Spreadsheet Format

Note: The code parses the spreadsheets until the detected last row index. It expects every row to be valid / complete, otherwise the current implementation for uploading information via spreadsheet will reject it and alert the user. However, there are times when a false last row value is used. This can happen when we empty the cells of the last row(s) of the spreadsheet, without actually deleting the rows. It seems that these rows are still stored as present in the spreadsheet, with empty cells. As a result, the code will attempt to parse these extra row(s) and reject the spreadsheet. To fix this, highlight the residue row(s), right click, select "Delete" and "Entire row".

For examples, refer to the spreadsheets in the folder "Spreadsheet Samples" in the repository.

For uploading of data entries

Refer to sample spreadsheet: BreadTalk Input.xlsx

This spreadsheet will contain the production data that are to be uploaded into the database, which will then be used for analysis, visualisation etc.

The first row is for column headings, starting from the leftmost cell:

Date	I/O/W	Process Name	Material Name	Amount	Remarks

(The code does not read this first row, so the headings wording can be changed if desired, without having to change the code).

From the second row onwards, each row represents a data entry. A sample row would be:

16/10/2017	Input	Horizontal Cutter – Tea Cake	Uneven Cake (Tea Cake)	100	Peter

The above is to insert a record representing 100 kg of Uneven Cake (Tea Cake) was consumed as input for the process Horizontal Cutter – Tea Cake. This was recorded by Peter on 16/10/2017.

For the second column (I/O/W), only "Input", "Output" or "Waste" are currently accepted (not case-sensitive, the cell value is converted to lower case before comparison). If the cell value does not match any of these 3 strings, the upload is rejected.

For the fifth column (Amount), all values are positive, even for input materials.

For initialisation of matrix skeleton & process info

Refer to sample spreadsheet: Matrix Skeleton & Process Info.xlsx

This spreadsheet will contain 2 sheets. The first for matrix skeleton, the second for process information (the sheet names do not matter, only their positions do).

In Sheet 1, build the entire matrix as you would normally, containing all the processes and materials that are present in the system.

Sheet 1 format (skeleton):

The first row is for headings and process names.
- The first cell is "Type", this column will contain information regarding whether a corresponding material is a waste item (from second row onwards).
- The second cell is "Material", this column will contain material names (from second row onwards).
- From the third cell onwards, these cells will contain process names.

From the second row onwards, material information is recorded.
- In the first cell, only indicate whether this row's material is a waste item, otherwise leave it blank. This is because, if this row's material is either an input or output, it may become an intermediary material depending on what other information is present in the matrix. This will be determined in the normalisation procedure. If this material is a waste item, use "Waste" (not case-sensitive, it is converted to lower case before comparison)
- In the second cell, use the material name.
- From the third cell onwards, these are the cells for numeric values. As this is just a skeleton, leave these cells empty (or you can use 0). Exception: if you have static/intermediary processes added into the system, then the appropriate numeric values must be reflected. Note that here, numbers representing input must be a negative value.
  (The empty cells will be filled up according to the data entries after the user specifies a timeframe. However, the static/intermediary processes do not have accompanying data entries, so their values must exist in the skeleton).

Sheet 2 format (process info):

This sheet will contain all processes in the system, and every material associated with each.

The first row is for headings.
- The first cell is "Process Name", this column will contain process names (from second row onwards).
- The second cell is "Components <Role>.
The code does not read this first row, so the headings phrasing can be changed if desired.

From the second row onwards, each row will represent 1 process.
- First cell contains the process name.
- Second cell onwards each contains the name of a material associated with this process. Append the role of this material to the end of the value, using "<input>",

"<output>", or "<waste>". These role indicators are not case-sensitive, and the tag is identified via the last occurrence of "<". So a process name can still contain "<" within its name if required.

If no role tag is detected, upload is rejected.

A sample row in the spreadsheet would be:

Horizontal Cutter – Tea Cake	Uneven Cake (Tea Cake) <input>	Even Cake (Tea Cake) <output>	Horizontal Cutter Scrap (Tea Cake) <waste>