Class boxes:

- ADD function
- SUB function
- MUL function
- DIV function
- AVERAGE function
- PRODUCT function
- CONCAT function
- COALESCE function
- «abstract» Binary function
- «abstract» Interval function
- «abstract» function
- Cell
- CellBuffer
- Spreadsheet
- Calculator
- User

Association labels:

- -cells
- -interval
- -cellbuffer
- -spreadsheet
- -users
- -sheets
- *

Note 1:

Os métodos "equals" e "toString" foram omitidos (pois herdados de Object), assim como "getters" e "setters". A classe Serial foi igualmente omitida, e todas as classes (exceto a classe Calculator) implementam Serializable. Ver métodos e atributos nas próximas páginas...

Note 2:

Declaro por minha honra que este diagrama foi realizado apenas pelos elementos que constituíram o grupo do Projeto. Bréval Mendes ist199158

Note 3:

Declaro por minha honra que este diagrama foi realizado apenas pelos elementos que constituem o grupo do Projeto. Felipe Abreu ist1106046

Spreadsheet

- rows : int
- columns : int
- changed : boolean

+ initialize Cells (rows : int, columns : int) : void
+ get Cells (range : String) : Cell []
+ insert Contents (range : String, content : String) : void
+ clear Cells (range : String) : void
+ Nnew Cells (range : String) : void
+ copy To CutBuffer (range : String) : void
+ paste From CutBuffer (range : String) : void
+ cut Cells (range : String) : void
+ Nnew CutBuffer () : void
+ get Cell Value (ref : String) : String
+ get Cells With Value (value : String) : Cell []
+ Nnew Cells With Value (value : String) : void
+ get Cell Expression (ref : String) : String
+ get Cells With Function (function : String) : Cell []
+ Nnew Cells With Function (function : String) : Cell []
+ calculate Cell Value (ref : String, function : String) : void
+ add User (name : String, function : String) : String
+ get User (name : String) : User
+ Nnew All Users () : void

Calculator

- filename : String

+ Nsave () : void
+ saveAs (filename : String) : void
+ load (filename : String) : void
+ import File (filename : String) : void
+ get Spreadsheet () : Spreadsheet

User

- name : String

+ adds Spreadsheet (new : Spreadsheet) : void

CutBuffer

+ is Empty () : boolean
+ get CutBuffer Content () : Cell []
+ empty CutBuffer () : void
+ store In CutBuffer (content : Cell []) : void

Cell

```
- <<final>> ref : String
- content : String
```
```
+ getRef() : String
+ getContent() : String
+ isEmpty() : boolean
+ isValue() : boolean
+ isRef() : boolean
+ isFunction() : boolean
+ clearContent() : void
+ insertContent(content : String) : void
+ getFunctionName() : String
```

ADDfunction
```
```
```
+ calculateBinary() : String
```

SUBfunction
```
```
```
+ calculateBinary() : String
```

<> InternalFunction
```
- args : String[]
```
```
+ stringToInt(args : String[]) : void
+ <<abstract>> calculateInternal() : String
```

<> Function
```
- value : String
```
```
+ <<abstract>> stringToInt(args : String[]) : void
+ intToString(value : int) : String
```

<> BinaryFunction
```
- arg1 : int
- arg2 : int
```
```
+ stringToInt(arg : String[]) : void
+ <<abstract>> calculateBinary() : String
```

MULfunction
```
```
```
+ calculateBinary() : String
```

AVERAGEfunction
```
```
```
+ calculateInternal() : String
```

PRODUCTfunction
```
```
```
+ calculateInternal() : String
```

DIVfunction
```
```
```
+ calculateBinary() : String
```

CONCATfunction
```
```
```
+ calculateInternal() : String
```

COALESCEfunction
```
```
```
+ calculateInternal() : String
```

```
┌─────────────────────────────┐
│ Import File Exception        │
└──────────────┬──────────────┘
               │
┌──────────────┴──────────────┐
│ Missing File Association Exception │
└──────────────┬──────────────┘
               │
┌──────────────┴──────────────┐
│ Unavailable File Exception   │
└──────────────┬──────────────┘
               │
┌──────────────┴──────────────┐
│ Unrecognized Entry Exception │
└──────────────┬──────────────┘
               │
        ┌──────┴──────────────────┐
        │                         │
        │        ┌────────────────┴──────────────┐
        │        │ Unknown Function Exception     │
        │        └───────────────────────────────┘
        │        ┌───────────────────────────────┐
        │        │ Invalid Cell Range Exception   │
        │        └───────────────────────────────┘
        │        ┌───────────────────────────────┐
        └───────▷│ Exception                      │
                 └───────────────────────────────┘
```