Automatic Answer Checking Software

Vandana Bali, Vandhana Thevar, Samit Shivadekar

Abstract: An automatic answer checker application that checks and marks written answers similar to a human being. This software application is built to check subjective answers in an online/offline examination and allocate marks to the user after verifying the answer. The admin may insert questions and respective subjective answers in the system. These answers are stored as notepad files. When a user takes the test he is provided with questions and area to type his answers. Once the user enters his/her answers the system then compares this answer to original answer written in database and allocates marks accordingly. Both the answers need not be exactly same word to word. The system consists of in built artificial intelligence sensors that verify answers and allocate marks accordingly as good as a human being.

Index Terms: Semantic Analysis, Subjective answer checking

I. INTRODUCTION

The ideal exam system not only include objective questions (multiple-choice question, determine the question, ll in the blank), but also include subjective questions (short answer, prove, computing, programming questions).The automatic scoring algorithm of objective questions use the students answer and standard answer to compare. The results of this comparison are consistent, and then the answer is correct or wrong. It is easy to implement. There is not an examination system which is good to complete its automatic scoring because of the answer characteristics and complexity in the subjective question. Lot of technical question need to be solved, and thus it become a technical difficulty in the subjective examination system.

II. EXISTING SYSTEM

OMR software is a computer software application that makes OMR possible on a desktop computer by using an Image scanner to process surveys, tests, attendance sheets, checklists, and other plain-paper forms printed on a laser printer. OMR software is used to capture data from OMR sheets. While data capturing scanning devices focus on many factors like thickness of paper dimensions of OMR sheet and designing pattern.

OMR sheet design is created using the OMR sheet design software. OMR sheet printing can be done using normal laser / inkjet printer or photocopy or offset printing. Any ADF scanner (Automatic scanning from pocket) can be used for OMR sheet scanning.

Any regular flatbed scanner (1-by-1 sheet) can be used as an OMR sheet scanner. OMR software is the main component in the OMR sheet scanning process.

III. PROPOSED SYSTEM

The proposed automatic answer checking software checks subjective answers by applying various logics and then marks is allotted accordingly .

1. The Admin first logs in the software and has the following options :

The admin can set/change question paper or student details, view student details, check papers.

2. The user logs in the software and has the following options :
3. The user can take up the test and view history.
4. The test process is :

- The admin sets the question paper and an model answer of all the question in the paper. In the paper there is an area given after every question for the user to write answer.
- When the student writes the answer this answer is stored in notepad file and the compared with the model answer.
- By comparing it textually and through meaning the answer is evaluated and allocated marks.
- The software also have password authentication which maintains integrity of the system.

IV. METHODOLOGY

A. Functions of Admin

1. Admin logs in using the correct user name and password, the admin has to undergo the authentication and verification phases of security. After successfully logging in the admin uploads the model answer with respect to the questions. The admin gives the input like type of question and respective question.

2. Generally the questions may be considered in the following forms.

3. Define: explain the meaning and (often) provide an appropriate example

4. Describe / illustrate: present the main points with clear examples that enhance the discussion

5. Differentiate / distinguish: present the differences between two things

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6. Discuss / explain: present the main points, facts, and details of a topic; give reasons

7. Enumerate / List / Identify / Outline: write a list of the main points with brief explanations Interpret: present your analysis of the topic using facts and reasoning.

8. Justify / Prove: present evidence and reasons that support the topic

9. Summarize: briefly state the main ideas in an organized manner

10. Trace: state the main points in logical or chronological order.

B. User Inputs

User is provided with the questions and space to type the respective answers. Once the user completes the test, they submit the test to the system. Our software extracts the answers and saves it as text file for respective students. This text file is used for further assessment.

C. Answer Correctness

Confidence in the correctness of an answer can be increased in a number of ways. One way is to use a lexical resource like WordNet (Synonyms) to verify that a candidate response was of the correct answer type.In this spelling of every word is checked using an external database and accordingly the marks is allocated.

D. Stages of Answer Correction:

1 . The model answer and the answer written by the student will be compared word to word. If it matches completely then full marks will be given.
2 . If the above is not fulfilled both answers will be evaluated as to how much similar they are based on words.
3 . The meaning of both the answers are extracted and then they will be evaluated and if they are similar even though the words are different full marks will be given otherwise marks will be allocated accordingly .

V. UNITS

Helpful Hints

A. Flowcharts and Use Case Diagrams
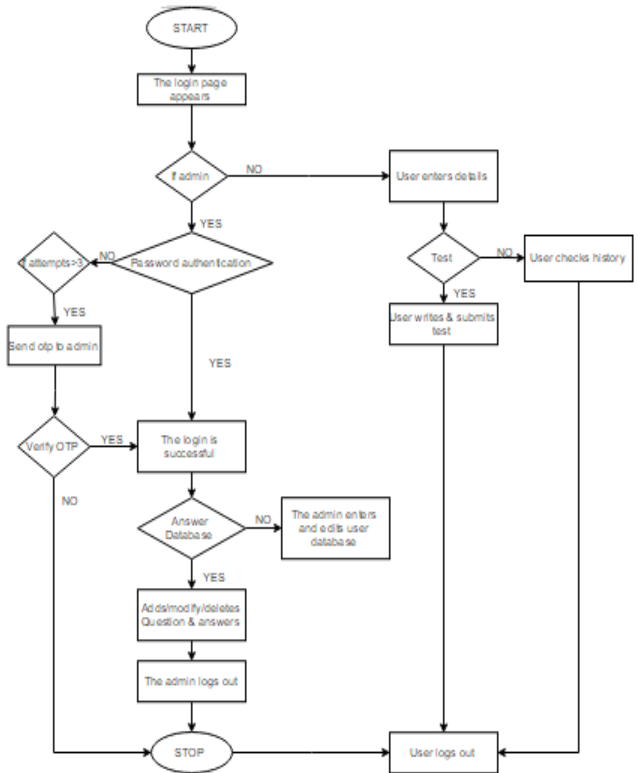
B. References

[1]. The Flowchart describes the functioning of the overall software.   [2]. The Usecase diagram also shows the functioning of the software.

C. Abbreviations and Acronyms

A.A.C.S defines Automatic Answer Checking Software.

VI. CONCLUSION

The automatic answer checking software is expected to check the answers accurately and allocate marks efficiently thus improving the current manual subjective answer checking process.

APPENDIX

Appendixes, if needed, appear before the acknowledgment.

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