

Demonstration script

We find ourselves in a spreadsheet context, like MS Excel, with data that are arranged in the form of rows and columns in a grid, and can be manipulated.

The only row different from the others, is the one for which the data has been saved as column names. It is always visible, even while navigating in the grid.

Demonstration of direct navigation

The general principle of this system, is that we use fingers to manipulate and navigate, and the pen to select, edit or annotate.

Among the manipulation operations, we find the shifting of rows and columns.

Demonstration of row and column shift

We can sort the dataset following the ascendant or descendant order of a column.

Demonstration of ascending and descending sort on the "Pclass" column (numerical) and "Name" column (nominal).

We can copy and paste an entire cell or just a substring of a cell, if it was selected beforehand.

Demonstration of copy and paste of a cell to another one, and of a substring to another one.

We can open and close widgets that are a mini-visualization of the distribution of the underneath column's values.

Demonstration of opening and closure of widgets.

We can perform selection on those widgets, but we will see that later.

We can open and close the color palette which is used to annotate directly on the data, and change the writing color.

Demonstration of opening and closure of the color palette.

We can move wherever we want this widget, which is a mini-representation of the table and has several functions.

-We can use it to have a quick overview of the table data which is beyond the field of view, and potentially get there.

Demonstration of row and column preview.

-We can use it to move a row or column beyond the field of view.

Demonstration of row and column drag and drop

We can perform selection on this widget, but we will see that later.

We can merge selected columns with an inward pinch, starting the gesture on two side-to-side cells.

Demonstration of columns merge

We can split a column in two or more columns with an outward pinch, starting the gesture on selected substrings.

Demonstration of column split

Do you have any questions at this point ?

Among the selection operations, we find the selection of every cell of the table.

Demonstration of "selectAll" button

We can select unique or contiguous cells, rows and columns.

Demonstration of unique and contiguous selection of cell, unique and contiguous selection of rows, unique and contiguous selection of columns

We can also select non-contiguous rows and columns by performing a first selection, then holding it with the finger while performing other selections.

Demonstration of non-contiguous selection of rows and non-contiguous selection of columns

We can select a substring of a cell value by performing a horizontal or enclosing mark inside the bounding box of a cell.

Demonstration of value-level selection with horizontal and enclosing marks

What we see in a lighter color, is the complementary of the selection. If we tap on it, it becomes the main selection.

Demonstration of complementary-to-main value-level selection

If we tap on a substring selection or a group of substring selection, it opens an edition widget. It is equipped with hand writing recognition, and we can erase by scratching. Then, we have to cancel or approve the changes.

Demonstration of substring edition

We can also insert a caret by performing a vertical mark inside the bounding box of a cell. It pops up the same edition widget, this time to insert characters in that place.

Demonstration of characters insertion

Do you have any questions at this point ?

We can select identical cells, or identical substrings in a column. If we want identical cells, we have to double tap on a cell and if we want identical substrings, we have to double tap on a substring selection.

Demonstration of semantic selection

We can also select all the rows that share an identical cell or an identical substring, with a triple tap.

Demonstration of semantic row selection

We can apply the same selection rationale that has been applied to a substring or a single character, to a column. For example, every character before a comma or a point, or every lower case character before an upper case character, or every last three characters. If it is not possible to generalize to some cells, the system will not.

Demonstration of generalization on "Name" and "Fare" columns

We can move a substring to the right or to the left of the cell value.

Demonstration of substring shift

We can convert a sequence of characters from lower case to upper case or from upper case to lower case.

Demonstration of substring case change

We can delete rows and columns with an eraser tap on the headers.

Demonstration of rows and columns deletion

We can delete the content of a cell or of a substring with an eraser tap on it.

Demonstration of cell and value-level content deletion

We can use the minivis plots and the minitable to get information and select data.

Demonstration of minivis plots and minitable

We can annotate on the grid when the color palette is open, and change the color.

Demonstration of annotation with the color palette

We can create a post-it note anywhere on the grid to write on it, and reduce it to open it later.

Demonstration of post-it notes

Do you have any questions ?