***TEST SPECIFICATION***

**1.0 Introduction**

An expert system is a computer system that is designed to emulate the decision-making ability of human experts. Expert systems are used in various domains, such as medical diagnosis, fault diagnosis, interpreting measurement data, and configuring systems.

The three main components of an expert system are a knowledge base, an inference engine, and a user interface. The knowledge base stores information about the particular domain, while the inference engine uses that information to solve problems. The user interface allows experts to input data and interact with the system.

**1.1 Goals and objectives**

To develop a system to analyze students’ performance in an examination.

2. To provide a graphical interface for the user to interact with the system.

3. To provide a way for the user to input the data into the system.

4. To provide a way for the system to output the analysis results.

The objective of providing grades to the students based on their answers is to give them feedback on their performance. The rates will be based on the answers to the questions asked in the application.

**1.2 Statement of scope**

The Expert system for swear analysis is a software application designed to help users analyze their performance in either a chatbot or Tkinter. This system will take in input from the user in the form of text, then analyze the text to see if there are any swear words present. If swear words are present, the system will then provide feedback to the user via either a chatbot or Tkinter message. This feedback will help the user to understand their performance and to improve their language usage.

The major inputs to the Expert system for swear analysis are the pieces of text that the user wishes to analyze. These texts can be inputted into the system via a chatbot or Tkinter interface. Once the text has been inputted, the system will then analyze the text and provide feedback to the user.

The software is designed to help teachers and administrators understand how well students are doing in school.

It is a tool for tracking student performance and identifying areas where students need improvement.

The software consists of three main modules: the student information form, the verbal questions, and the quantitative questions.

The student information form collects data about the student's background, including their name, age, address, and contact information.

The verbal questions module assesses the student's understanding of the material. It consists of a series of questions that the student must answer. The questions are designed to test the student's knowledge of the material.

The quantitative questions module assesses the student's understanding of the material. It consists of a series of questions that the student must answer. The questions test the student's ability to apply the material.

**2.0 Test Plan**

The project is about developing an expert system for swear analysis. The system will either be in the form of a chatbot or a graphical user interface (GUI) built with Tkinter. The project is intended to help users understand their performance by providing questions and grades.

**2.1 Software to be tested**

The software to be tested is identified by name. Exclusions are noted explicitly.

**2.3 Testing tools and environment**

**Test cases are to be prepared manually by knowledge engineers. The most import criteria of these test cases is that it must cover both normal cases, as well as the most difficult, rare cases.**

**In general, field testing is important because it allows the developer to monitor the system in its actual user environment. The expert system is tested in a similar environment for short period (1 year) and obtains feedback on system effectiveness and user interface. Accordingly, appropriate changes are made to the system. The system is then run in parallel at different sites to the existing process in the intended operational environment. During the parallel test, assessments are made as how well the system is meeting its goals.**

**2.4 Test schedule**

A detailed schedule for testing is described.

**3.0 Test Cases**

A copy of the selected test cases will be given to three or four domain experts. The same cases will be introduced to the expert system. Each of the domain experts as well as the expert system will work out the test cases independently

This section enumerates a complete list of test cases for the software. A template for test cases is as follows.

|  |  |
| --- | --- |
| ID |  |
| Test Input | **Valid username and password** |
| Expected Output | **The students can successfully login** |
| Description | **Students can navigate to welcome page once they are logged in successfully.** |

|  |  |
| --- | --- |
| ID |  |
| Test Input | **Valid username and invalid password** |
| Expected Output | **The students can not login.** |
| Description | **Students should enter the correct password to navigate to welcome page.** |

|  |  |
| --- | --- |
| ID |  |
| Test Input | **Invalid username and valid password** |
| Expected Output | **The students can not login** |
| Description | **Students should enter the correct username to navigate to welcome page.** |

|  |  |
| --- | --- |
| ID |  |
| Test Input | **Invalid username and invalid password** |
| Expected Output | **The students can not login** |
| Description | **Students should enter valid credentials to navigate to welcome page.** |