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Automatic Mcq Generator

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ABSTRACT:

QUESTION is an essential tool to assess the knowledge or understanding of a learner. Assessment is crucial in learning and question is essential for assessment. Multiple choice question (MCQ) is the most widespread form of a question for various levels of assessment. MCQs have many advantages including quick evaluation, less testing time, consistent scoring, and the possibility of an electronic evaluation. Many examinations use MCQ based question papers through a computerized environment. However, manual preparation of MCQs is time-consuming and costly. Therefore, the research community devoted substantial effort to find the techniques for automatic generation of MCQs. The research on automatic MCQ generation started at least 20 years ago. As an early attempt, we find the system developed by Coniam David in
1997 [1]. Since then, many MCQ generation systems have been developed in various languages and domains, and for various applications.MCQs are playing a vital role in all organizations, evaluating a person capability or eligibility for a particular purpose. Our Proposed idea to generate MCQs with software can help those kinds of organizations and institutes to evaluate one in a easy and time efficient manner. Manual preparation of exam questions is a challenging task for educators especially within a short time frame. It requires a lot of time and efforts in order to meet the standard quality of exam questions. This research introduces an automated exam question generator to resolve this issue in preparation of multiple choice exam questions.

I. INTRODUCTION

Multiple choice questions are a popular form of assessment in which the respondents select the best possible answer out of a set of choices. MCQ is often treated as a subcategory of objective type questions [2]. Primarily this type of questions has a specific scope, i.e., a question deals with the knowledge embedded in a
very small sized text, often a single sentence. A set of choices or alternatives is the primary requirement for labelling a question as MCQ. The actual answer to the question must be included in those alternatives. Due to this property, the MCQs are also called as cloze questions in the literature when we consider the nature of the question sentence of an MCQ, it holds multiple formats. Most popular among those are, fill-in-the-blank and wh-question[3].

Automatic MCQ Generator is a software application that gets data from user for

which a set of MCQ Questions need to be generated, The software will go through the data and with the help of the algorithm it will generate MCQ pattern questions which comprises of Sentence, the key, the distracters.

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A.EXISTING APPROACH

Currently in most of the educational institutions and organizations will assign a board of staff members to go through the syllabus or material and manually create MCQ based questions. As we can see it is a lot of time consuming and huge staff work involved.

B.PROPOSED SYSTEM

Our proposed system can overcome the drawbacks in the existing systems by

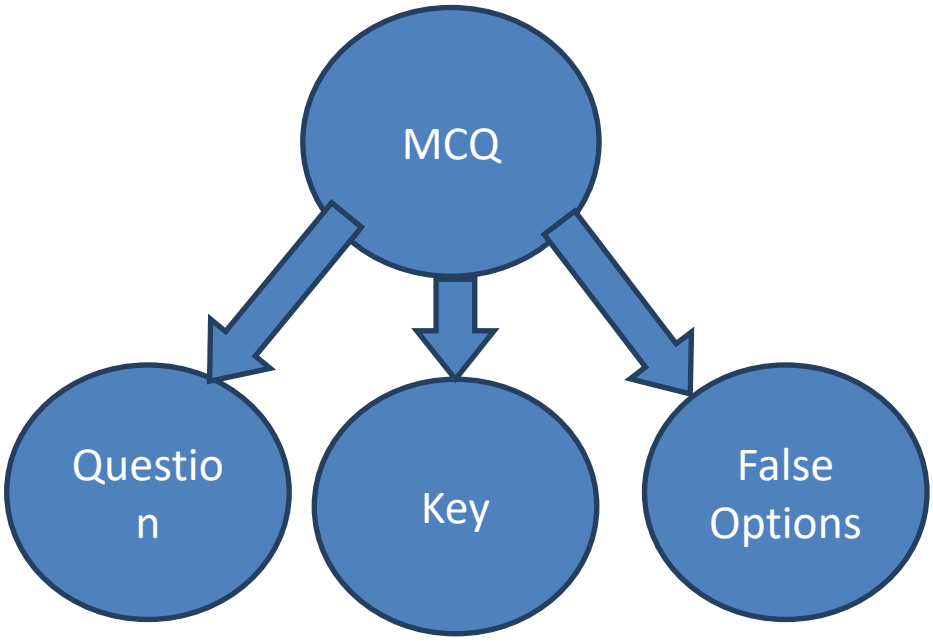
- **Less Time Consuming:**
  Once the data is feed to the system the system does everything in the backend, like all the process done manually by human in producing a MCQ question.

- **Less Man power:**
  In conventional method it takes lot of members to make a work happen in a very fast and quick manner, with our system the amount of human need with drastically get low

- **Less Interaction:**
  Besides feeding data, a person will not have any interaction with the system.

II. EXPLANATION

The whole system is analyzed and intended to produce the following components shown below:



Question:

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The question is the root of an MCQ based question which defines the statement of evaluation to the person. It has many structure defined to trick the person for whom it is specified.

Key:

The key is nothing but the correct option which concludes the question specified. In simple it is the one which completes the sentence or one which adds meaning to it.

False Options:

The options that are available except the key are called as False Options.

The main purpose is to make the MCQ tricky and confusing, to achieve that every other should be equally relevant as the key but it is not the key.

In order to make our system more effective and accurate as like our real human made MCQs, the above three mentioned sentence ,key ,False Options need to have a well defined structure and analyzation as high as possible it can be. So the system should able to learn from and should be able to improvise themselves on each usage, Also the way the process all those data should be a self learning process So that they can evolve according to the changing trend and patterns we use. Anyway these are the necessary ones where any system/software should concentrate on when developing MCQs.

III. MODULES

The following are the modules defined for the system. They are

- Interaction
- Keywords Generation
- Sentence Mapping
- Distracter Generation

Interaction:

- This is the phase of the system where the user interacts with. This is where the user provides the data required for which MCQs need to be produced.
- The Interface is defined in a well defined manner so that user can be very easy and convenient to use it.
- Once the process is done the produced MCQs are displayed here.

Keywords Generation:

- This is the next phase of operation where a set of keywords are analyzed and extracted from the data provided.
- This is a crucial one, because for next two phases needs key to proceed further.

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- The algorithm provided will analyze through the data and provide the keywords.

Sentence Mapping:

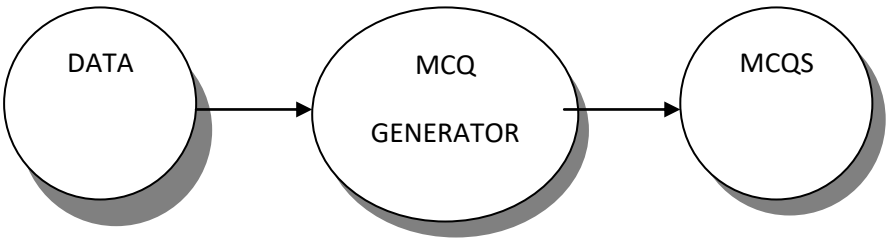
- The next phase of process where sentence for the keywords are mapped.
- Now the software will track the data with keywords and fetch words/sentences that can be mapped as an MCQ.
- Once done the keywords and sentences get mapped together.

Distracter Generation:

- The final phase of the system where the false options for the MCQ to be generated.
- For a word need to be a false option it should be relevant as far as it can be, so this makes it a tricky and a challenging one.
- Here we will use the keyword and pull the words that are more relevant to the words, For Example; If the word is Nile the algorithm fetches the root of the word which concludes River as the root of the keyword so the sub elements of the root will be defined as false options.

IV. WORKING

- The whole system will be expressed as a web application; On Entering the user will have a field to enter data.
- After getting data the system will provide the data to the system backend procedure/algorithm.
- On Getting data the backend will go through all modules specified phases of operation defined which are keyword generation, sentence mapping, and distracter generation.
- On Completion, the all terms will be mapped into MCQ format.
- Then the data will be provided to the user on the web application Interface.



V. SOFTWARE REQUIREMENTS

- Anaconda prompt and IDE for development.
- Any Operating systems that can run python and anaconda prompt.
- Any latest browser.

VI. ADVANTAGES

- No time consuming.

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- Reduces work load drastically.
- Easy to interact with the system.
- Reduces workforce.
- Can be made evolutionary on changing trends/patterns.

CONCLUSION

Evaluation is an essential part in a learning process and MCQs are

Popular among them because of its quicker evaluating and defined accessibility. In this paper we analyzed the actual need and difficulties caused by the conventional method in developing MCQs, Also how our proposed system will help to overcome those difficulties in all possible aspects. We are in the world where machines which designed to do calculation now changed the way we live and do things. Evolution and Innovation in every aspect of science and technology is required to overcome certain difficulties, this paper about Automatic MCQ generator is one of those innovation which should be needed and available in future to keep up with the phase of evolution in technologies and to evaluate those faster, easier and amongst all with less burden.

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