Project Deliveries: Use Cases fully-developed

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Introduction

The aim of this task is to practice the most relevant object-oriented analysis tasks, like: identify the user-level user cases, develop these use cases and list of requirements.

Problem: The customer wants us to build some of the core components of a spreadsheet, to be used through a textual interface.

List of feature requirements:

1. Identify cells and insert values in cells
2. Identify and process formulas
3. Calculate results of formulas / Perform mathematical operations according to formulas
4. Update values of cells automatically
5. Store spreadsheet values
6. Load spreadsheet values from SV2 file
7. Load spreadsheet file from local disk
8. Load spreadsheet from internet
9. Send error messages to user

Below are the most important use cases we have identified:

1. Use spreadsheet
2. Save spreadsheet
3. Load spreadsheet

Analysis: Use Cases fully-developed

Use case Number:	**1**
Use case Name:	**Use Spreadsheet**
Goal in context (OPTIONAL):	Allow user to create and modify spreadsheet
Actors and their interests:	User (interested in creating and modifying a spreadsheet)
Preconditions:	○ System(spreadsheet) properly initialized ○ User has the ability to create or modify spreadsheet

Postconditions:	○ Spreadsheet modified
Main Success Scenario (Basic Flow)	1. System requests cell identifier to modify 2. User provides cell identifier 3. System checks the status of the cell identifier 4. System notifies user of the content of the cell identifier 5. User requests to edit the cell identifier 6. System requests from the user, a value for the cell identifier 7. User provides value for the cell identifier. 8. System modifies the cell identifier with the result of the value provided by the user. 9. System notifies the user of the new content of the cell identifier. 10. System updates content values of all relevant cells using new value. 11. User finishes modifying spreadsheet
Extension (Alternative Flow)	2a. User proposes to close the spreadsheet. 1. System requests confirmation to close the spreadsheet. 2. User gives confirmation to close the spreadsheet. 3. System closes the spreadsheet. 4. Session is terminated.
	3a. System does not recognize cell identifier 1. System notifies user of error in cell identifier. 2. Returns to step 1 of Basic flow.
	5a. User requests to remove the content of the cell identifier. 1. System requests new movement from the player. 2. Player proposes another movement. 3. System continues with step 4 of the basic flow.
	5b. User requests to change the cell identifier. 1. Returns to step 1 of Basic flow.
	5b. User requests to close the spreadsheet. 1. System requests confirmation to close the spreadsheet. 2. User gives confirmation to close the spreadsheet. 3. System closes the spreadsheet. 4. Session is terminated.
	7a. User requests to close the spreadsheet. 1. System requests confirmation to close the spreadsheet. 2. User gives confirmation to close the spreadsheet. 3. System closes the spreadsheet. 4. Session is terminated.

	8a. System notifies user of error in value provided. 1. Returns to step 6 of the Basic flow
	11a. User requests to continue modifying spreadsheet. 1. Repeat steps 1-10 of Basic flow.
	11b. User requests to close the spreadsheet. 1. System requests confirmation to close the spreadsheet. 2. User gives confirmation to close the spreadsheet. 3. System closes the spreadsheet. 4. Session is terminated.

Use case Number:	**2**
Use case Name:	**Save Spreadsheet**
Goal in context (OPTIONAL):	Allow to user to save the state of the spreadsheet values
Actors and their interests:	User (interested in saving a spreadsheet)
Preconditions:	○ System(spreadsheet) properly initialized and modified
Postconditions:	○ Spreadsheet saved in desired retrievable format
Main Success Scenario (Basic Flow)	1. User requests to save the spreadsheet 2. System requests a name for the spreadsheet. 3. User provides a name for the spreadsheet. 4. System creates a file with the provided name. 5. System stores spreadsheet values in created file.
Extension (Alternative Flow)	3a. User proposes to close the spreadsheet. 1. System requests confirmation to close the spreadsheet. 2. User gives confirmation to close the spreadsheet. 3. System closes the spreadsheet. 4. Session is terminated.
	4a. System notifies user of error in provided name. 1. Returns to step 2 of Basic Flow .

Use case Number:	**3**
Use case Name:	**Load Spreadsheet**
Goal in context (OPTIONAL):	Allow to user to load the state of an existing spreadsheet file
Actors and their interests:	User (interested in loading a spreadsheet file)
Preconditions:	○ Existence of spreadsheet file on local disk or internet.
Postconditions:	○ Spreadsheet is loaded and can be modified by the user.
Main Success Scenario (Basic Flow)	1. User requests to open an existing spreadsheet. 2. System requests location of spreadsheet file. 3. User provides a location for the spreadsheet. 4. System accesses location to retrieve the spreadsheet file. 5. System opens the requested spreadsheet for modification.
Extension (Alternative Flow)	3a. User terminates request to load a spreadsheet file. 1. Session is terminated.
	4a. System notifies user of error in provided location. 1. Returns to step 2 of Basic Flow .
	5a. System notifies user of error in file format. 1. Returns to step 2 of Basic Flow .