

Use case Number: 1

Use case Name: Spreadsheet initialization.

Actors: User who interacts with the spreadsheet.

Preconditions:

- System has been initialized correctly.

Postconditions:

- The system either generates and opens a new blank spreadsheet or opens an existing spreadsheet file.

Main Success Scenario (Basic Flow):

1. The system prompts the user to either start a new blank spreadsheet, open an existing one, or terminate the program.
2. The user opts to initiate a new blank spreadsheet.
3. The system generates a new, empty spreadsheet.

Extensions (Alternative Flows):

- 2a. The user selects to open an existing spreadsheet.
 1. System asks the user the path where the spreadsheet is located.
 2. User inputs an incorrect path.
 - 2a. User introduces an invalid path.
 1. System displays an error indicating the file doesn't exist.
 2. System returns to step 1 of alternative flow 2a.
 3. System retrieves the chosen spreadsheet file.
 - 3a. User picks a file format incompatible with the system.
 1. System shows an error for unsupported file type.
 2. System goes to step 1 of the alternative flow 2a.
 4. System converts the file's raw data into a spreadsheet object.
 - 4a. File contains invalid data.
 1. System alerts the user to an error due to corrupt or invalid content.
 2. System reverts to step 1 of the main flow.
 5. System confirms successful file loading.
 6. System completes the use case.
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- 2b. User chooses to exit the program.
 1. System exits the program.