

**IFSM 461: Systems Analysis and Design  
Stage 03: Decision Table and Decision Tree Instructions**

### **Introduction**

Before you begin this assignment, be sure you have read the Udo, Marian, & Uduak Corporation (UMUC) Case Study. Also, you should review your completed Stage 1 & 2 assignments and the Stages 4 & 5 individual assignments to get an understanding of the future projects that build on this stage.

### **Purpose of this Assignment**

This assignment gives you the opportunity to apply the course concepts to develop a Decision Table and a Decision Tree for one aspect of the new billing and payment system. This assignment specifically addresses the following course outcomes to enable you to:

- Effectively communicate with stakeholders to determine, manage, and document business requirements throughout the SDLC
- Perform modeling to assist with analysis and decision making
- Translate business requirements into systems by applying appropriate SDLC methodologies and incorporating industry best practices

### **The Deliverable**

Using the Udo, Marian, & Uduak Corporation (UMUC) Case Study, build on the Requirements Document you developed in “Stage 1 - Requirements Document” and the diagrams you developed in Stage 2 to create a decision table and decision tree that describes how the organization determines which discounts, if any, are to be applied to products purchased.

Create a document that includes the following:

- The paper should consist of the two (2) diagrams (Decision Table and Decision Tree).
- Cover and a Works Cited page are also required. These are not included in the page count.
- The Cover page must include an appropriate title and your name.
- Use the Works Cited page to correctly cite and reference any sources you use with APA format.
- Use the Grading Rubric to be sure you have covered everything.



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- Submit your paper via your Assignment Folder as a Microsoft Word or Power Point document with your last name included in the filename.
- If you use Visio or some other drawing tool, be sure it can be opened without a password or special software other than Microsoft Office.
- Decision Table
  - Create a decision table that describes how the organization determines which discounts, if any, are to be applied to the products purchased.
  - This diagram should look similar to the one shown in: Textbook, Structured System Analysis and Design Fig. 8.5: Complete decision table for payroll system example.
- Decision Tree
  - Create a decision tree that describes how the organization determines which discounts, if any, are to be applied to the products purchased.
  - This diagram should look similar to the one shown in: Textbook, Structured System Analysis and Design Fig. 8.8: Decision tree representation of the decision logic in decision tables shown in figures 8.5 and 8.6, with only two choices per decision point.
- Completeness - Have all conditions and combinations of conditions that determine which discounts, if any, are to be applied to the products purchased been depicted?
- Correctness – are the all the conditions and combinations of conditions correctly depicted?
- Formatting - Decision Table and Tree are properly formatted and professional in appearance; spelling is correct.

**Helpful Resources**

- Decision Tables
  - Textbook, Structured System Analysis and Design 8.4 Logic Modeling Using Decision Tables.
- Decision Trees
  - Textbook, Structured System Analysis and Design 8.5 Logic Modeling Using Decision Trees.
- Decision tree examples - drawing your own  
<http://www.decision-making-confidence.com/decision-trees-examples.html>



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- Decision Tables –  
<http://reptest.com/requirements-blog/a-guide-to-using-decision-tables/>



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Tools that can assist you in developing the graphics for this project:

- Decision Table for the billing and payment system
  - Microsoft Visio
  - Microsoft Word
  - Microsoft PowerPoint
  - Microsoft Excel
  - LPA VisiRule 1.5 (free tool so there are no guarantees)
    - [http://www.lpa.co.uk/vsr.htm?gclid=CMP6i6\\_Bi6oCFUFx4Aod5QLy\\_zg](http://www.lpa.co.uk/vsr.htm?gclid=CMP6i6_Bi6oCFUFx4Aod5QLy_zg)
  
- Decision Tree for the billing and payment system
  - Microsoft Visio
  - Microsoft Word
  - Microsoft PowerPoint
  - Decision Tree Demo 1.0 (free tool so there are no guarantees)
    - <http://www.brothersoft.com/decision-tree-demo-322631.html>



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**Decision Table and Decision Tree Rubric**

<b>Criteria</b>	<b>Superior to Outstanding</b>	<b>Substandard to Good</b>	<b>Inadequate</b>	<b>Points</b>
Decision Table	The decision table contains and correctly depicts all of the for determining which discounts, if any, are to be applied to the fixed fees for a child	The decision table does not contain all of the conditions and combinations of conditions for determining which discounts, if any, are to be applied to the fixed fees for a child; and/or table is not correct.	No Decision Table is included	6
Decision Table Format	Decision Table is properly formatted and professional in appearance; spelling is correct.	Decision Table may not be properly formatted, professional in appearance, and/or use correct spelling.	No Decision Table	1.5
Decision Tree	The decision contains and correctly depicts all of the conditions and combinations of conditions for determining which discounts, if any, are to be applied to the fixed fees for a child.	The decision tree does not contain all of the conditions and combinations of conditions for determining which discounts, if any, are to be applied to the fixed fees for a child; and/or tree is not correct.	No Decision Tree	6
Decision Tree Format	Decision Tree is properly formatted and professional in appearance; spelling is correct.	Decision Tree may not be properly formatted, professional in appearance, and/or use correct spelling.	No Decision Tree	1.5
<b>Total Points:</b>				<b>15</b>