Artificial Intelligence (AI) – Cover Sheet

ASSIGNMENT

Instruction:

- Marks will be awarded for good presentation and thoroughness in your approach.
- Referencing Code: If you use some code, or ideas for code, which are taken or adapted from another source (book, magazine, internet, discussion forum, etc), then this **must** be cited and referenced using the APA referencing within your source code. Failure to reference code properly is considered as plagiarism.
- Complete this cover sheet and attach it to your project.
- This project is to be attempted by a group of 3 to 4 students.

Student declaration:

I declare that:

- *We understand what is meant by plagiarism*
- *The implication of plagiarism has been explained to us by our lecturer*
- *This project is all our work and we have acknowledged any use of the published or unpublished works of other people.*

Group Leader's Signature: ..... Date: .....

Project Title:		**Intake:**
Role	**Name**	**Signature**
Team Leader		
Knowledge Engineer		
Programmer		

Introduction to Artificial Intelligence

Learning Outcome 2 – PLO3
Implement a range of Artificial Intelligence techniques and apply a specific Artificial Intelligence method to problem solving

Problem Description: Expert System on specific domain

Human experts can perform at a successful level because they know a lot about their areas of expertise. In Artificial Intelligent an Expert System uses knowledge specific to a problem area to provide "Expert Quality" performance in that application area. Generally, Expert System designers acquire this knowledge with the help of Domain Experts. As with skilled human, Expert Systems tend to be specialist, focusing on a narrow set of problems. Expert systems are built to solve a wide range of problems in domains such as medicines, mathematics, engineering, chemistry, geology and education.

You are required to develop a knowledge-based system that serves as an **information repository** and **consultant**. Your system should be equipped with an interactive means to engage in a conversation with the user. This can be achieved by utilizing an Expert System Shell by your lecturer's choice.

You are required to choose your Expert System domain and submit a Proposal by week 4 – maximum 25 marks will be awarded. (Template Proposal is provided)

The documentation and the approach taken to develop the system are as important as the functionality of the program.

Note 1:
You should utilize the controlling and exception handling capabilities of the tool
Your system should hold a conversation with user (avoid the usage of Yes/No and multiple-choice option for user to choose)

Note 2:
You are expected to define the project scope or theme. Please discuss with your lecturer.

Performance Criteria

Grade	Assessment Guidelines
0-39%	Incomplete documentation. System barely addressed the problem domain. Little or no implementation.
40-49%	Barely completed documentation. Minimum compliance to the scope. System functional but discontinuity observed in several instances. System does not engage in a full-fledge conversation with user.
50-64%	Missing sections in documentation. Limitations observed in system. Gaps were evident when recommendations were provided. Knowledge and reasoning lacking in some instances.
64-74%	Evidence of wider understanding. The system provides credible recommendations. Fairly well documented solution. A systematic approach to development and evaluation is used. Fair amount of critical insight and evaluation included.
75% and above	Thorough documentation. Knowledge base system completely addressed the problem domain. Ability to stimulate conversation and engaging in conversation. Evidence of sound understanding. The system provides good recommendations. A systematic approach to development and evaluation is used. Extensive amount of critical insight and evaluation included.

Your documentation MUST consider the following:

(a) Project Title (Documentation)
- (i) Abstract: 300 words

(b) Introduction (Documentation) – Chapter 1
- (i) Introduction of your proposed expert system – 1.1
- (ii) Problem Statement with references (each member 1 problem statement) – 1.2
- (iii) Objectives of the expert system – 1.3
- (iv) Summary – 1.4

(c) Knowledge Acquisition (Documentation) – Chapter 2 (each member min 3 journals – different then group members)
- (i) Types/Categories of Expert System with reference – 2.1
- (ii) Literature Review on Chatterbot/chatbot 2.2

(d) Knowledge Representation (Design) – Chapter 3
- (i) Semantic nets/ network 3.1

(e) Implementation (Documentation) - Chapter 4
- (i) Test plan / Screen shoot of special features 4.1
- (ii) User Acceptance testing in questionnaire – monkey survey or google forms 4.2 (20 questions)
- (iii) Results of user acceptance testing in graphs format - 4.3

(f) Coding Implementation (Implementation – chatbot) – Chapter 5
- (i) Attach source codes with the documentation under appendix

(g) Conclusion (Documentation) – Chapter 6
- (i) Future enhancement of system and improvement with challenges

(h) References
- (i) APA referencing format

(i) Appendices
- (i) Source code/snippet
- (ii) Workload Matrix

Submission Requirements:

Your documentation should be submitted in the following form: - only 1 group member upload all the below requirements
- (i) Pdf of your proposal which will be 25 marks (upload into moodle)
- (ii) Zip file Executable Version of your system (upload into moodle)
- (iii) Documentation (uploaded into moodle)
  (Please make sure the cover sheet is the first page of your documentation as this first page and make sure all members name included)