A Sample Document With LabPal Data

Fred Flintstone

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This is a simple LaTeX document showing how to include plots, macros and tables generated with LabPal inside your research paper. Our paper will use the data generated by the *Sorting Lab* example contained in LabPal's example folder.

Required Packages

Make sure your LaTeX file imports the following packages:

- `graphicx` and `pdfpages` to include figures
- `multirow` for tables
- `hyperref` for the hyperlink functionalities

Importing the Files

The first step is to run the experiments in the lab, and to export four files:

- The PDF files for all plots in the lab. Go to the *Plots* page and click on the "Download all plots" button. By default, the file is called `labpal-plots.pdf`.
- The macro file to easily import the plots. In the *Plots* page, click on the "Download LaTeX macros" button. By default, the file is called `labpal-plots.tex`.
- The LaTeX file for the tables. In the *Tables* page, click on the "Download all tables" button. By default, the file is called `labpal-tables.tex`.
- The LaTeX file for the macros. In the *Macros* page, click on the "Download all macros" button. By default, the file is called `labpal-macros.tex`.

Copy these files in the same folder as your research paper. At the top of the paper, make sure you include the two `.tex` files using the `input` command.

Adding a Table

To add a table to your text, create a `table` environment as usual. Use the command `\usebox{\boxname}` to include the contents of a table, where `boxname` is the name of one of the boxes defined in `labpal-tables.tex`. (In your lab, you can set the name given to each table's box through method `setNickname()`. Otherwise, LabPal assigns a default name to each table.)

Table 1 shows an example of a table included in such a way. Each cell in the table is a hyperlink. The destination of each link can be copy-pasted in LabPal's web console, in the *Find* page, which takes you to the table, plot or macro where this specific data point is defined.

Adding a Plot

Adding a plot can be done in the same way as a table; create a `figure` environment, and use the `\usebox{\boxname}` to include a specific image; `boxname` is the name of one of the boxes defined in `labpal-plots.tex`.

Figure 1 shows an example of a figure included in such a way. The figure is surrounded by a hyperlink. The destination of this link can be copy-pasted in

size	time	name
5000	0.621499	Shell Sort
	1.665609	Quick Sort
	29.273993	Gnome Sort
	54.097157	Bubble Sort
10000	1.235695	Quick Sort
	2.714715	Shell Sort
	129.84296	Gnome Sort
	400.20477	Bubble Sort
15000	1.426542	Quick Sort
	2.571225	Shell Sort
	261.7582	Gnome Sort
	876.07794	Bubble Sort
20000	2.594335	Quick Sort
	9.63834	Shell Sort
	464.4201	Gnome Sort
	1568.4214	Bubble Sort
25000	3.528015	Quick Sort
	5.46716	Shell Sort
	799.64813	Gnome Sort
	2464.7026	Bubble Sort
30000	6.36526	Quick Sort
	19.46297	Shell Sort
	1053.254	Gnome Sort
	3552.2434	Bubble Sort

Table 1: This table is generated by LabPal. Hyperlinks in the table refer to individual data points in the lab.

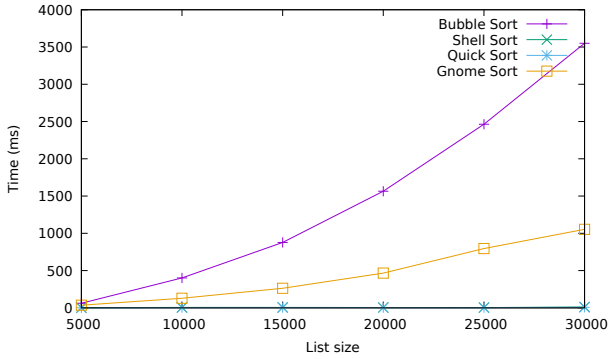

Figure 1: This plot is generated by LabPal. The hyperlink points to the same figure inside the lab instance.

LabPal's web console, in the *Find* page, which takes you to the plot and its associated data table.

Referring to Macros

Referring to macros is even easier. Simply call any of the commands defined in `labpal-macros.tex` wherever in the text. For example, we know that the slowest sorting algorithm is None, and that our lab has considered arrays of size up to 30000.