

DummPy

Random Data Generator

User Guide

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Chapter 0: Introduction and How to Execute

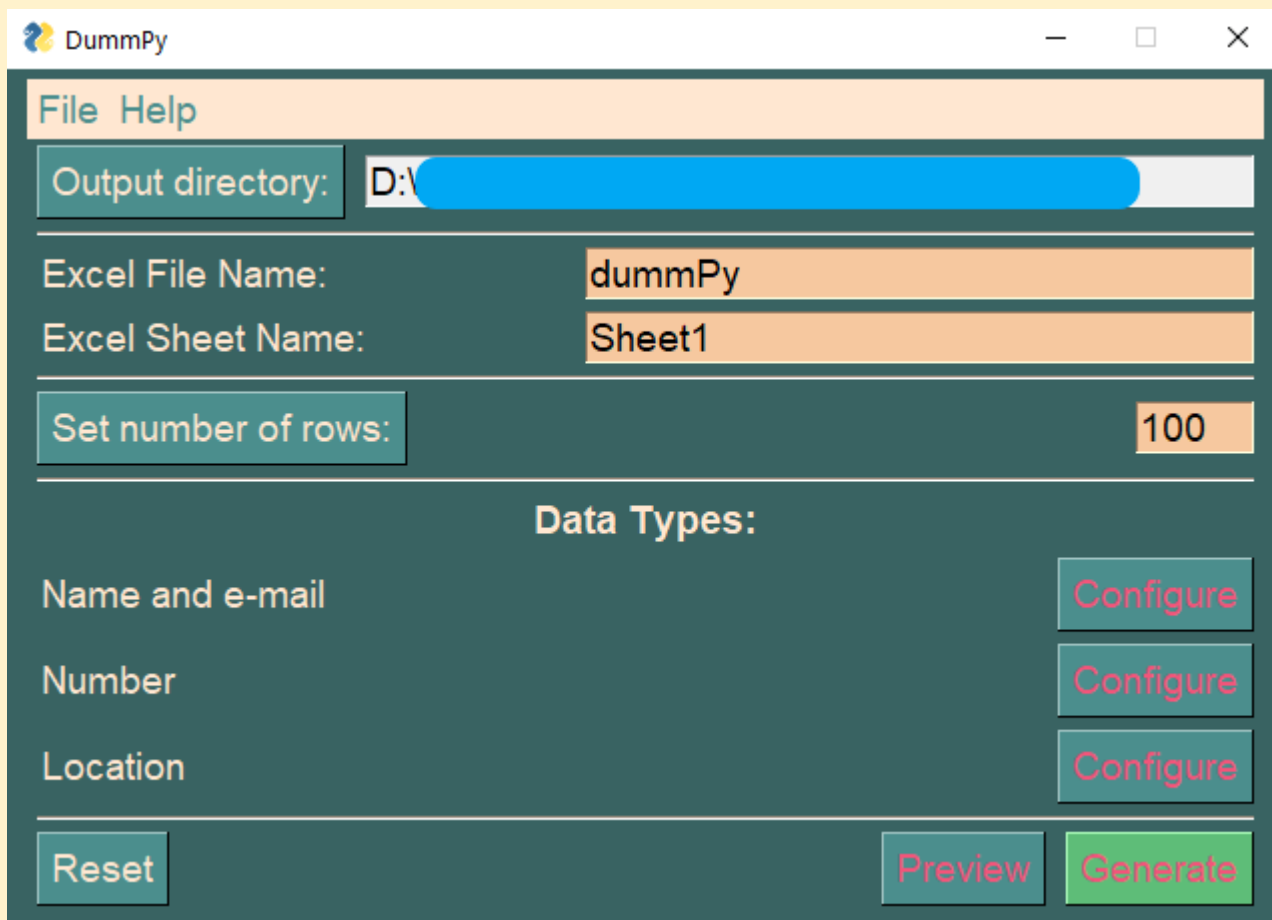
DummPy is a random data generator written in Python. With DummPy you can produce random instances or combinations of the sample data, that are provided in an external Excel file, save them in a Python dictionary, and create a new Excel file through a dataframe created with the dictionary random data.

In order to run the application on a Windows PC, you will need to have a recent version of [Python](#) installed on your computer (version 3.10 was used to write the code, so it should work if anything goes wrong). With Python installed, open Powershell and type the following commands, followed by pressing the Enter key after each one:

- 1) **cd "directory path"** : this sets the current directory. The directory path is where the main.py file is located (for example: cd "C:\dummPy").
- 2) **pip install -r requirements.txt** : this will install any dependencies that are required to run the application. Before this step, you can also create a new Python virtual environment and activate it.
- 3) **python main.py** : this will run the main.py file and start the application. The first thing you will see is the [Main Window](#).

Thank you for using DummPy!

Chapter 1: Main Window



The screenshot shows the 'DummPy' application window. At the top is a menu bar with 'File' and 'Help'. Below the menu bar is a section for output settings: 'Output directory:' with a text field containing 'D:\', 'Excel File Name:' with a text field containing 'dummPy', 'Excel Sheet Name:' with a text field containing 'Sheet1', and 'Set number of rows:' with a text field containing '100'. Below this is a section titled 'Data Types:' containing three rows: 'Name and e-mail', 'Number', and 'Location'. Each row has a 'Configure' button to its right. At the bottom of the window are three buttons: 'Reset', 'Preview', and 'Generate'.

The Main Window

At the top of the window, we can see the Menu Bar, which will be discussed in the following chapter.

Directly below it, is the button used to select the output directory of the created Excel file. By default, this is set as the directory where the main.py file is located.

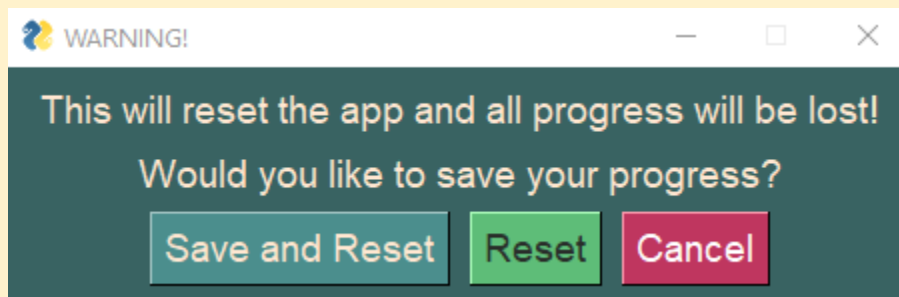
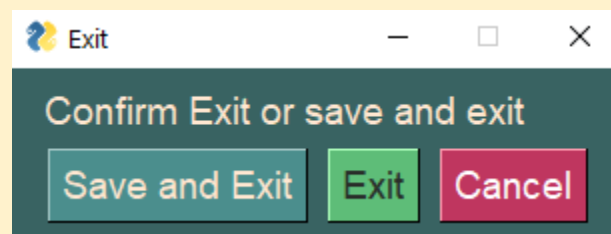
In the section below, we can set the Excel File Name and Sheet Name where our data will be created. Be careful not to overwrite any existing information.

The following section is used to set the number of rows of data you want to create, with an acceptable value of up to 99999.

The Data Types section allows for the [configuration](#) of the various data types you want to add to your file. The **Configure** buttons are initially disabled, and will only be enabled after the rows are set in the above section, or if an existing dictionary is [loaded](#).

Finally, there is the option to reset the application, preview the dataframe, and generate the Excel file. The **Preview** and **Generate** Buttons are also disabled until the rows are set or a dictionary is loaded.

Chapter 1.1 Exit / Reset confirmations

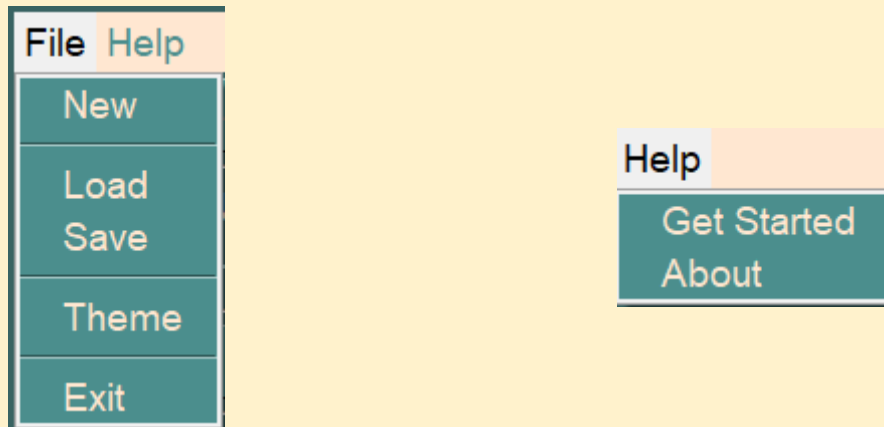


The Exit (above) and Reset (below) confirmation Windows

If you attempt to close the application or reset it while there are data in the dictionary, you will be prompted to Save beforehand, or continue the action. By pressing the **Save and Exit** button you will be able to save your progress in an external .txt file. You can find more information on the Save function in [Chapter 2.1](#).

If you attempt to close or reset the application while there is no data in the dictionary, then the action will be instant.

Chapter 2: The Menu



The Menu options

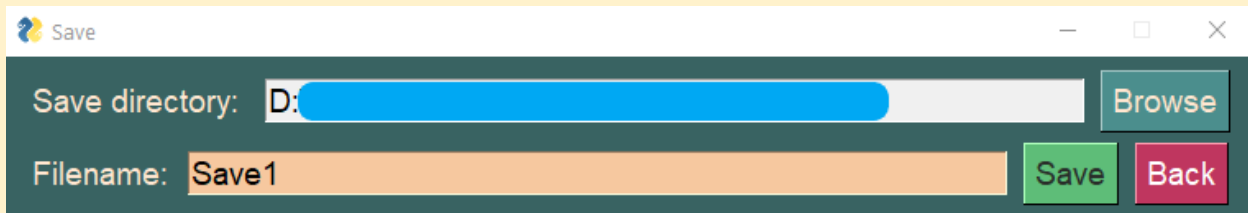
By clicking the **File** menu, you will get the following options:

- 1) **New** : Close the existing window and create a new one. This has the same functionality as the **Reset** button in the Main Window.
- 2) **Load** : Load a dictionary of values from an external .txt file.
- 3) **Save** : Save dictionary in an external .txt file
- 4) **Theme** : Change the theme of the app and reset it.
- 5) **Exit** : Exit the application.

By clicking the **Help** menu, you will get the following options:

- 1) **Get Started** : This option will open a browser tab or window to this file located on the GitHub repository of the project.
- 2) **About** : Show general information about the application.

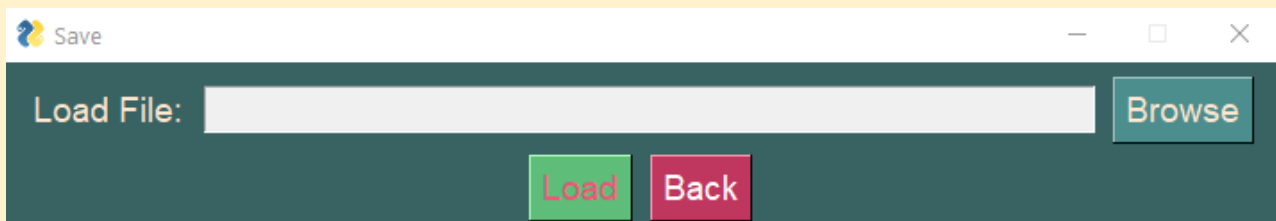
Chapter 2.1: Save



The Save Menu

With the **Save** menu you can save your progress in a .txt file, in order to [load](#) it at a later time. Simply click **Browse** to select the save file directory (default is the directory with the main.py file), followed by the **Save** button.

Chapter 2.2: Load



The Load Menu

With the **Load** submenu you can load previously [saved](#) dictionaries from a .txt file. Click on the **Browse** button to navigate and select the file, followed by the **Load** button.

After loading a dictionary file, you will notice that the number of rows will be set according to the loaded dictionary, and all the disabled buttons in the Main Window will be enabled.

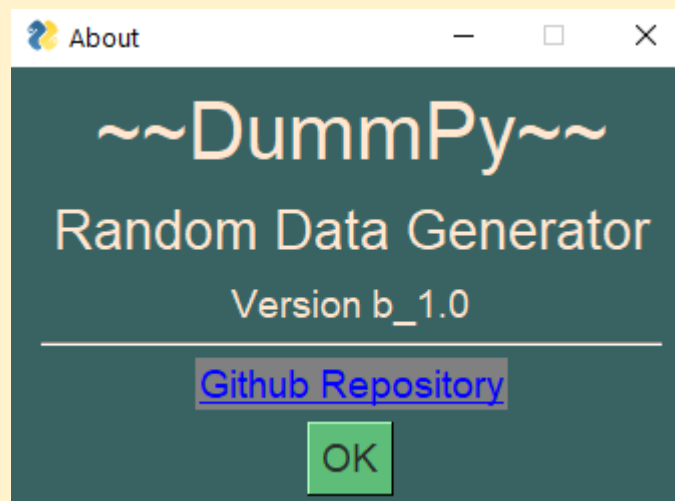
Chapter 2.3: Theme



The Theme Menu

With the Theme submenu you can change the theme of the application, by selecting one of the available themes from the dropdown menu, followed by clicking **OK**. Please be aware that this will [reset](#) the application, and if there is any data in the dictionary, you will also be prompted to [save](#) beforehand if you would like.

Chapter 2.4: About



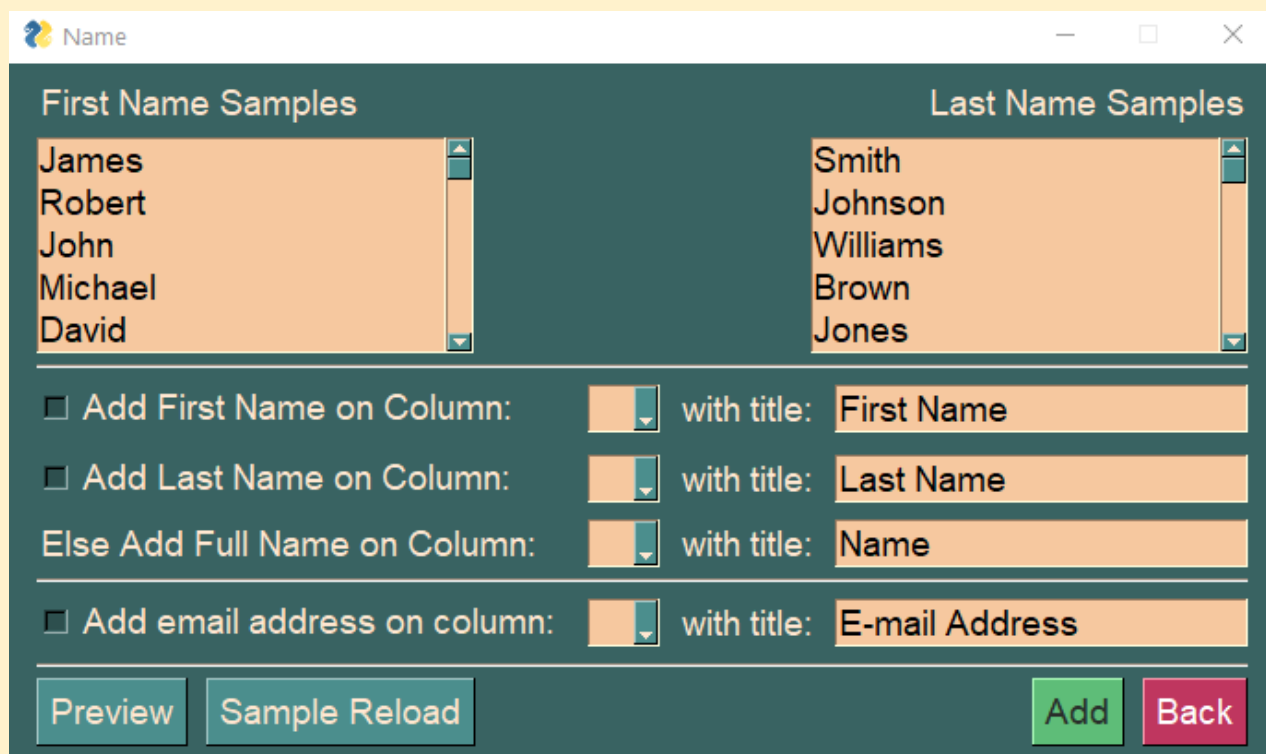
The About Window

By selecting the About submenu, you will see the About Window, with information on the version of the application, as well as the link to the [Github Repository](#).

Chapter 3: Configuration

Once you have selected the amount of lines of random data you want to create, the **Configure** buttons will become active, and you will be able to specify all the details about the created data. In this chapter we will see all the configuration options for every data type.

Chapter 3.1: Name and e-mail



The screenshot shows a window titled "Name" with two lists of name samples. The "First Name Samples" list contains: James, Robert, John, Michael, David. The "Last Name Samples" list contains: Smith, Johnson, Williams, Brown, Jones. Below the lists are four configuration options, each with a checkbox, a color selector, and a title field. The options are: "Add First Name on Column:" (checkbox unchecked, color orange), "Add Last Name on Column:" (checkbox unchecked, color orange), "Else Add Full Name on Column:" (checkbox unchecked, color orange), and "Add email address on column:" (checkbox unchecked, color orange). The title fields are "First Name", "Last Name", "Name", and "E-mail Address" respectively. At the bottom are four buttons: "Preview" (blue), "Sample Reload" (blue), "Add" (green), and "Back" (pink).

The Name and E-mail Configuration Window

At the top of the **Name and E-mail Configuration** window you will see two lists created with data from the external *SAMPLE_DATA.xlsx* file.

The next section contains the option on how you want the data to be created. You can choose to add only first name data by checking the first checkbox, only last name data by checking the second checkbox, or both in separate columns by checking both checkboxes.

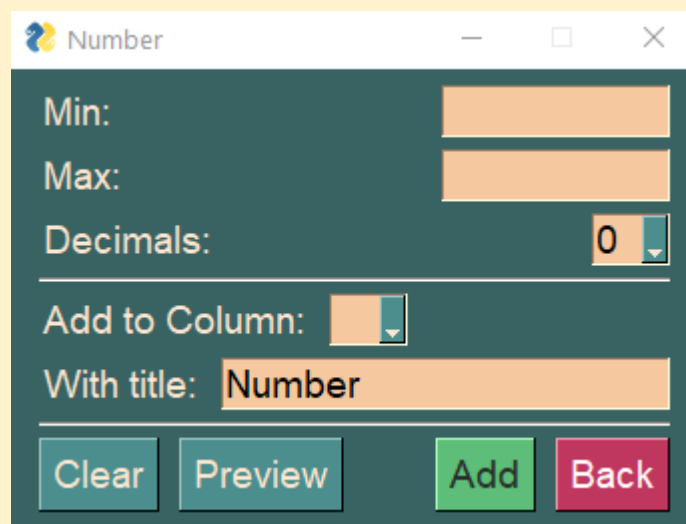
You can also add the full name in a single column by leaving both boxes unchecked.

For each option you will have to determine the Excel column from the dropdown list, as well as provide a column title name.

The next section provides the option to add an e-mail address to a specified column determined by the names generated.

Finally, in the last section you have the option to preview the dataframe, reload the sample data from the external file, if you have made any adjustments, and add the specified data to the dictionary.

Chapter 3.2: Number



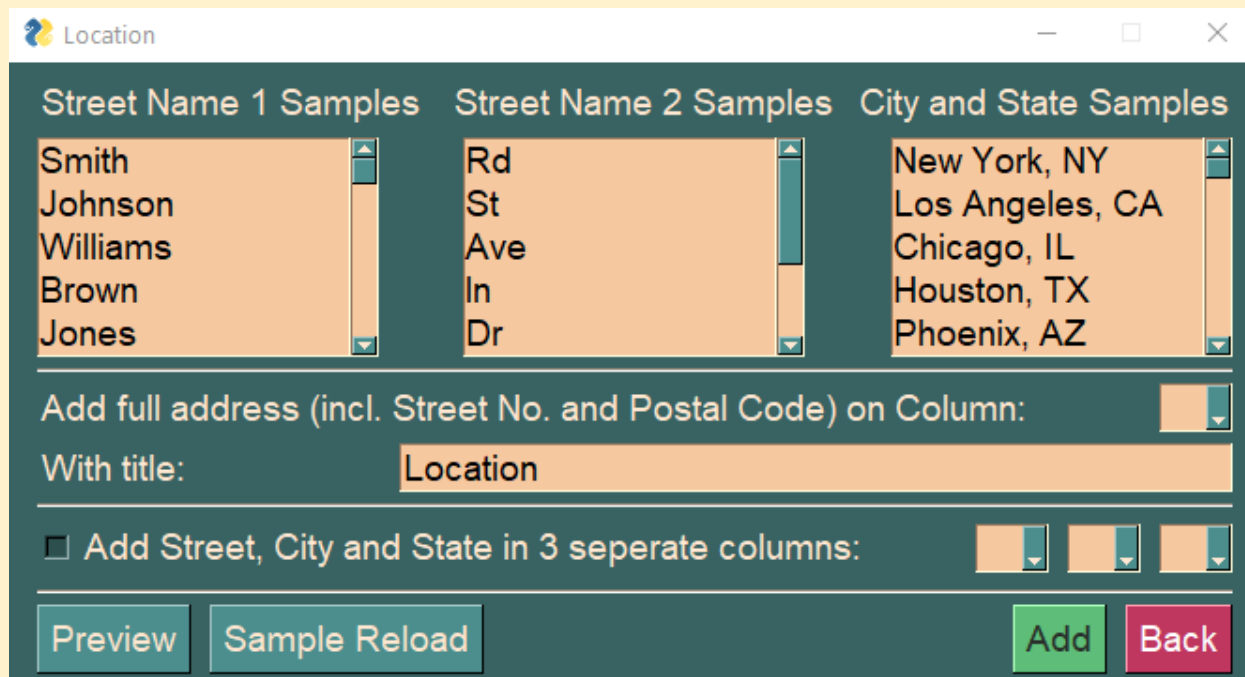
The Number Configuration Window

At the top of the **Number Configuration** window, you will be able to specify a range in which the random numbers will be generated, as well as how many decimals they should have, up to 8.

In the next section you will be able to specify the Excel sheet column where the data will be added by selecting it from the dropdown list, as well as the column title.

Finally, in the last section you will be able to Clear the data in this window, Preview the dataframe, and add the data to the dictionary.

Chapter 3.3: Location



The screenshot shows a window titled "Location" with three columns of sample data: "Street Name 1 Samples", "Street Name 2 Samples", and "City and State Samples". The first column lists surnames (Smith, Johnson, Williams, Brown, Jones), the second lists street suffixes (Rd, St, Ave, In, Dr), and the third lists cities and states (New York, NY, Los Angeles, CA, Chicago, IL, Houston, TX, Phoenix, AZ). Below these lists, there is a section for adding a full address to a specific column, with a dropdown menu and a text field for the title (currently "Location"). There is also a checkbox for adding street, city, and state in three separate columns, with three corresponding dropdown menus. At the bottom, there are four buttons: "Preview", "Sample Reload", "Add", and "Back".

Street Name 1 Samples	Street Name 2 Samples	City and State Samples
Smith	Rd	New York, NY
Johnson	St	Los Angeles, CA
Williams	Ave	Chicago, IL
Brown	In	Houston, TX
Jones	Dr	Phoenix, AZ

Add full address (incl. Street No. and Postal Code) on Column:

With title:

☐ Add Street, City and State in 3 separate columns:

The Location Configuration Window

At the top of the **Location Configuration** window, you will see three lists of sample data that will be used to generate the random location data.

In the next section, if you want the full address added in a single column, you will be able to specify the Excel Column from the dropdown list, as well as the column title. This option will also add a random street number and postal code to the address.

If, however, you want the data in separate columns, you will have to check the checkbox in the next section, along with specifying the Excel columns for each one.

Finally, at the last section you can preview the dataframe, reload the sample data from the external file, if you have made any adjustments, and add the specified data to the dictionary.

Chapter 4: Generate the Excel file

After you have configured all the data types that you want, simply return to the [Main Window](#) and click on the **Generate** button. Depending on the size of the data, you might have to wait a few seconds until the file is generated. After the confirmation, ensure that you can open the generated file in excel and feel free to close the application or start over.

Credits

Sample data sources:

- <https://www.ssa.gov/oact/babynames/decades/century.html>
- <https://www.thoughtco.com/most-common-us-surnames-1422656>
- <https://www.moving.com/tips/largest-cities-in-us/>
- https://www.faa.gov/air_traffic/publications/atpubs/cnt_html/appendix_a.html

Inspiration for this project:

- <https://github.com/Sven-Bo/advanced-gui-with-usersettings-and-menubar>