CSI Hackathon

Purpose

- The biggest advantage of this solution is that the concept of “Good Handwriting=Good Marks” is gone. The student can submit more than one time for the same answer simply by discarding the previously saved answer.
- Even for the teacher the Speech to text API is useful so that the evaluation is also done automatically and the workload of the faculty is reduced.
- The purpose of cheating is defeated as the students cannot have time for copying and the honest answer of the student is received.

Features

- Quiz Appearance
- Speech to text API
- Evaluation(using ML)

Quiz Appearance

- The quiz has 1 question per screen.
- Every answer is saved after user presses finish attempt
- For each question, there is an option to start recording the audio.
- As soon as one presses the start button, the microphone records the audio.
- As soon as the user presses the end button, the microphone stops recording.
- After recording, there are 2 option and user has to select one of them save or discard
- The test gets submitted after timeout or if the user clicks ‘submit test’.

Q.1 What is deadlock in Operating Systems ?

You have 5 minutes to attempt this question

START ATTEMPT

SKIP QUESTION

Q.1 What is deadlock in Operating Systems ?

01 : 24

FINISH ATTEMPT

Speech to Text API

- The audio that is fetched after the test are mapped to question number and that audio file is stored in the database.
- After the audio submission, the Google GCP will convert the audio file into a text file (Accuracy 95%).
- The teacher can schedule the timings on when should the transcript of the specified file should be ready
- After the text file is done processing, the text is sent to the back-end evaluator for evaluation.
- Using start of the art evaluator the answers of the student are graded

Q1. What is Deadlock?

Ans: In concurrent computing, a deadlock is a state in which each member of a group is waiting for another member, including itself, to take action, such as sending a message or more commonly releasing a lock. Deadlock is a common problem in multiprocessing systems, parallel computing, and distributed systems, where software and hardware locks are used to arbitrate shared resources and implement process synchronization. Deadlock occurs when a process or thread enters a waiting state because a requested system resource is held by another waiting process, which in turn is waiting for another resource held by another waiting process.

Submissions

Roll no: 18BCE001

Submission:A deadlock occurs when a process or thread enters a waiting state because a requested system resource is held by another waiting process, which in turn is waiting for another resource held by another waiting process.

Marks: 8

Roll no: 18BCE002

Submission:A deadlock is a situation in which two computer programs sharing the same resource are effectively preventing each other from accessing the resource, resulting in both programs ceasing to function. The earliest computer operating systems ran only one program at a time. All of the resources of the system were available to this one program. Later, operating systems ran multiple programs at once, interleaving them.

Marks: 9

Evaluation based on ML

- The text file is evaluated on various criterias like keywords(specific for each answer), grammar of the text file and the pattern matching.
- Scores are generated for each of the above mentioned field.
- A Naive-Bayes Classifier is used for the various scores and the final grading out of 10 is done.
- If the teacher feels that a particular student has gotten more than or less than what was expected, then teacher can evaluate the transcript too.

THANK YOU