

Ai Answer Verifier

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Abstract: - Every year many students apply for various examinations which include competitive, institutional non-institutional competitive exams mostly have objective or multiple choice questions. As these exams are conducted on machines, their evaluation is easy and therefore is done on machines. However it has been observed that these examination cater only objective or multiple choice questions and provision to subjective answer and its evaluation is still an open problems. Automation of descriptive answer evaluation process will be helpful for various universities and academic institutions to efficiently handle the assessment of exam answer sheets of students.

Index Terms— Computer, Assessment, Descriptive, Processing Evaluating Grammar, Database Extraction.

I. INTRODUCTION

Examinations have always been part of every educational, non educational organization. Examinations can either descriptive or objective or both. Every examination needs evaluation. Most of the competitive examinations are objective in nature. They are conducted on machines evaluated on the same. These system or any other such system are more advantages in terms of saving resources. However it has observed that these systems can contain only multiple choice questions and there is no provision to extend these systems to subjective questions. There are few problems due to which these systems cannot be used in board examinations, university examinations where students writes subjective answer so there is need for software system which will help in reducing the usage of resources. for countries like India, ever-growing population and poor infrastructure hampers quality education. It can be imagined that the amount of pressure that is held on education system and teachers to evaluate the number of answer copies however, going forward, India will need to be focus more on quality. There are almost more than 10330 institutions that offer education in India to more than 2 million students. The AICTE also reported 6432 engineering colleges in India with an annual student is capacity of over 3 million and more than 1.6 million actually enroll with just 578245 faculties. On an average every institute has 4 examinations per year so when calculated more than around 6.4 million answer sheets are generated. Keeping in mind of faculties evaluating papers and assigning marks is a tedious job. The process of evaluating the descriptive answer will not only reduce the usage of resources bit also overcome the human limitations. It will also speed up the overall educational system as the students won't have to wait for a long time for the reason.

II. LITERATURE SURVEY

[1] Sheeba Praveen, Published in International Journal of Innovative Research in Computer and Communication Engineering. Vol. 2, Issue 11, November 2014. As observed that these systems contain only multiple choice questions and there was no provision to extend these systems to subjective questions. The paper presents an approach to check the degree of learning of the student/learner, by evaluating their descriptive exam answer sheets. By representing the descriptive answer in the form of graph and comparing it with standard answer are the key steps in our approach. Main drawback of the system will be Non Mathematical subjects only., Less efficiency in similarity matching., Multiple sentence answers are difficult to grade.

[2] Algorithm for Automatic Evaluation of Single Sentence Descriptive Answer International Journal of Inventive Engineering and Sciences (IJIES) ISSN: 23199598, Volume-1, Issue-9, August 2013. The proposed system was a system that would seek to implement an application which will be able to evaluate the subjective answer to a question. It will allot the marks according to the percentage of accuracy present in the answer. This system was a software system in which user will be authenticated by using user login. After the authentication, users will be provided with the questions. The proposed system was designed to evaluate answers for five users providing five different answers. The standard answer is stored in the database with the description meaning and keywords. Then it will evaluate each answer by matching the keywords or the key concepts as well as its synonyms with the standard answer. It will also check the grammar and spellings of the words. After the evaluation, it will grade the answer depending on the correctness of the answer. Here Drawback will be, Not easy to grade multiple sentences. As seen drawbacks of the other systems. In our system i.e AI ANSWER VERIFIER we

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overcome the drawbacks such as manual efforts, consume time, mistakes. Our main motto is that our system will be helpful for various universities and academic.

III. METHODS & MATERIAL

A. PROPOSED SYSTEM

The proposed system is a system that seeks to implement an application which will be able to evaluate the subjective answer to question. It will allot the marks according to the percentage of accuracy present in the answer. This system is a software system in which user will be authenticated by using user login. After the authentication, users will be provided with the question. Our proposed system is designed to evaluate answer for five users providing five different answers. The standard answer is stored in the database with the description meaning & keywords. Then it will evaluate each answer by matching the keywords or the key concepts as well as its synonyms with the standard answer. It will also check the grammar & spellings of the words. After the evaluation, it will grade the answer depending on the correction of the answer. The entire process consists of three main steps, keywords & synonyms extraction, matching of keywords & synonyms, weighting the keywords & generating score. This evaluation system will grade the answers depending upon the number of keywords matched.

IV. RESULTS AND DISCUSSION

A. Modules of Proposed Project

The system comprises of four modules and they are Login module, Information extraction module, Weighting module and Score Generation module.

LOGIN MODULE

The login module authenticates both the user & the admin. Once the authentication is done, the user and admin can perform their individual activities.

1. Admin Login:

The admin needs to enter the user name and the password for authentication. Once authenticated, the admin can now create the question & store the answer for the same in the database. The admin can also add students, subjects & tests for those subjects. The admin should keep all the keywords present in the answer in capital letters. Thus admin should store the answer with a subject expert helping him to identify the keywords present in the answer. The question will be displayed to the user and the answer stored will be used as the standard answer for comparing with the user's answer.

2. USER LOGIN

The user login enables the user to write the answer for the question displayed. The user is asked to enter his login id

and test id. If all the credentials are satisfied then the student is redirected to the page when the question & a text box for the answer is displayed. Once the user has completed writing the answer, he/she can submit the answer for evaluation.

INFORMATION EXTRACTION MODULE:

Information extraction module is a module where the process of extracting the keywords from the standard answer and the user submitted answer would take place. Along with the keywords, the synonyms of the keywords submitted by the user will also be extracted. The keywords that get repeated very often in a document is given less importance. But the keywords which occur rarely in a document will have great importance. The synonym of the keywords will be extracted from the dictionary stored in the database.

WEIGHTING MODULE:

1. Keywords

The keywords of the model answer must be written in capital letters while storing in the database. These keywords are extracted by our system and stored in a multidimensional array. Now these words are checked in student's answer and depending on the percentage of keywords present in the student's answer, marks will be given. First of all, the student's answer is broken down into strings & is stored in multidimensional array. Now the keywords extracted by the system from the admin's answer are checked with the array of the student's answer one by one.

2. Grammar

Grammar is used to form the structure of a sentence. There is a possibility that the user may only write the keywords without the sentences. Thus checking grammar plays an important role in answer verifier. In order to secure maximum marks the user must specify the keywords along with proper sentence formation. Grammatically incorrect sentences in the student's answer will be given less marks even if there are lots of keywords. The library that is used for checking grammar is "After the Deadline".

Grammar checking involves the following:

- Spelling errors: The student's answer is broken down into words and these words are checked in a dictionary which is inbuilt in. After the Deadline library. Those words which are not present in the dictionary are matched with the words within array of model answer. If they are not present in either of them then they are considered as incorrect words.
- Sentence Formation: Only if the sentence are in the correct grammatical form made for grammar are given.

3. Length

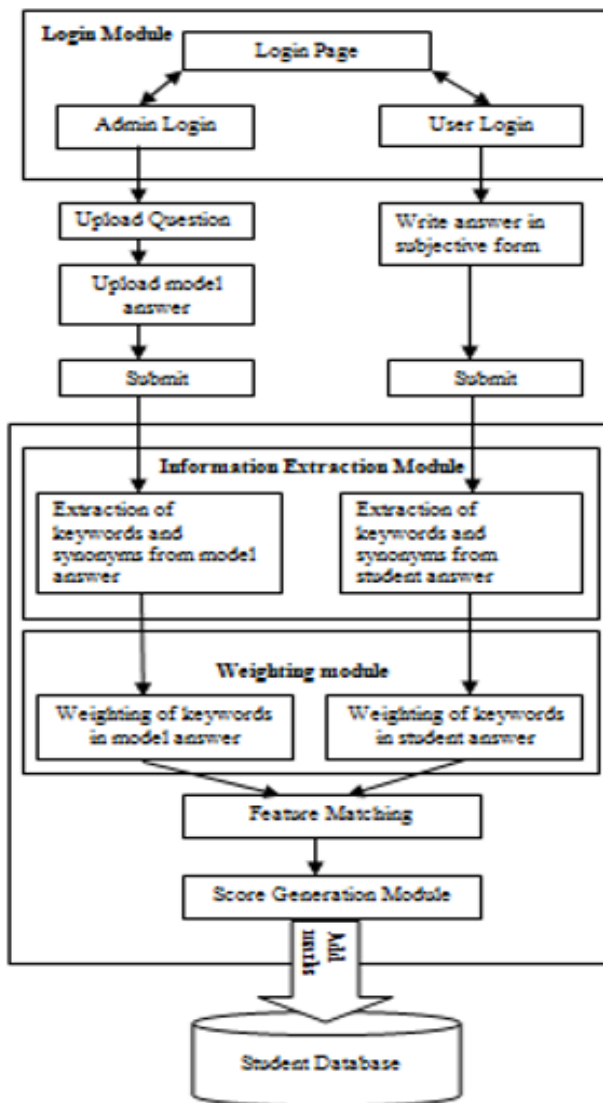
length of the answer is also important as the student may write the answer very shortly with all keywords & grammatical correct sentence. Such an answer would get all

the marks for grammar & keywords but it will get less marks for the length.

SCORE GENERATION MODULE:

The score for marks is generated depending on the above factors & the total marks will be sum of all the marks obtained from individual sections. Depending upon the priority, keywords are given 40% priority followed by grammar 30% & then synonyms 20% & the finally length of the answer is 10%. The marks for length are dependent on the percentage of keywords matching & a making scheme is tabulated for giving marks to the length. Thus if the students writes complete different answer with no keywords matching, marks would not be allocated.

B. Architectural Diagram:



IV. CONCLUSION

Examinations play a very important role in colleges, universities and various other educational institutes. Many educational institutes have their examinations conducted online, but these exams only contain multiple choice questions which are providing to be very efficient in testing the student's aptitude, on the other hand fail to measure the conceptual knowledge a student or learner must possess. Therefore subjective answer must be included in online examinations. The proposed system evaluates the answer based on the keywords. By comparing the standard answer and the student's answer, marks are obtained if the student utilizes all the keywords mentioned in the standard answer. Hence the said system could be of great utility to the educators whenever they need to take a quick test for revision purpose, as it saves them the trouble of evaluating the bundle of papers. Also, this system totally evaluates any circumstances of business. In the future, we are planning to evaluate subjective answer with diagrams and mathematical expressions. The current system only evaluates answer written in English. Further, it can be extended to evaluate answer written in other languages also.

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