

COMP3131 Business and Information Systems strategies

Hi everyone

Please sit together in your group
(but one person per computer if possible)

Please boot on:
“Windows 7 AL Expert System”

* These slides are available in the blackboard !

Lab 1: today (Feb. 11th)

Lab 2: March 4th

Each lab = using 3 tools

- discover the tools (individually)
- choose one and write one report/group /lab
(short: 4 pages max.)

Deadlines:

- report of lab 1: 15 March
- report of lab 2: 29 March

My name: Rémi Watrigant

questions (lab only!): csrwatrigant@comp.polyu.edu.hk

**One representative from your group
should submit the group reports on
Blackboard**

(don't forget to mention the names of everyone
in the group!)

The report should explain the results
of the exercise using screenshots,
pictures and tables where appropriate

Tools:

1) Demo Expert System for A&L Outfitters

- tutorial provided in the software

/!\ needs windows XP /!

6:30 -> 8:00

2) Web-based Expert System using eXpertise2Go

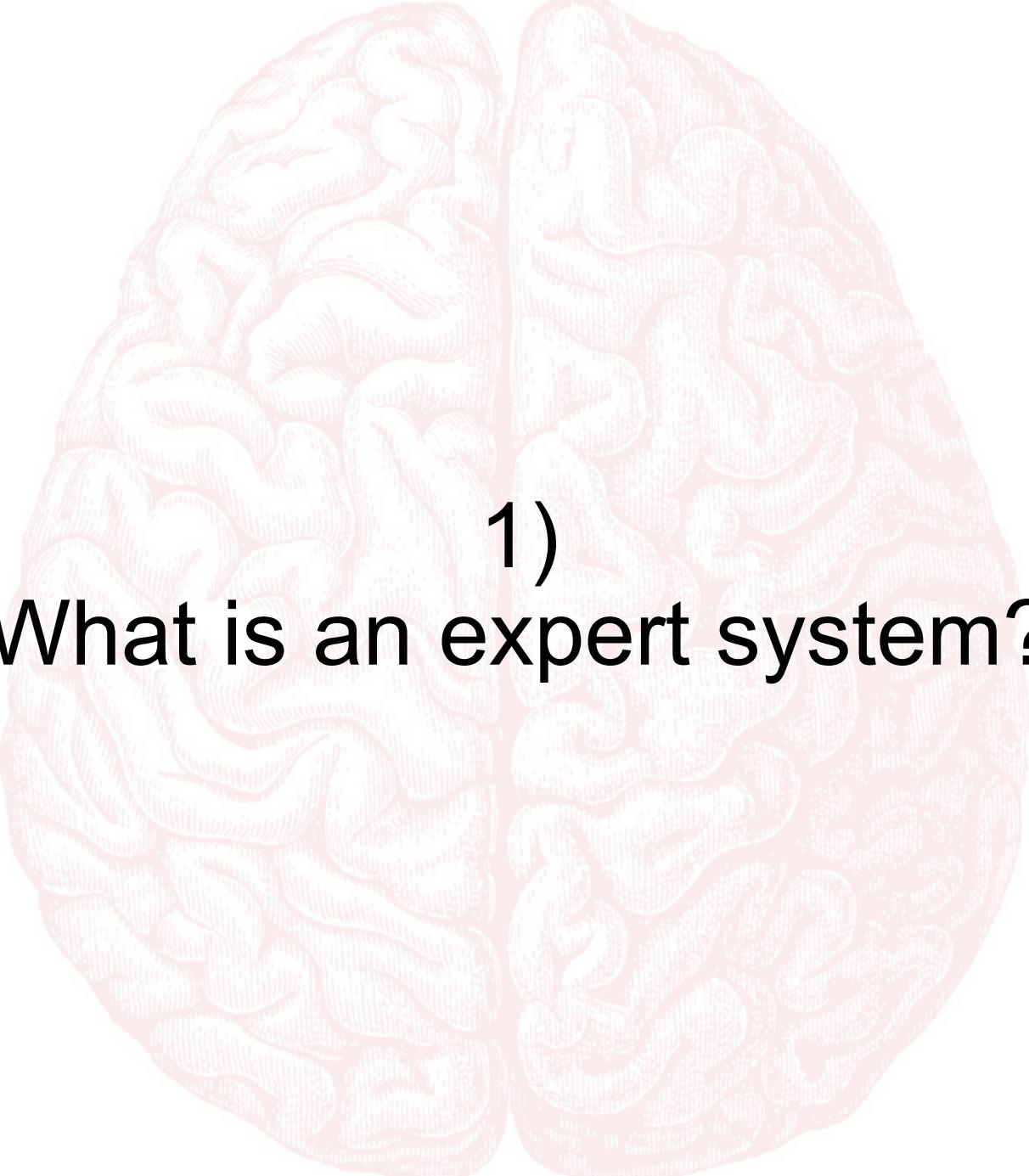
- tutorial = following the indications of the tool

8:00 -> 8:30

3) Applied Decision Analysis using DPL

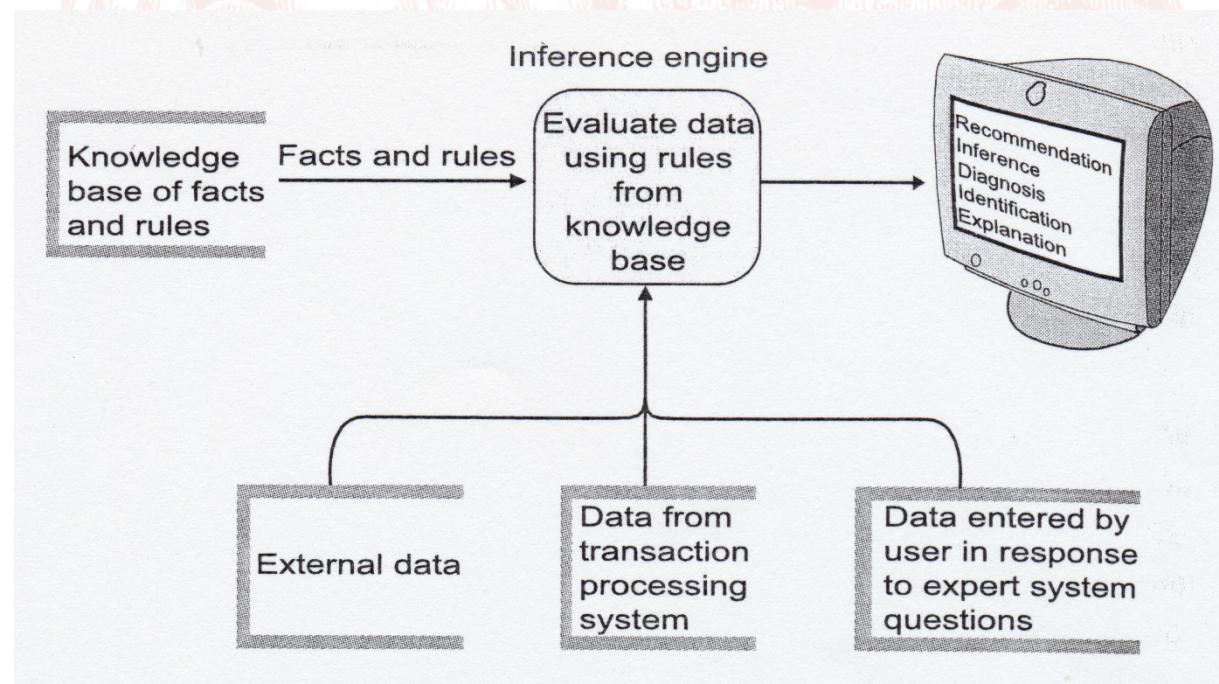
- tutorial = chapter 2 of the manual
(see blackboard)

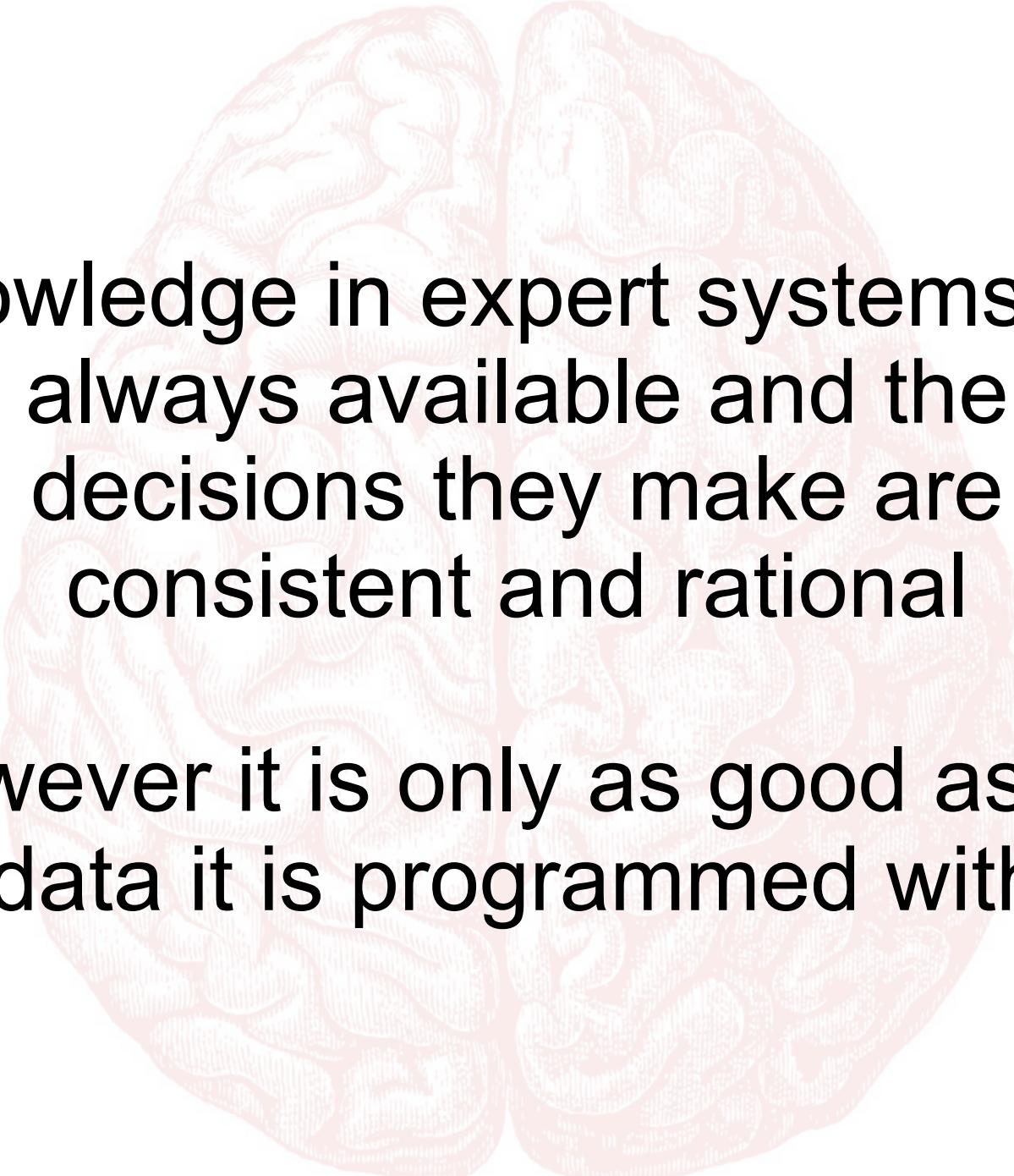
8:30 -> 9:30



1)
What is an expert system?

It is a type of Artificial Intelligence (AI) that makes decisions by using rules and facts





Knowledge in expert systems are
always available and the
decisions they make are
consistent and rational

However it is only as good as the
data it is programmed with

1) A&L outfitters Expert System

Bad news 1: it only works on windows XP ☹

To do so: you have to boot on
"Windows 7 AL Expert System"

And then run

"D:\vm\wxp_lab\start_D_WXP_LAB.cmd"
To run a virtual Windows XP system

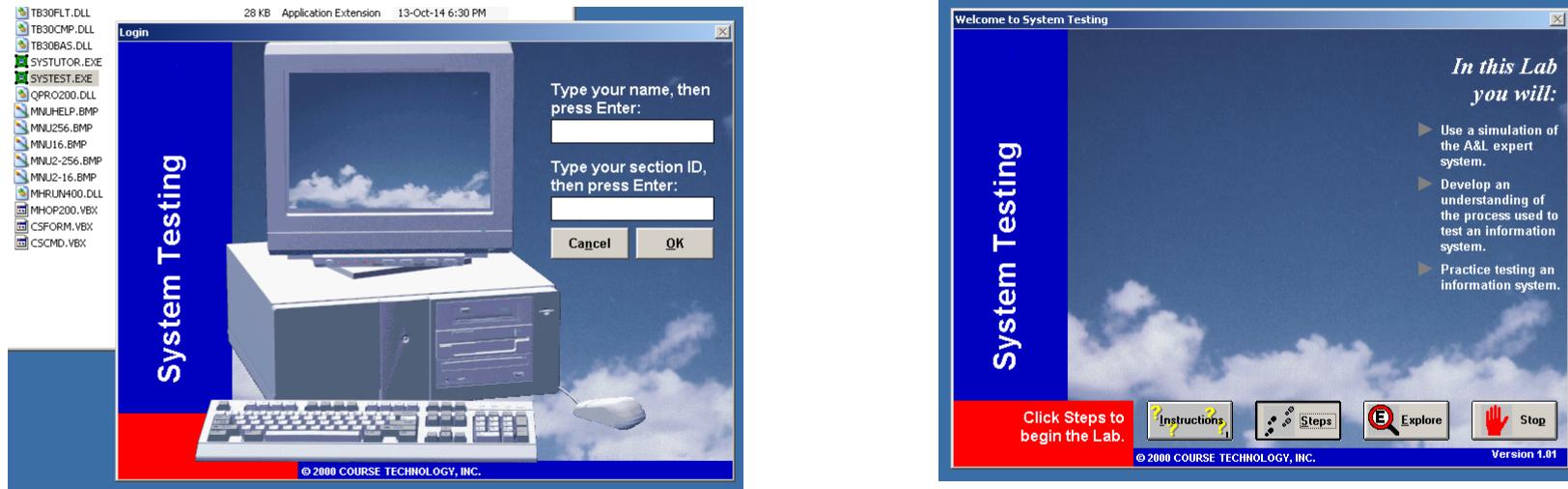
Bad news 2: you cannot save anything neither on the Windows XP image nor in this Windows 7 system

⇒ However you will have to take some screenshots

⇒ One solution: save it by usb disk (or send to yourself by email... etc.)

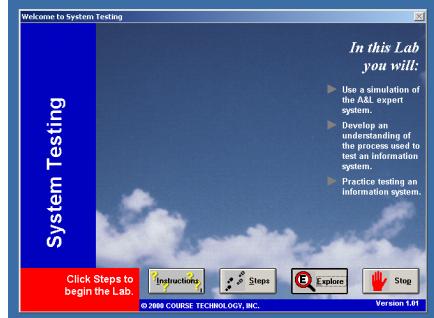
Bad news 3: it is available only in PQ606 (here) until end of March (or on you computer if you can run windows XP: just copy the files)

run **SYSTEST.EXE**



Task 1: Click “Steps” and finish the tutorial

if the tutorial window hides the software, then run “SYSTUTOR.EXE” first, and then “SYSTEST.EXE and click “explore”



On the report: check the 7 rules
(one example per rule is enough)
Answer: there are two mistakes !

Hints:

- **mistake 1:** page 42 of the tutorial, when placing an order for item "3003 Tent 4Psn"
(read carefully the picking ticket)
you will also encounter this mistake (and get the answer) at page 59
- **mistake 2:** rule 6 is not respected
(try to put 2 items (any item) in stock in Telluride, 5 in stock in Guatemala, and make an order to Katmandu)

2) Web-based Expert System

- You can now reboot to the classical "Windows 7"

Or stay in this Windows 7, but:

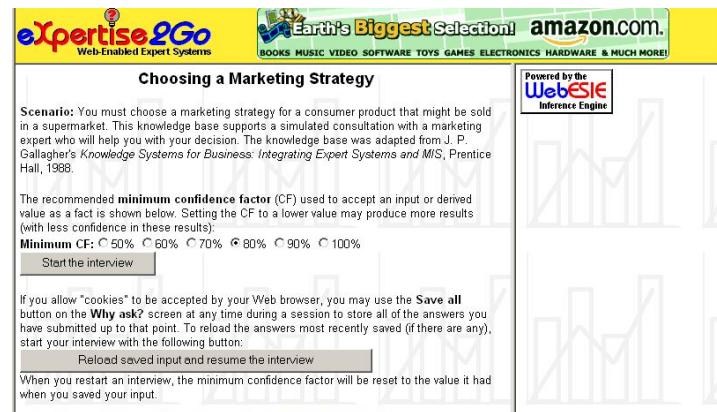
Reminder:

Be carefull: you cannot save anything on the partition "Windows 7 AL Expert System"

2) Web-based Expert System



The screenshot shows a web-based expert system interface for a loan decision policy. The top navigation bar includes the expertise2Go logo, a link to Earth's Biggest Selection!, and the amazon.com logo. The main content area is titled "Implementing a loan decision policy". It contains a scenario text, a radio button selection for "Minimum CF", and a "Start the interview" button. The right side of the screen displays a "Policy Manual" titled "eXpertRef for the Loan Decision Knowledge Base" and "Cyberland Bank Loan Policy Manual". The manual sections include "1.0 Loan types" and "2.0 Criteria for determining loan category". A sidebar on the left provides instructions for using cookies and a "Save all" button. The bottom of the page has a "Home: Demos & Tutorials" link.



The screenshot shows a web-based expert system interface for choosing a marketing strategy. The top navigation bar includes the expertise2Go logo, a link to Earth's Biggest Selection!, and the amazon.com logo. The main content area is titled "Choosing a Marketing Strategy". It contains a scenario text, a radio button selection for "Minimum CF", and a "Start the interview" button. The right side of the screen displays a "Policy Manual" titled "eXpertRef for the Marketing Strategy Knowledge Base" and "Cyberland Bank Marketing Strategy Policy Manual". A sidebar on the left provides instructions for using cookies and a "Save all" button. The bottom of the page has a "Home: Demos & Tutorials" link.

Go to
<http://www.expertise2go.com/webesie/loan/>

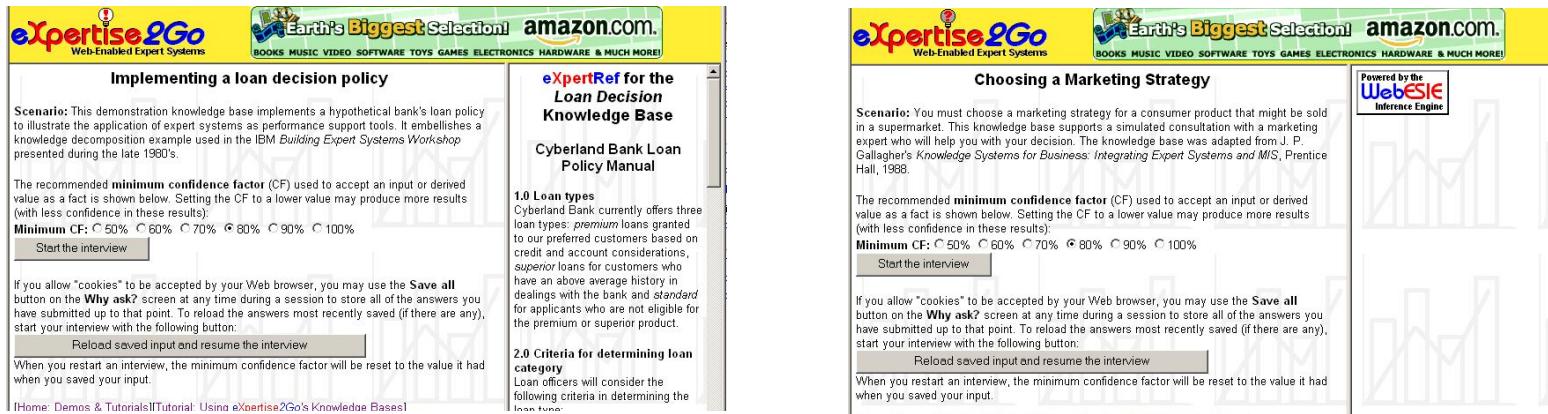
and experiment with the choices

Go to
<http://www.expertise2go.com/webesie/promote/>

and experiment with the choices

Or go to **[Home: Demos & Tutorials]** and choose another example on the left "Server-Based Demonstrations"

2) Web-based Expert System



Implementing a loan decision policy

Scenario: This demonstration knowledge base implements a hypothetical bank's loan policy to illustrate the application of expert systems as performance support tools. It embodies a knowledge decomposition example used in the IBM *Building Expert Systems Workshop* presented during the late 1980's.

The recommended **minimum confidence factor** (CF) used to accept an input or derived value as a fact is shown below. Setting the CF to a lower value may produce more results (with less confidence in these results):

Minimum: CF: 50% 60% 70% 80% 90% 100%

Start the interview

If you allow "cookies" to be accepted by your Web browser, you may use the **Save all** button on the **Why ask?** screen at any time during a session to store all of the answers you have submitted up to that point. To reload the answers most recently saved (if there are any), start your interview with the following button:

Reload saved input and resume the interview

When you restart an interview, the minimum confidence factor will be reset to the value it had when you saved your input.

Home **Demos & Tutorials** **Tutorial: Using Expertise2Go's Knowledge Bases**

eExpertRef for the Loan Decision Knowledge Base

Cyberland Bank Loan Policy Manual

1.0 Loan types
Cyberland Bank currently offers three loan types: **premium** loans granted to our preferred customers based on credit and account considerations, **superior** loans for customers who have an above average history in dealings with the bank and **standard** for applicants who are not eligible for the premium or superior product.

2.0 Criteria for determining loan category
Loan officers will consider the following criteria in determining the loan type:

Choosing a Marketing Strategy

Scenario: You must choose a marketing strategy for a consumer product that might be sold in a supermarket. This knowledge base supports a simulated consultation with a marketing expert who will help you with your decision. The knowledge base was adapted from J. P. Gallagher's *Knowledge Systems for Business: Integrating Expert Systems and MIS*, Prentice Hall, 1988.

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Powered by the WebESIE Inference Engine

In the report:

Choose one system, and perform several scenarii. Explain the decisions of the system
(example: one scenario per student in the group)

Remark: this system is not supposed to contain mistakes...!

3) Decision analysis using DPL

What is decision analysis (DA)?



DA is a framework for analyzing
risk and enumerating possible
alternatives

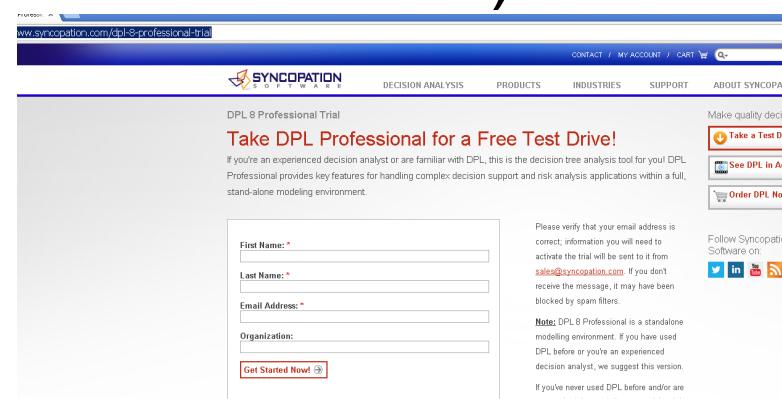
It is useful in many decision
making scenarios such as in
branding, market entry and
capital investment

To install & run DPL...

Download it from
Blackboard
DPL8Trial.msi



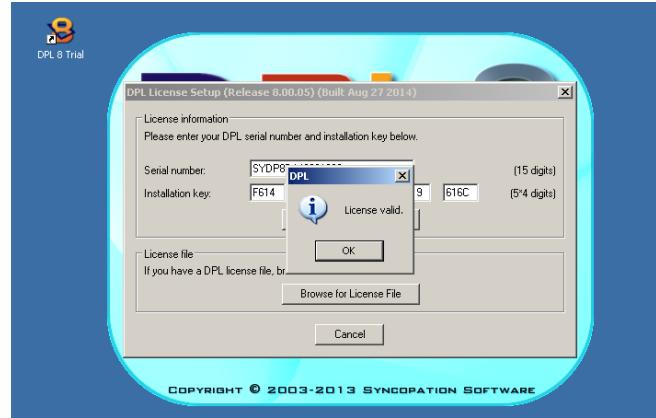
or register at
[http://
www.syncopation.com/
dpl-8-professional-trial](http://www.syncopation.com/dpl-8-professional-trial)
**(Professional, not
Direct)**



Enter the following license information

Serial Number: SYDP8D140301341

Installation key:
8966-E001-9219-A915-B8CB



or use your own if it doesn't work

A simple example using DPL:

<https://www.youtube.com/watch?v=MMHQ2gUMoNA>



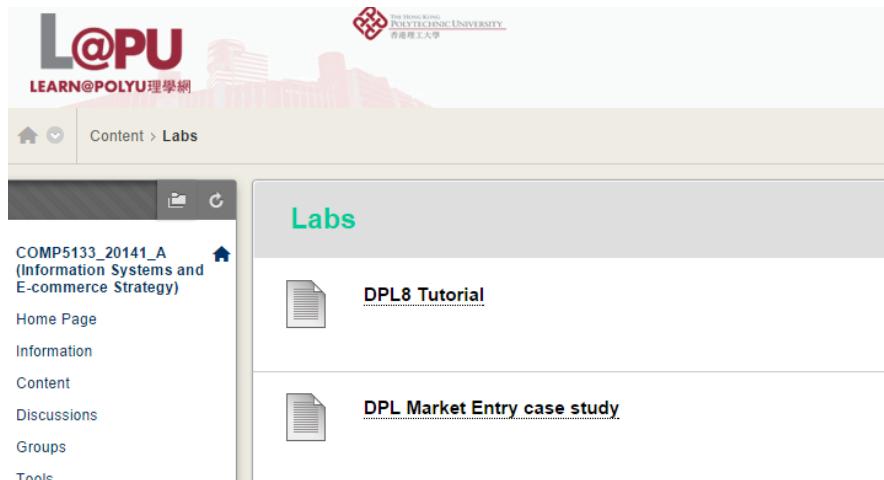
SYNCOPE
SOFTWARE

Presents:

Syncopation Video:

A Simple Decision Tree Example

Individually: go through the provided tutorial (Chap. 2) sections 2.1, 2.2, 2.3, 2.4



The screenshot shows a web-based learning environment. At the top, there is a header with the L@PU logo and the Hong Kong Polytechnic University logo. Below the header, the URL 'Content > Labs' is visible. On the left, a sidebar lists course navigation links: Home Page, Information, Content, Discussions, Groups, and Tools. The main content area is titled 'Labs' and contains two items: 'DPL8 Tutorial' and 'DPL Market Entry case study', each with a small document icon.

In the report, choose between:

- Read the provided case study (see blackboard) and explain how DA was used
- Invent another scenario, of the same flavor as the umbrella case, but more involved if possible (you can be creative !!)