

## Year 11 Information Processing and Technology

### Assessment Item F

#### Information & Intelligent Systems 3 Knowledge Discovery 1 – Knowledge Based Systems Minor Project

Semester 2, 2009

Formative Assessment

DATE ISSUED: 12 October

Time: 5 weeks,  
3 weeks in class

No Teacher Input

DATE DUE: 10 November

STUDENT NAME: \_\_\_\_\_

TEACHER: Mrs Ferry



### RESULTS

CRITERIA	STANDARD
Knowledge	
Research and Development	

# Information & Intelligent Systems 3

## Knowledge Discovery 1 – Knowledge Based Systems

### Minor Project - Specifications

#### **TASK:**

You are required to create a working Expert System using the software package ES-Builder. You are to choose an area of interest and expertise, and develop a knowledge base consistent with this. Be sure that your topic is suitable for development as an Expert System, and that it is an appropriate size for the project.

#### **STAGE 1**

**DUE: 27 October**

#### **PROBLEM DEFINITION AND SOLUTION SPECIFICATION**

You are required to submit a word-processed document of approximately 400 words, clearly outlining:

- Your reasons for choosing your topic
- A description of the specific areas which you will be covering
- The proposed user/s of your expert system
- The suggested location/s for your system
- The value that your expert system will have to potential users

#### **STAGE 2**

**DUE: 2 November**

#### **DESIGN**

You are required to undertake research in your chosen field and prepare an **induction table** (6 - 7 attributes, 10 conclusions) that will then be used to design a **decision tree**. This tree will provide a graphic representation of all the attributes and paths that must be taken in order to reach a conclusion.

#### **STAGE 3**

**DUE: 10 November**

#### **IMPLEMENTATION**

You are required to use your decision tree to create a **working expert system**, which is free of errors. You should show that you have the ability to edit rules and values, and enter notes on attributes and conclusions.

**You are required to submit:**

- An induction table
- A decision tree
- A printout of the expert system data
- A sample print of a search result
- A user manual
- A copy of your expert system in the submit folder on the network
- User feedback sheets for at least three of your fellow students' Expert Systems

# Information & Intelligent Systems 3

## Knowledge Discovery 1 – Knowledge Based Systems

### Minor Project – Marking Scheme

Aspect		Very Good	Good	Sound	Poor	Very Poor					
<b>Stage 1 – Plan problem definition and solution specification</b>											
Knowledge	Vocabulary Choice of words for the subject Grammar Sentence structure, phrases, use of words	10	9	8	7	6	5	4	3	2	1
Research & Development	Validity & explanation of reasons for topic choice Description of specific areas covered, proposed users of the system, proposed locations of the system, and the value of the KBS to the user	10	9	8	7	6	5	4	3	2	1
<b>Stage 2 - Design</b>											
Knowledge	Clarity of attributes, prompts and goal states	10	9	8	7	6	5	4	3	2	1
<b>Stage 3 - Implementation</b>											
Knowledge	Consistency with decision tree Overall presentation	10	9	8	7	6	5	4	3	2	1
	Accuracy of code System works as required	10	9	8	7	6	5	4	3	2	1
Research & Development	Description of attributes/conclusions Quality of explanatory notes	10	9	8	7	6	5	4	3	2	1
	Adequacy of user interaction (HCI)	10	9	8	7	6	5	4	3	2	1
	User Manual (HCI)	10	9	8	7	6	5	4	3	2	1

## RESULTS

CRITERIA	SCORE	STANDARD
Knowledge	/40	
Research & Development	/40	