**ASD CS-525**

**SPREADSHEET PROJECT**

**NAME ID TAG No**

Yosief Teklemariam 109633 27

Bereket Abraham 109671 4

Senait Habte 109707 18

Samrawit Haile 109666 17

Professor **Francis G. Mosse**

**PROJECT METHODOLOGY**

The spreadsheet project has multiple releases, with each release delivering a business value. A release contains one or more sprints. A sprint, with a time boxed scope, implements one or more functionality (stories) in that sprint.

This simple spreadsheet project will use the following structure:

|  |  |
| --- | --- |
| **Sprint** | **Feature** |
| Sprint 1 | Element, Cell, Contents, Text, Spreadsheet, Director |
| Sprint 2 | Numeric Value, Reference |
| Sprint 3 | Add |
| Sprint 4 | Subtract, Multiply, Divide |
| Sprint 5 | Read formulae, parse number |
| Sprint 6 | Parse cell syntax (square bracket) |
| Sprint 7 | Parse reference to cells |
| Sprint 8 | Deal with parenthesis |

**Note:** *We are encouraged to allocate a max of one day of time for each sprint and complete the project within eight days or less time.*

**DESIGN PATTERNS TO BE USED**

We have considered the following design patterns that we may possible use for this project:

|  |  |  |
| --- | --- | --- |
| **Requirements** | **Best Pattern** | **Reasons/Features obtained** |
| Cell can be composed content or reference.  Operator also contains a group of expressions to hold more than one operator at a time. | Composite | To describe a group of objects that are needed to be treated same way, by the client, as a single other object of the same type. |
| The Operator, being applied to the Cells content, computes the value results, and any of its changes are directly notified in the Cells. The Cells are fully dependent on the Operator for their Values calculations. | Observer | To allow a subject to be linked or observed by many dependent objects/observers. |
| The Operator class encapsulates the operations desired by the Cell and executes the requests to get the computed content of the cell. | Command | To construct general components that need to delegate, sequence or execute method calls without the need to know the class of the method or the method parameters, thus separating the operation definition from its execution. |

**CLASS DIAGRAM**

**A picture containing screenshot, wall, indoor

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**Sprint # 7&8**

**A screenshot of a cell phone

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**Output**

**A screenshot of a cell phone

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