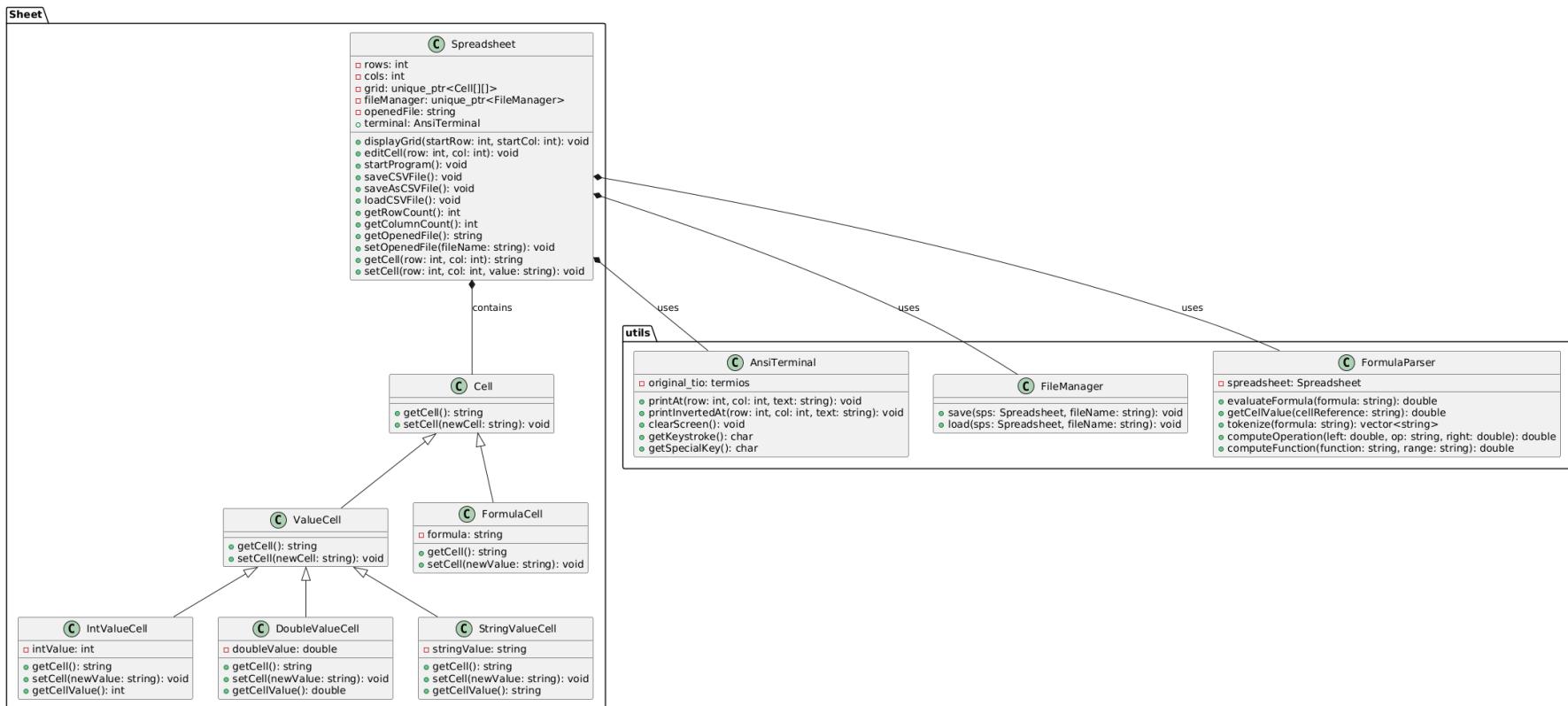


CSE241

ASSIGNMENT-2

Consol Spreadsheet Program V2

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Description:

The project includes ten classes: `AnsiTerminal`, `Spreadsheet`, `Cell`, `FileManager`, and `FormulaParser`. `Cell` class, `ValueCell` derived from `Cell` class, `FormulaCell` derived from `Cell` class, `IntValueCell` and `StringValueCell` and `DoubleValueCell` classes are derived from `ValueCell` class. Users can work on an empty sheet, load an existing file, save their progress, or save the file as a new one. Navigation within the sheet is possible using the arrow keys, and users can edit the currently selected cell. The cells accept both numeric and text inputs.

Missing Parts:

- The `FormulaParser` class is not fully integrated into the project. Cell referencing and handling of formulas not functioning correctly.

AI assistance: (AI assistance was done with chatgpt and claude)

- Implementation of the `FormulaParser` class.
- Various suggestions and improvements for the classes.
- Debugging and fixing issues.
- Creation of the UML diagram.
- Converting parts from the assignment 1 to be suitable for assignment 2's requirements

USER MANUAL:

Compile the code.

Run the program.

Select one of the options:

Press 1 to load an existing file.

Press 2 to start with a new sheet.

Enter the csv file name (if loading a file).

Use the sheet as needed.

To save the file, press 'S'.

Or, press 'A' to save it as a new file. Enter the file name with ".csv" extension to save the file .

Press Q to exit the program.

Controls:

- Use the arrow keys on the keyboard to navigate in the sheet.
- Press Enter or E to edit the highlighted cell.
- Press 'S' to save the file.
- Press 'A' to save the file as a new one.
- Press 'Q' to exit the program

Formulas and arithmetic operations:

The program supports +,-,*,/ operations between: Cells and numbers, numbers and numbers , Cells and cells.

```
=====
```

Welcome to GTU Spreadsheet Program v2

```
=====
```

- 1. Load Spreadsheet from file
- 2. Start with an empty spreadsheet
- Q. Exit the program

Enter your choice :

First Run.

```
A          B          C          D          E          F          G          H          I          J          K          L
1 1
2 2
3 3
4 4      "=A1+A2+A3+A4"
5 10.000000
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
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26
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32
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37
38
39
Use Arrow Keys to Navigate, Enter to Edit, 'A' to Save as, 'S' to Save, 'Q' to Quit.
```

*option 1 is selected.
the csv file is loaded
after the user entered
the file name*

```
muhammed@muhammed-ThinkBook-15-G3-ACL: ~/Desktop/HW2/new start
A   B   C   D   E   F   G   H   I   J   K   L   X
1   1
2   2
3   3           update and save
4   4       "=A1+A2+A3+A4"
5   5       10.000000
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
Use Arrow Keys to Navigate, Enter to Edit, 'S' to Save, 'A' to Auto Save, 'Q' to Quit.
File saved successfully to 'test.csv'.
```

A is pressed for save as.
The user enters the file name and the sheet saves



```
A B C D E F G H I J K L
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
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27
28
29
30

The Option 2 is selected
from the main menu.
The program starts with
an empty file.

Use Arrow Keys to Navigate, Enter to Edit, 'q' to Quit. Enter S to save, A to save as, or Q to quit:
```

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CSE241

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ASSIGNMENT-2

```
Exiting program...
muhammed@muhammed-ThinkBook-15-G3-ACL:~/Desktop/220104004930_HW2/src$
```

The program finish if the user enters 'Q'

THANKS!