# Research Based Curricula

# Decision Making in Business

Key Stage 5

Business Studies

Resource 4

2019

BROUGHT TO YOU BY
RBC
ACCESS ED

# Resource Four Overview

**Topic**      Using Computer Support Systems in Decision Making

**A-Level Modules**      Understanding management decision making

**Objectives**      By the end of this resource, you will be able to:

- ✓ identify the impact of technology on decision making;
- ✓ appreciate the difficulties in learning and interacting with the software;
- ✓ understand the importance of development of new modules and features.

**Instructions**
1. Read the data source
2. Complete the activities
3. Explore the further reading

**Context**

**Decision Support Systems (DSS)** is an information system that supports business or organisational decision-making activities. DSSs serve the management, operations and planning levels of an organisation (usually mid and higher management) and help people make decisions about problems that may be rapidly changing and not easily specified in advance—i.e. unstructured and semi-structured decision problems. Decision support systems can be either fully computerised or human-powered or a combination of both.
(https://en.wikipedia.org/wiki/Decision_support_system)

**Forecasting Support Systems (FSS)** is a set of (typically computer-based) procedures that facilitate interactive forecasting of key variables in a given organisational context. An FSS enables users to combine relevant information, analytical models, and judgements, as well as visualisations, to produce (or create) the forecasts and monitor their accuracy. (Ord, K., Fildes, R., Kourentzes, N., 7 2017. Principles of Business Forecasting, 2nd Edition. Wessex Press Publishing Co.)

# Resource Four
# Data Source

**Data Interpretation**

In order to facilitate various operational processes in more structured, problem-oriented, analytic-driven way, many companies use different Decision Support Systems (DSS). Looking at the figures below, try to identify areas where these systems can be helpful. Where can we use similar systems?

**Figure 1**

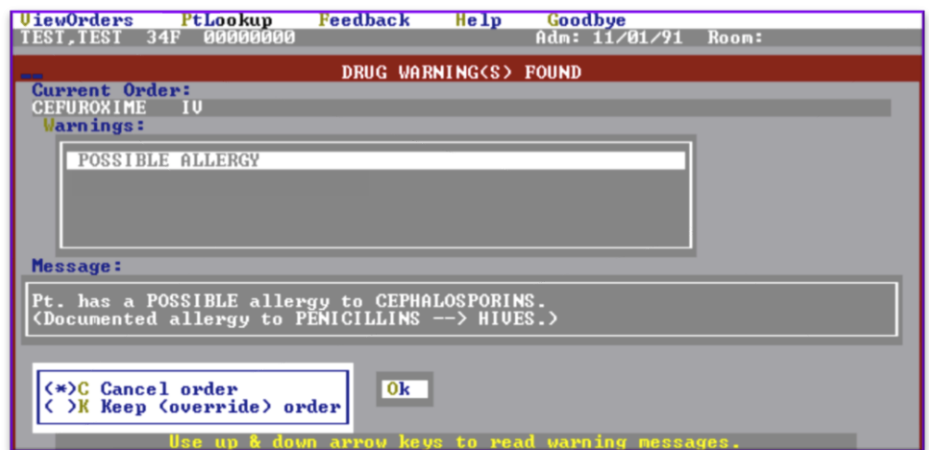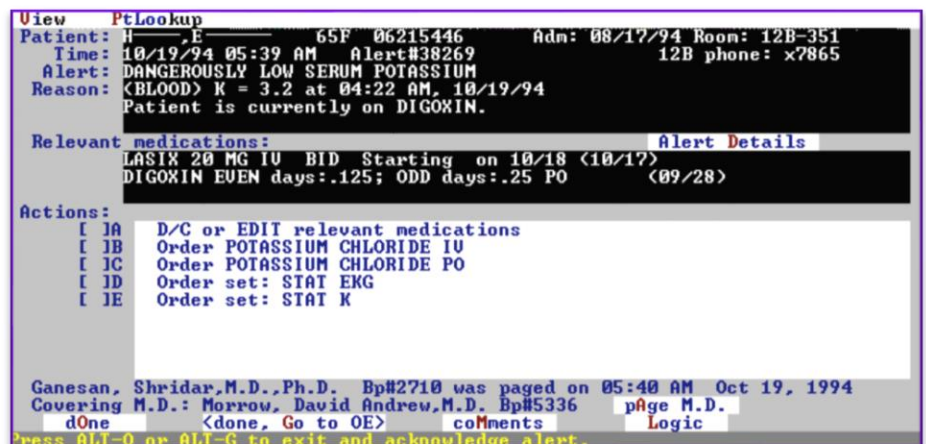Customer Decision Support System (CDSS) example

– immediate alerts



```
ViewOrders    PtLookup    Feedback    Help    Goodbye
TEST,TEST  34F  00000000                Adm: 11/01/91  Room:
                        DRUG WARNING(S) FOUND
 Current Order:
 CEFUROXIME   IV
  Warnings:
     POSSIBLE ALLERGY


  Message:
  Pt. has a POSSIBLE allergy to CEPHALOSPORINS.
  <Documented allergy to PENICILLINS --> HIVES.>

  (*)C Cancel order      Ok
  ( )K Keep (override) order
           Use up & down arrow keys to read warning messages.
```

**Figure 2**

Customer Decision Support System (CDSS) example

– event-driven alerts



```
View    PtLookup
Patient: H——,E——      65F  06215446     Adm: 08/17/94 Room: 12B-351
   Time: 10/19/94 05:39 AM   Alert#38269           12B phone: x7865
  Alert: DANGEROUSLY LOW SERUM POTASSIUM
 Reason: <BLOOD> K = 3.2 at 04:22 AM, 10/19/94
         Patient is currently on DIGOXIN.

Relevant medications:                          Alert Details
         LASIX 20 MG IV   BID  Starting  on 10/18 (10/17)
         DIGOXIN EVEN days:.125; ODD days:.25 PO       (09/28)

Actions:
     [ ]A   D/C or EDIT relevant medications
     [ ]B   Order POTASSIUM CHLORIDE IV
     [ ]C   Order POTASSIUM CHLORIDE PO
     [ ]D   Order set: STAT EKG
     [ ]E   Order set: STAT K

Ganesan, Shridar,M.D.,Ph.D.  Bp#2710 was paged on 05:40 AM  Oct 19, 1994
Covering M.D.: Morrow, David Andrew,M.D. Bp#5336      pAge M.D.
    dOne        <done, Go to OE>       coMments        Logic
Press ALT-O or ALT-G to exit and acknowledge alert.
```

# Resource Four
# Data Source

Figure 3

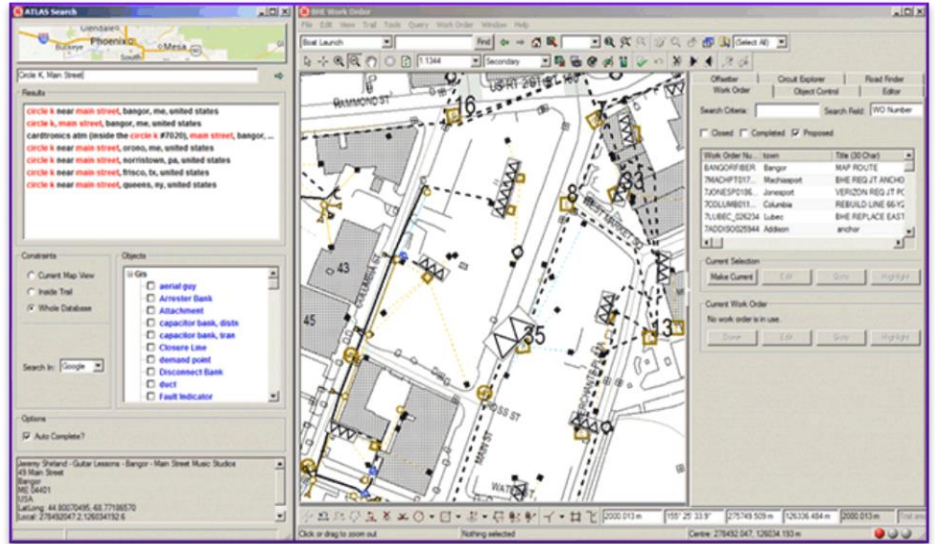LADSS (Land Allocation Decision Support System) example



Figure 4

FSS (Forecasting Support System) example
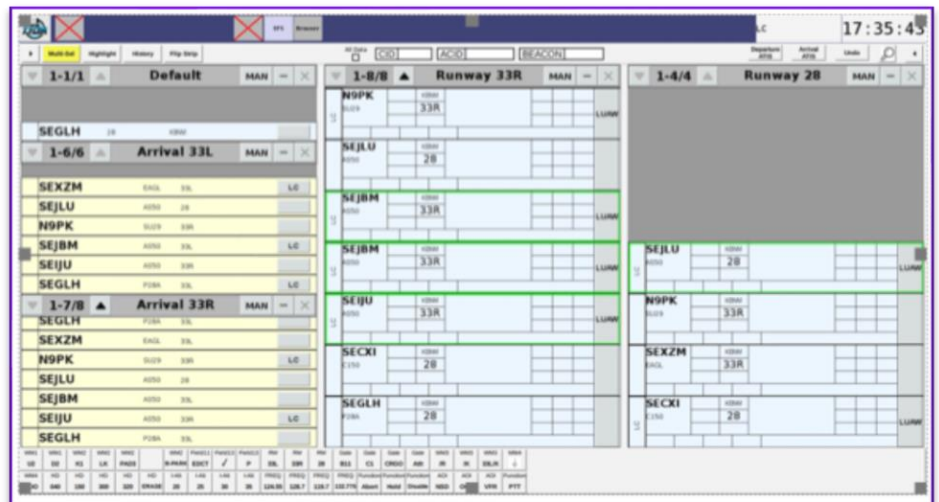
# Resource Four Activities

**Activities**    1

1. What is the main idea of Decision Support Systems?
2. Can you recall any software that helped you to make a decision?
3. How would you improve the software in Figure 1 and 2?
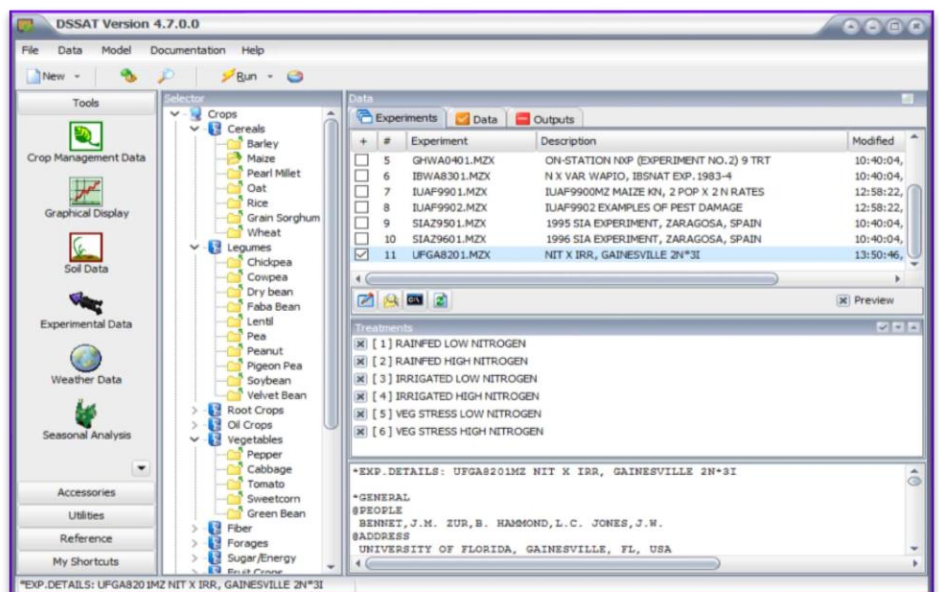4. Can you recall any software that you used to make decisions?

2

Can you guess what industries might use these DSS?

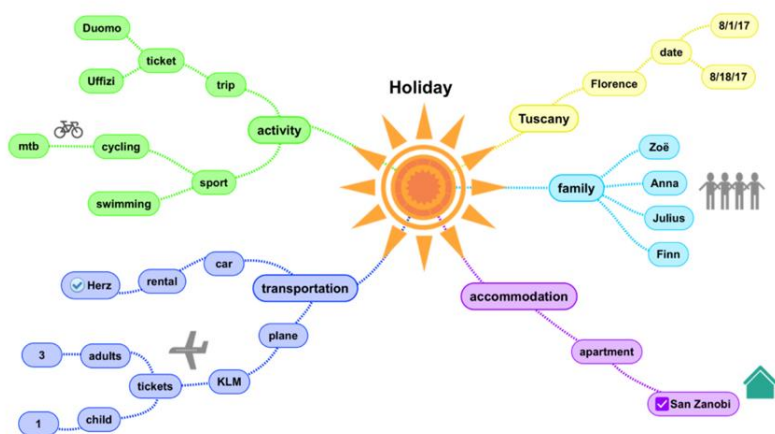Industry 1: _____



Industry 2: _____

**Activities** 3

There is a nice tool for your planning and decision making: **mind mapping.**

A mind map is a diagram used to organise information visually. A mind map is hierarchical and shows relationships among pieces of the whole. It is often created around a single concept, drawn as an image in the centre of a blank page, to which associated representations of ideas such as images, words and parts of words are added. Major ideas are connected directly to the central concept, and other ideas branch out from those major ideas.
(https://en.wikipedia.org/wiki/Mind_map)
Many programs allow creating such maps (see an example below).



*Creativity*

Using one of any free software and any topic, please try to create one, so you can see the full spectre of opportunities and applications of this useful tool.

# Resource Four
# Further Reading

**Explore**  Look up online or check this journal:
https://www.journals.elsevier.com/decision-support-systems.

A short overview of DSS:
http://www.umsl.edu/~sauterv/analysis/488_f02_papers/dss.html

BROUGHT TO YOU BY

**RBC**

ACCESS ED

www.researchbasedcurricula.com