

Project Overview

Terminology in This Page

Contains terminology in this overview and in the whole project files.

ID	Terminology	Definition
1	Testing Transcription Ability	The ability to accurately assessed English test answers, including both automatic and manual scoring.
2	User Roles and Access Rights	These define the tasks each user can perform and the parts of the system they can access. For example, administrators manage users and access, test developers create and modify tests, and markers score answers that the system can't automatically score.
3	Test Key	The correct answer(s) to a test question.
4	Test Key System	A system that allows for different types of answers and scoring schemes, meaning it can handle a variety of answer types and score them according to different rules.
5	User Management System	A system used to manage user accounts and permissions.
6	Automated Scoring	The use of an application to automatically determine the scores of test answers.
7	Manual Marking Tools	Tools used for manually scoring answers that cannot be automatically scored by the system.
8	Integration with External Systems	The process of connecting and coordinating the application with other external systems, such as student information systems.
9	Administrators, Test Developers, Markers	Users who play different roles within the testing system: administrators manage the system, test developers create and modify tests, and markers score answers.
10	Dichotomous Scoring	A scoring method where each question has only two possible outcomes: right or wrong, scored as 1 or 0 respectively.
11	Partial Scoring	A scoring method where each question can be fully right, partly right, or wrong, scored as 2, 1, or 0 respectively.

The **Transcript Test Project** focuses on English proficiency testing within a small research centre in the Faculty of Arts at University of Melbourne. The goal is to ensure the validity of various English tests. Specifically, we're developing an application for *testing transcription ability*¹.

Background & Necessity

Traditionally, creating and scoring tests, especially listening tests, involves a lot of manual work. Here's why this project is important:

- **Time-consuming:** Teachers and administrators spend a significant amount of time grading tests by hand.
- **Error-prone:** Manual scoring can lead to mistakes, especially when dealing with large numbers of tests.

- **Limited flexibility:** Traditional methods might not be suitable for complex scoring schemes (partial credit, different points per question).

Our application aims to develop a **web-based system** that addresses these issues. By automating scoring and managing tests electronically, the application aims to:

- **Save time:** Teachers and administrators can spend less time grading and more time teaching.
- **Reduce errors:** Automatic scoring minimises the chance of mistakes.
- **Increase flexibility:** The system allows for various scoring options, making it adaptable to different test types.

Application Goals

- **Define clear *user roles and access rights*²:** This ensures that each user has the appropriate permissions and can perform their tasks efficiently.
- **Empower test developers to create, edit, and manage tests:** This gives test developers the freedom to create tests that meet their specific needs.
- **Implement a flexible *test key*³ *system*⁴:** This allows for different types of answers and scoring schemes.
- **Enhance efficiency by automating scoring and integrating user-friendly management tools:** This makes the process of creating, administering, and scoring tests more efficient and accurate.

By achieving these goals, we'll revolutionise test creation, administration, and scoring, making the process more efficient and accurate.

Scope

What's In Scope

- *User management system*⁵ with different roles (admins, test developers, markers)
- Test creation and management tools
- *Automated scoring*⁶ system with flexible scoring rules
- *Manual marking tools*⁷ for markers
- Result reporting and downloading

What's Out of Scope

- Creating the actual test content (audio files, questions)
- *Integration with external systems*⁸ (e.g., student information systems)
- Mobile app development

Application Explanation

Who can use it?

- *Administrators*⁹: They manage users and access. They have the highest level of access and can control the roles and permissions of other users.
- *Test developers*⁹: They create tests with audio files and answer keys. They have the ability to create and modify tests as needed.
- *Markers*⁹: They score answers that the system can't automatically score. They review and score answers that have been flagged for manual marking.

What does it do?

- Stores listening tests with question files and answer keys
- Scores student answers automatically (better than a spreadsheet)
- Allows markers to review and score tricky answers
- Lets administrators see the results

Functionalities Breakdown

1. User Management: User Access and Security

- **Admins can add/remove all user types (admins, developers, markers):** Administrators have the ability to manage user roles within the system. This includes adding new users, removing existing users, and assigning roles such as administrators, developers, and markers.
- **Users can update their passwords:** All users have the ability to update their own passwords, ensuring the security of their accounts.

2. Test Management: Test Creation and Modification

- **Stores tests (sets of questions and answer keys) for reuse:** The system has the capability to store tests, including sets of questions and their corresponding answer keys, for future use.
- **Allows editing answer keys:** Test developers have the flexibility to edit answer keys as needed.
- **Lets developers copy tests for further analysis:** Developers can make copies of tests, allowing them to analyse and modify tests without affecting the original.
- **Enables adding/deleting questions within a test:** Developers can add or delete questions within a test, providing flexibility in test design.

3. Answer Management: Handling Student Responses

- **Stores student answers:** All student answers are stored in the system for scoring and review.
- **Allows uploading multiple student answers from Excel files:** The system can accept bulk uploads of student answers from Excel files, making it easier to handle large volumes of data.
- **Automatically removes extra spaces from answers:** The system automatically formats student answers by removing extra spaces, ensuring accuracy in scoring.

4. Scoring: Automated and Customisable Scoring System

- **Automatically scores text-based answers (more advanced than a spreadsheet):** The system can automatically score text-based answers, providing a more advanced and efficient scoring method than traditional spreadsheets.
- **Defines scoring rules (e.g., points per question):** The system allows for the definition of custom scoring rules, such as assigning different point values to different questions.
- **Offers options for different scoring types:** The system supports different scoring types, including *dichotomous scoring*¹⁰ (0 for wrong, 1 for right) and *partial scoring*¹¹ (0 for wrong, 1 for partly right, 2 for fully right).
- **Lets developers decide how to handle specific answer types (blanks, symbols, etc.):** Developers can customise how the system handles specific types of answers, such as blanks or symbols.
- **Flags answers for manual marking based on similarity to the answer key or containing typos:** The system flags answers that require manual review, such as those that are similar to the answer key or contain typos.

5. Marker View: Manual Review and Scoring

- **Markers see answers flagged for manual marking:** Markers are presented with answers that have been flagged for manual review.
- **They can see the answer key(s) for each question:** Markers have access to the answer key(s) for each question, providing them with the information they need to accurately score answers.
- **They decide the score (correct, incorrect, or other options set by the developer):** Markers have the final say in the scoring of answers, and can assign scores based on the options set by the developer.

6. Results: Accessing and Sharing Test Results

- **Allows downloading or copying marked answers:** The system allows for the downloading or copying of marked answers, making it easy to share and analyse test results.