**Unit Outcomes:**

Identify a business problem to which a DSS can be applied in order to find an effective solution.

Develop a spreadsheet-based DSS specific to the identified problem.

Articulate how the DSS works and how its output is applied to the problem.

Create a presentation explaining the problem, the decision making process, and the recommended solution.

**Project Instructions:**

Identify a problem to which a Decision Support System can be applied. This can be a business or organizational problem you have faced or are currently facing, or it could be a hypothetical problem a business or organization might realistically face. Think about the problem and how DSS applies to it. Ensure that the problem is of sufficient complexity that the DSS to be developed to address the problem will require what-if scenarios, goal seeks, weighting, and/or conditional logic. You do not need to have a problem which will require all of these, but it should require at least one or two of them.

**Example:** I own a company which manufactures widgets. I have more orders than I can fill at this time. I would like a DSS which helps me determine how much manpower I will need to add in order to increase widget production capacity by X% and how much my payroll will increase as a result.

To make such decisions, I need to know how much manpower it takes to manufacture one widget, and the cost/profit per unit of manpower. In order to create such a DSS in Excel, I will need to use What-if scenarios and conditional logic.

**Project requirements:**

Create a new, blank Word document. Create Five Section Titles in bold**: Statement of the Problem, DSS Requirements, DSS Design, DSS Results, Recommendations.**

Under Statement of the Problem, write one paragraph which summarizes the problem you

have selected, explaining what needs to be decided and why.

Under DSS Requirements, write one paragraph explaining what functions will be needed in

Excel in order to create a decision support system which you will be able to use to address

the problem.

Create a new, blank Excel document. Create a DSS in Excel to address the problem. Set up the system with the necessary functions to test scenarios, reach a specified goal, or test some condition. You can make up data if necessary to test your DSS and make sure it is working.

Then, in the Word document, complete the following:

Under DSS Design, write a paragraph explaining how you have set up your DSS in Excel and

why you made the choices you did. Outline why you believe that this design best helps

contribute to a positive decision relating to your selected problem.

Under DSS Results, write a paragraph which explains how you used the DSS that you made

to address your problem, and specifically, list the outcome or output of your DSS as it

relates to the problem you selected. For example, if you created a DSS which helps you

determine how much manpower you will need to add in order to increase widget production

capacity by 50% and how much your payroll will increase as a result, list the manpower

calculation and payroll increase in this section of your essay.

Under Recommendations, write a paragraph explaining the decision you would make

relative to the problem you’ve selected, and *why you would make that decision based upon*

*what your DSS has told you.*

Create a new, blank PowerPoint document. Assume you are going to give a short presentation to the executive team at the company or organization affected by the problem you’ve chosen. Create a slide presentation which captures the five main points of your five paragraphs from your essay. Use graphics and text to paint the picture for the executive team – What is the Problem? How do we design a problem solving mechanism? How does the mechanism work? What are the potential solutions? What do you recommend based on the potential solutions? Keep your presentation to 5-7 slides, including a title

slide.

**Rubric:**

The word document addresses the scenario posed for the final project, discusses the

practical implementation of the DSS, outlines managerial decision making assisted through

use of the DSS and discusses social and practical implications of the system and identifies

a business problem to which a DSS can be applied in order to find an effective solution.

Develop a spreadsheet-based DSS specific to the identified problem. that is reflective of

thoughtful, accurate and meaningful thought regarding the scenario posed. The formulae,

formatting and interactions used in the sheet are both accurate and justified.

The PowerPoint presentation clearly summarizes the main points of the project: why

is the project important, what’s being addressed, how does the system help, and how

are the results improved through its use. The presentation explain is the problem, the decision making

process, and the recommended solution.

The various components of the final project are congruous with one another – the work

presented is of a professional quality reflective of college-level effort, time and preparation by articulating how the DSS works and how its output is applied to the problem.