

**Requirements and Specification, ESOF 328, Spring 2022**  
**Documenting the Requirements, Chapter 10, Jan. 26**

Evaluate the following requirements and write new requirements if necessary.

R01. Invalid commodity income, less than on Next button press

While compiling the data, if the expected income of a commodity is less than 0 when the user presses the ‘Next’ button, the program does not continue to the next screen.

Rationale: Gross revenue cannot be negative for any commodity.

Priority: Imperative

Requirements checklist:

|   | Satisfied? | Why or why not? |
|---|------------|-----------------|
| Identified by a number  |            |                 |
| Identified by a short phrase  |            |                 |
| Prioritized (imperative, important, desired)  |            |                 |
| Rationale is given  |            |                 |
| Tells what is required  |            |                 |
| Tells under what situation  |            |                 |
| Clearly written, unambiguous  |            |                 |
| Avoids premature design   |            |                 |
| Can't be broken into multiple more clear requirements   |            |                 |
| Necessary requirement (also check that it wouldn't be better expressed as a non-functional requirement) |            |                 |
| Realistic   |            |                 |
| Testable  |            |                 |
| Stands on its own – other requirements don't need to be examined to understand what this means          |            |                 |
| Uses terms/approach consistent with the rest of the document  |            |                 |

Problems:

- Identifying short phrase is not very short
- Includes premature design

Rewrite:

R01. Validate commodity gross revenue

Gross revenue value for any commodity cannot be negative. If a negative value is entered the system shall provide feedback to the user. There is no restriction on the maximum value.

Rationale: Gross revenue for any commodity cannot be negative.

Priority: Imperative

R02. Print report selection

When the 'Print report' button is selected, a standard Windows print dialog is created.

Rational: Windows standard

Priority: Desired

|   | Satisfied? | Why or why not? |
|---|------------|-----------------|
| Identified by a number  |            |                 |
| Identified by a short phrase  |            |                 |
| Prioritized (imperative, important, desired)  |            |                 |
| Rationale is given  |            |                 |
| Tells what is required  |            |                 |
| Tells under what situation  |            |                 |
| Clearly written, unambiguous  |            |                 |
| Avoids premature design   |            |                 |
| Can't be broken into multiple more clear requirements   |            |                 |
| Necessary requirement (also check that it wouldn't be better expressed as a non-functional requirement) |            |                 |
| Realistic   |            |                 |
| Testable  |            |                 |
| Stands on its own – other requirements don't need to be examined to understand what this means          |            |                 |
| Uses terms/approach consistent with the rest of the document  |            |                 |

Problems:

- Identifying phrase captures when, but not what the requirement is saying.
- Includes premature design
- Possibly this should be a non-functional requirement since a standard print dialog should be used throughout the system

If this is going to be a functional requirement:

R02. Standard Print Dialog

When printing any report the system shall use the standard MS Windows Print Dialog.

Rational: The MS Windows Print Dialog box has become an industry standard for MS Windows application and the use of standards makes the software easier to use.

Priority: Important

R03. The system shall interface with the Actuarial Document Master

Rationale: In order to calculate the Adjusted Gross Revenue, the tables stored in the Actuarial Document Master will need to be accessed.

Priority: Imperative

|   | Satisfied? | Why or why not? |
|---|------------|-----------------|
| Identified by a number  |            |                 |
| Identified by a short phrase  |            |                 |
| Prioritized (imperative, important, desired)  |            |                 |
| Rationale is given  |            |                 |
| Tells what is required  |            |                 |
| Tells under what situation  |            |                 |
| Clearly written, unambiguous  |            |                 |
| Avoids premature design   |            |                 |
| Can't be broken into multiple more clear requirements   |            |                 |
| Necessary requirement (also check that it wouldn't be better expressed as a non-functional requirement) |            |                 |
| Realistic   |            |                 |
| Testable  |            |                 |
| Stands on its own – other requirements don't need to be examined to understand what this means          |            |                 |
| Uses terms/approach consistent with the rest of the document  |            |                 |

Problems:

- As this is written, it is not a functional requirement. Information about external interfaces belongs in Section 2.1 Product Perspective (high level identification of external interfaces), Section 2.5 Dependencies (more detailed explanation), and optionally, Non-Functional Requirement 5.2.2 External Interface Requirements (if more detail is needed). If more detail is not needed in Section 5.2.2, this section must be removed.

R04. AGR-Lite shall collect information in order to determine eligibility of AGR-Lite purchase:

- a.) User must be in an eligible state and country.
- b.) User must have five consecutive years of tax records, not including the immediate preceding year.
- c.) User’s annual adjusted gross revenue must be \$2 million or less.
- d.) User must not have more than 50% of allowable income from commodities purchased for resale.
- e.) User must not exceed 83% of total revenue from potato production.

Rationale: Users should not be allowed to enter data and calculations unless they are eligible for the AGR-Lite package. This requirement will be used to ensure that eligibility for AGR-Lite is taken into consideration.

Priority: Imperative

|   | <b>Satisfied?</b> | <b>Why or why not?</b> |
|---|-------------------|------------------------|
| Identified by a number  |                   |                        |
| Identified by a short phrase  |                   |                        |
| Prioritized (imperative, important, desired)  |                   |                        |
| Rationale is given  |                   |                        |
| Tells what is required  |                   |                        |
| Tells under what situation  |                   |                        |
| Clearly written, unambiguous  |                   |                        |
| Avoids premature design   |                   |                        |
| Can’t be broken into multiple more clear requirements   |                   |                        |
| Necessary requirement (also check that it wouldn’t be better expressed as a non-functional requirement) |                   |                        |
| Realistic   |                   |                        |
| Testable  |                   |                        |
| Stands on its own – other requirements don’t need to be examined to understand what this means          |                   |                        |
| Uses terms/approach consistent with the rest of the document  |                   |                        |

Problems:

- No short phrase
- Doesn’t tell the situation when this should be done
- Most likely this should be broken into several more clear requirements

Rewrite:

R04. Determine Eligibility Early

Before collecting any user data, the system shall help the user determine if they are eligible to purchase AGR-Lite insurance. (See the Business Rule on AGR-Lite eligibility.)

Rationale: The producer needs to know if their farm is eligible for AGR-Lite insurance before they begin entering information into the system.

Priority: Imperative

An additional requirement is needed for each aspect of eligibility.

R05. User Report

AGR-Lite shall produce a report that calculates and displays the following information:

- a.) The user's name, address, phone number, and email.
- b.) The user's premium and coverage-level chart.

Priority: Imperative

Rationale: This program is to compute the user's premium and display it in a user-friendly report. This requirement will be used to ensure that the generated report displays the correct information.

|   | Satisfied? | Why or why not? |
|---|------------|-----------------|
| Identified by a number  |            |                 |
| Identified by a short phrase  |            |                 |
| Prioritized (imperative, important, desired)  |            |                 |
| Rationale is given  |            |                 |
| Tells what is required  |            |                 |
| Tells under what situation  |            |                 |
| Clearly written, unambiguous  |            |                 |
| Avoids premature design   |            |                 |
| Can't be broken into multiple more clear requirements   |            |                 |
| Necessary requirement (also check that it wouldn't be better expressed as a non-functional requirement) |            |                 |
| Realistic   |            |                 |
| Testable  |            |                 |
| Stands on its own – other requirements don't need to be examined to understand what this means          |            |                 |
| Uses terms/approach consistent with the rest of the document  |            |                 |

Problems:

- No priority is given
- Doesn't tell the situation when this should be done

Rewrite:

R05. User Report

After producer information has been entered, the system shall generate a report that displays:

- a.) The user's name, address, phone number, and email address.
- b.) The user's premium and a coverage-level chart.

Rationale: The producer may want to see the contact information within the system and a summary of the premium and coverage.

Priority: Imperative