Chapter 5
Decision Support Systems Overview

1. Cite the purposes for which decision support systems may exist.

   a. Improve decision making ability of managers by allowing more or better decisions within constraints of cognitive, time and economic limits.
   b. Increase productivity of decision makers.
   c. Supplement one or more of a decision maker’s abilities. (i.e. knowledge collection, formulation, analysis knowledge derivation and problem recognition)
   d. Facilitate one or more of the decision-making phases (intelligence, design, choice)
   e. Facilitate problem solving flows
   f. Aid decision maker in addressing unstructured or semi-structured decisions
   g. Enhance a decision maker’s knowledge management competence, supplementing human knowledge management (KM) skills with computer-based KM capabilities.

2. Distinguish decision support systems from other kinds of computer-based systems such as data processing and management systems.

![Diagram of Data Processing System]

![Diagram of Management Information System]
3. Describe the kinds of characteristics you would expect a DSS to exhibit.

   a. includes descriptive and possibly other types of knowledge
   b. has the ability to acquire/maintain these types of knowledge
c. has ability to present knowledge on ad hoc basis in customized ways
d. has ability to select any desired subset of stored knowledge for presentation or derivation during problem recognition/solving
e. can interact directly with decision maker who has flexibility in choice/sequencing of knowledge management activities

4. Recognize the potential benefits DSSs can offer, plus limitations on DSS abilities.

a. Augment DM’s innate knowledge handling abilities
b. DM can have DSS solve problems that DM alone would not even attempt or that would consume great DM time due to their complexity
c. Even for relatively simple problems, DSS may be able to reach solutions faster and/or more reliably than DM
d. Used to stimulate DM’s thoughts about the problems
e. Activity of constructing DSS may reveal new ways of thinking about decision domain and partially formalize aspects of decision making.
f. Provide more compelling evidence to justify DM’s position
g. Competitive advantage to organization due to enhanced internal productivity

LIMITATIONS
a. unable to replicate some innate human KM skills
b. may be too specific
c. may not match DM’s mode of expression or perception
d. cannot overcome a faulty DM
e. constrained by the knowledge it possesses
f. over dependence dangers

5. Discuss possible behaviors that you might expect or want DSSs to exhibit.

a. can accept requests from DM
b. can make responses to DM
c. non-procedural requests (natural language)
d. understand requests that are semantically different but are actually the same
e. request clarification of a request
f. collect knowledge from other sources
g. help in making next request
h. invention of knowledge (Most difficult area for computer DSS)
i. process different types of knowledge when working on a single problem.

etc.