis on interaction and collaborative construction of satisfied and it is in continual evolution. Moodle was erudition platform can increase existing learning environments. As E-learning tool, Moodle has broad range of standard and inventive features such as calendar and grade book. Moodle is a prime virtual learning environment such as education, training and development.



Fig 2:Moodle Logo

Demerits of using Moodle: The first issue is the fact that Moodle is not entirely developed to treaty with big projects. While it may be useful for colleges or universities of small to medium size, the system might not work effectively with larger schools or serve as a great way to conduct all classes in a city. In addition to the absence of complete development, Moodle users habitually complain about the problems they experience with customizations.

Cloze Question Generation (CQG):

Cloze question are questions comprising sentences with one or more blanks and multiple choices listed to choose an answer from. In this work, system presents an automatic Cloze Question Generation (CQG) system that generates a list of important cloze questions gives an English article. The system is divided into three modules: sentence selection, keyword selection, distractor selection.

Disadvantages of CQG: The face validity is low because there are many blanks. If the isolated words are difficult, the test takers concentrate their mind in guessing the vocabulary instead of comprehending the test.

III. PROPOSED ALGORITHM

We have proposed a system for Automatic Quality Question Paper Generation which is based on Role-based Hierarchy model. This model allows the tasks to be divided among a number of users depending upon their roles. A central administrator will have complete supremacy over all users and tasks. The interface is provided using ASP.net and MySQL database is used to store questions and related data. Syllabus and pattern of any course is considered while generating question papers. Also, the system is fully changeable according to any educational institute and course schemes.

A. Role-based Hierarchy:

In our system, there are basically three types of entities-that are Administrator, Data Entry User and Paper Generator. A Data Entry User can only access the modules pertaining to data entry while Paper Generator generates question paper whenever required. Administrator is authorized to perform all the tasks and have control over the all the user.



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B. General working:

Courses, syllabus, patterns, questions can be entered and are stored in database. Data Entry User does data entry and it is in the form of syllabus or specification table in which all questions are defined as per Bloom's taxonomy. Administrator validate the data entry user and it request for question paper to Paper Generator. Paper Generator extracts the questions from database in some particular manner using proposed algorithm and generate quality question paper. The system also avoids redundancy of questions in question paper. This allows an educational institute to generate question paper during security and non-redundancy of questions. And as per level defined by Bloom's taxonomy question paper is generated with maintaining its quality.

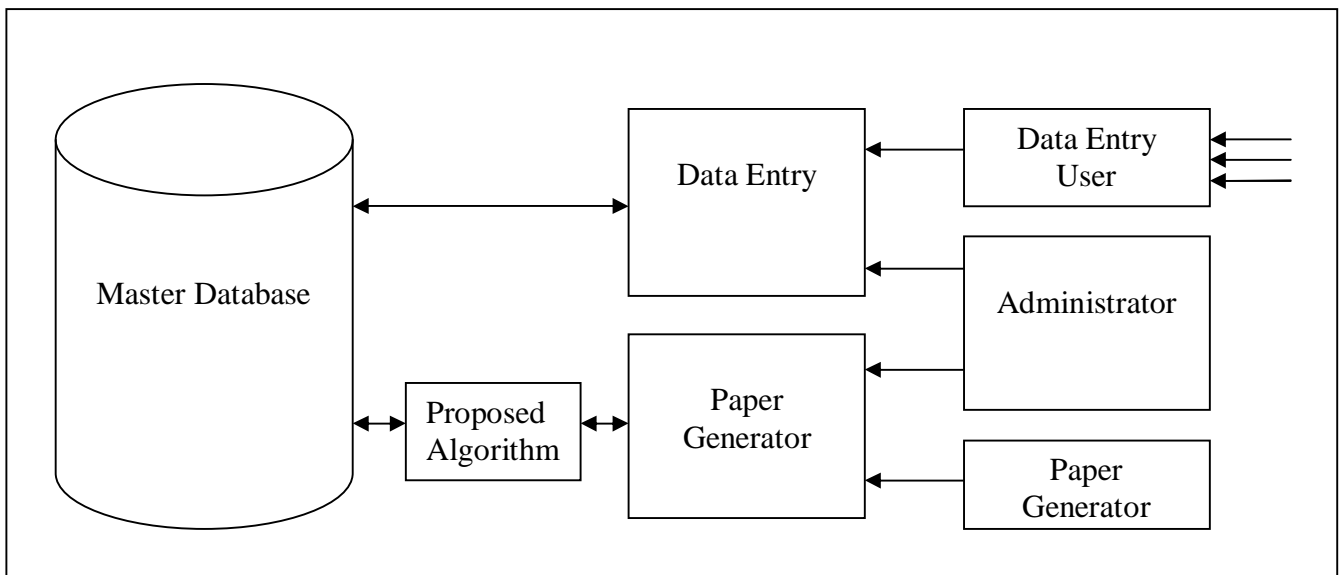


Fig3: Block Diagram

IV. CONCLUSION AND FUTURE WORK

The proposed work elaborates a Quality Question Paper Generator System that improves from traditional method of paper generation to an automated process. Our system has deployed an effective algorithm which generates question paper for particular course by following particular pattern and avoids redundancy of question to maintain its quality of produced question paper.

In the proposed system, the levels of Bloom's Taxonomy are predefined whereas in future proposed system levels can be defined by us.

ACKNOWLEDGMENT

It gives us great pleasure in presenting this project report titled "An Role Based Hierarchy Model for Quality Question Paper Generator" and we wish to express our immense gratitude to people who provided invaluable knowledge and support in the completion of this project. We express our gratitude to our project guide **Prof. Vishakha N Pawar**, who provided us with all the guidance and encouragement throughout the project development. We would also like to express our sincere gratitude to the respective Project coordinators. We are eager and glad to express our gratitude to the Head of the Computer Engineering Dept. **Prof. Charushila D.Patil**, for her approval of this project. We would like to deeply express our sincere gratitude to our respected principal **Prof. P. S. Duggal** and the management of Guru



ISSN(Online): 2320-9801
ISSN (Print): 2320-9798

International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Website: www.ijircce.com

Vol. 5, Issue 1, January 2017

Gobind Singh Polytechnic for providing such an ideal atmosphere to build up this project. We are thankful to all staff and management for providing us all the facilities and resources required.

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