DummPy

Random Data Generator

User Guide

Contents

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.

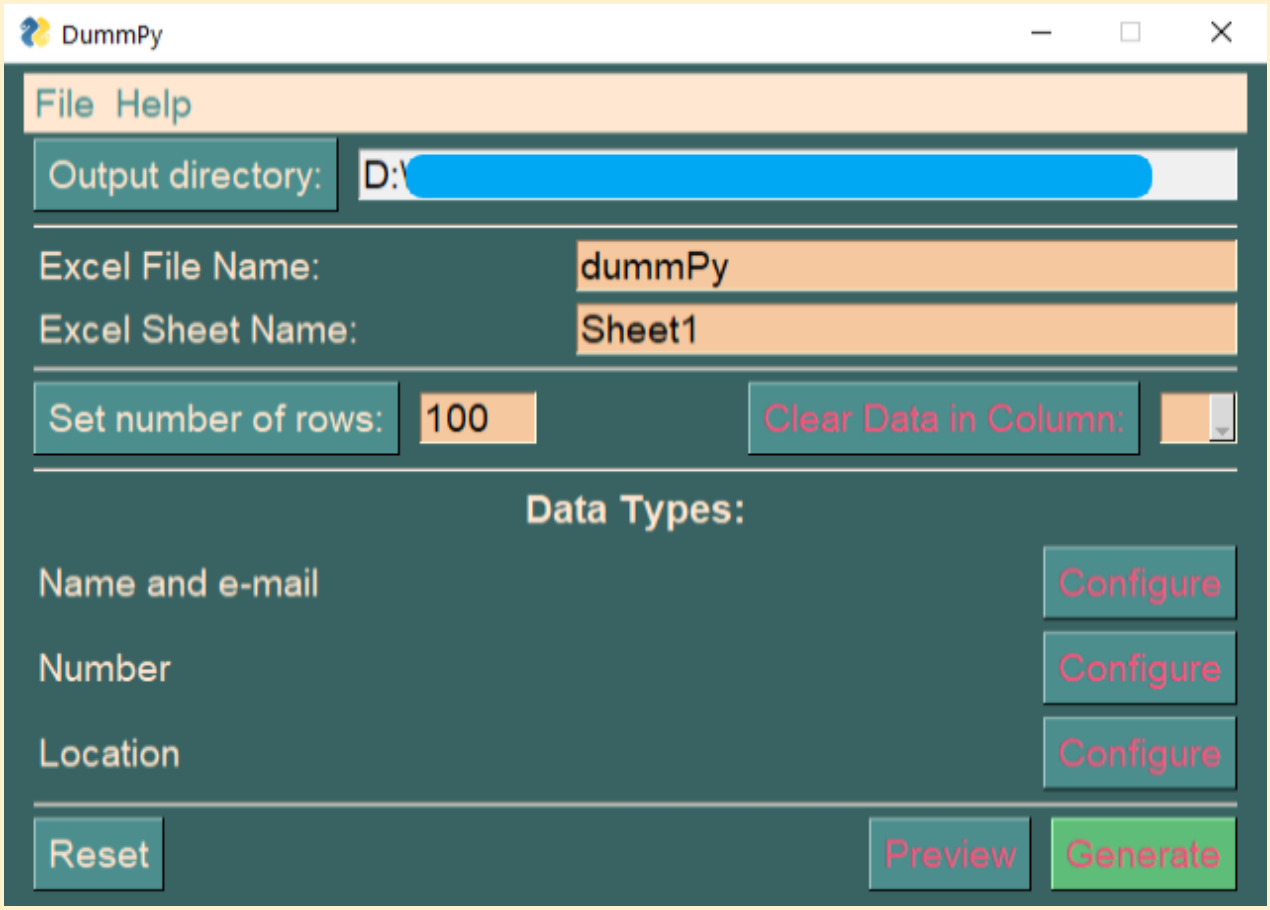
In order to run the application on a Windows PC, you will need to have a recent version of Python installed on your computer (version 3.10 was used to write the code, so it should work if anything goes wrong). With Python installed, open Powershell and type the following commands, followed by pressing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

If you don't have a lot of experience with coding, instead of the above, you can navigate to the releases page in the GitHub repository and download the latest release version, which contains a standalone executable file (no need to install python or perform the above console commands).

Thank you for using DummPy!

Chapter 1: Main Window



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.

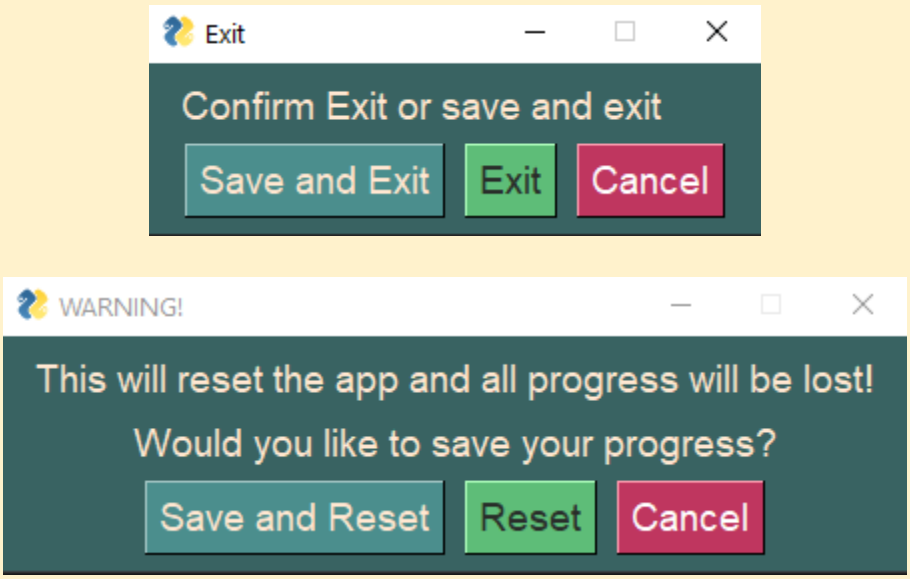
In the section below, we can set the Excel File Name and Sheet Name where our data will be created.

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. We can also remove a column from the dictionary by selecting the column from the dropdown menu and clicking the Clear Data in Column: button. The dropdown menu and the button are disabled until the rows are set or a dictionary is loaded.

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

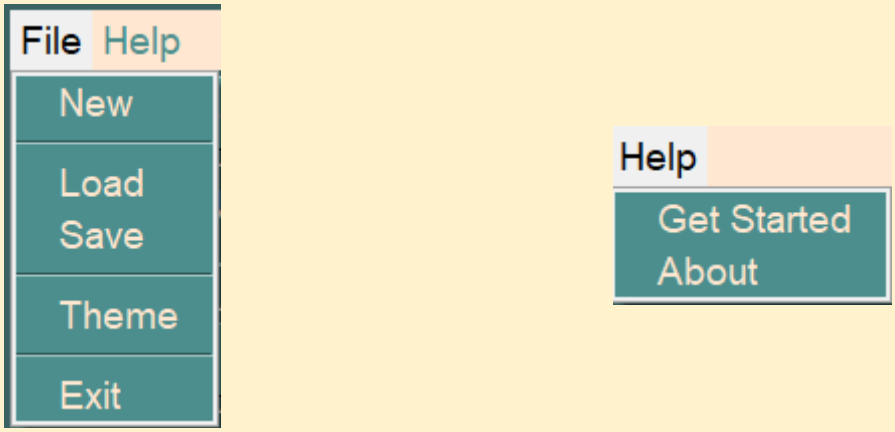


The Exit (above) and Reset (below) confirmation Windows

If you attempt to close the application or reset it while there are data in the dictionary that has not been saved or loaded recently, you will be prompted to Save beforehand, or continue the action. By pressing the Save and * 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

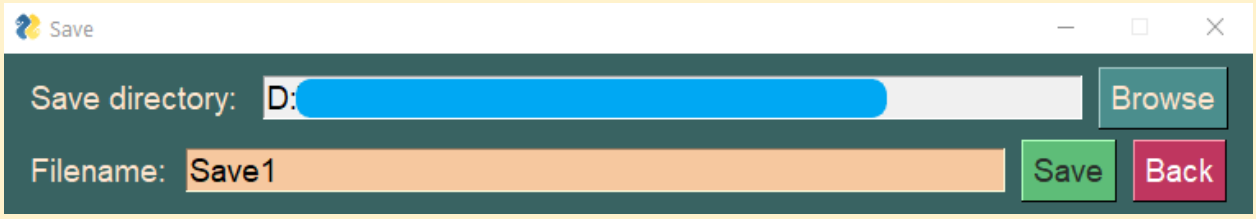
By clicking the File menu, you will get the following options:

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.

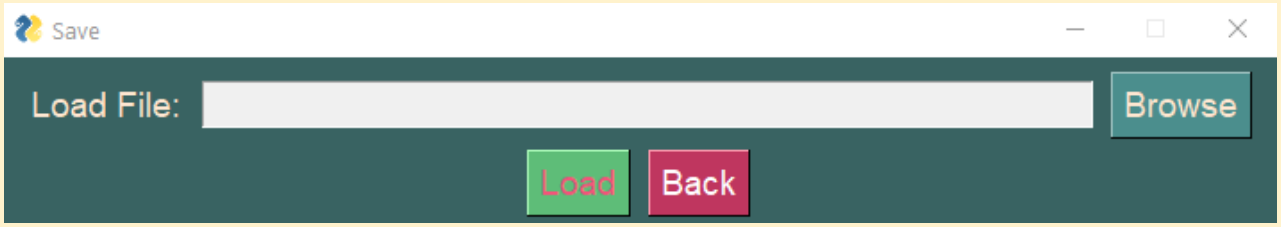
Chapter 2.1: Save



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.

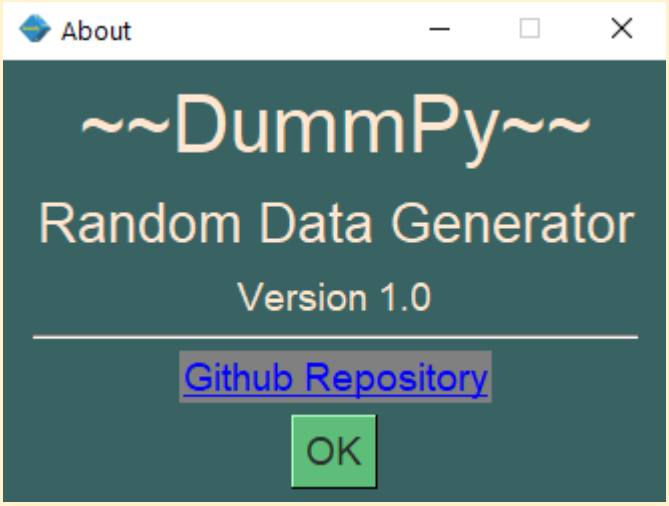
After loading a dictionary file, you will notice that the number of rows will be set according to the loaded dictionary, and all the disabled buttons in the Main Window will be enabled.

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.

Chapter 2.4: About



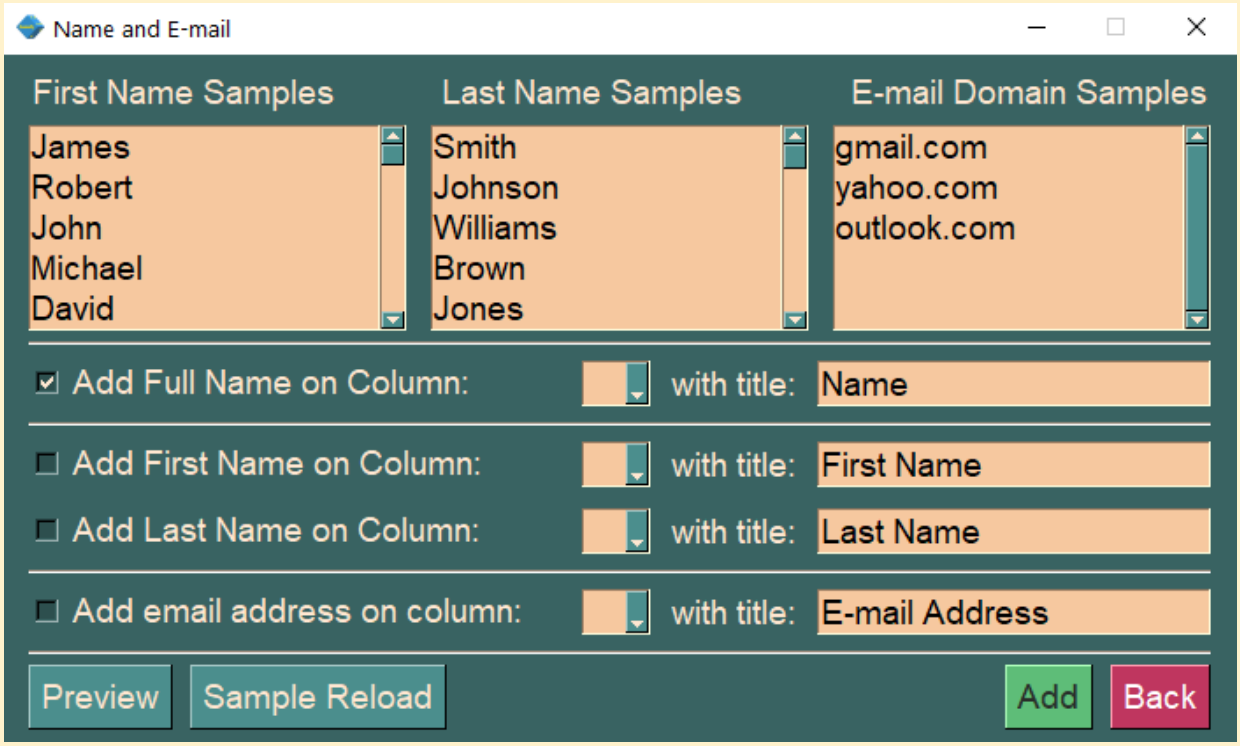
The About Window

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 number 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 Name and E-mail Configuration Window

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

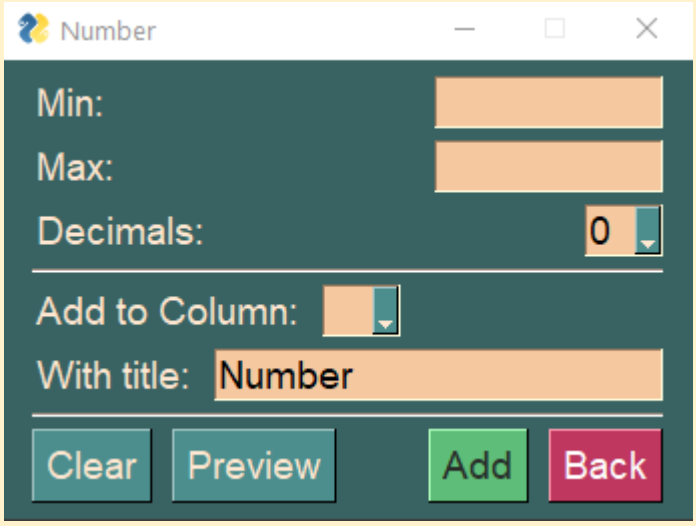
The next two sections contain the option on how you want the data to be created. You can choose to add full name data by checking the first checkbox, only first name data by checking the second checkbox, only last name data by checking the third checkbox, or both first and last name in separate columns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

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



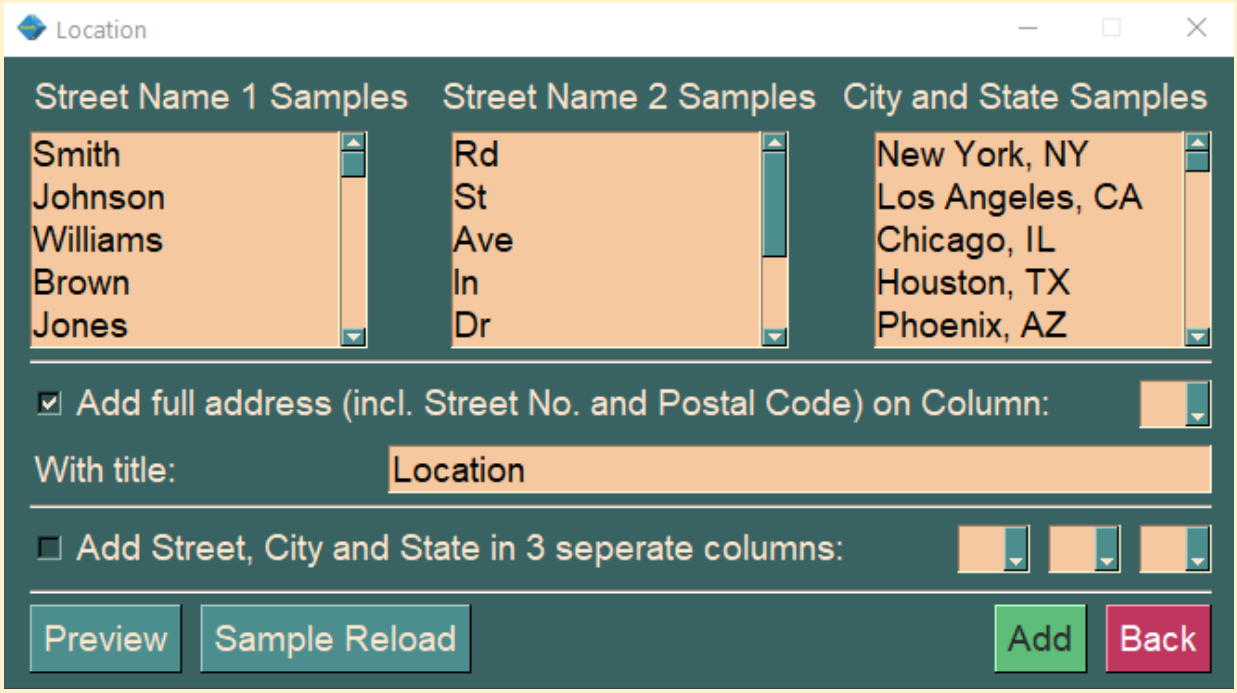
The Number Configuration Window

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 Location Configuration Window

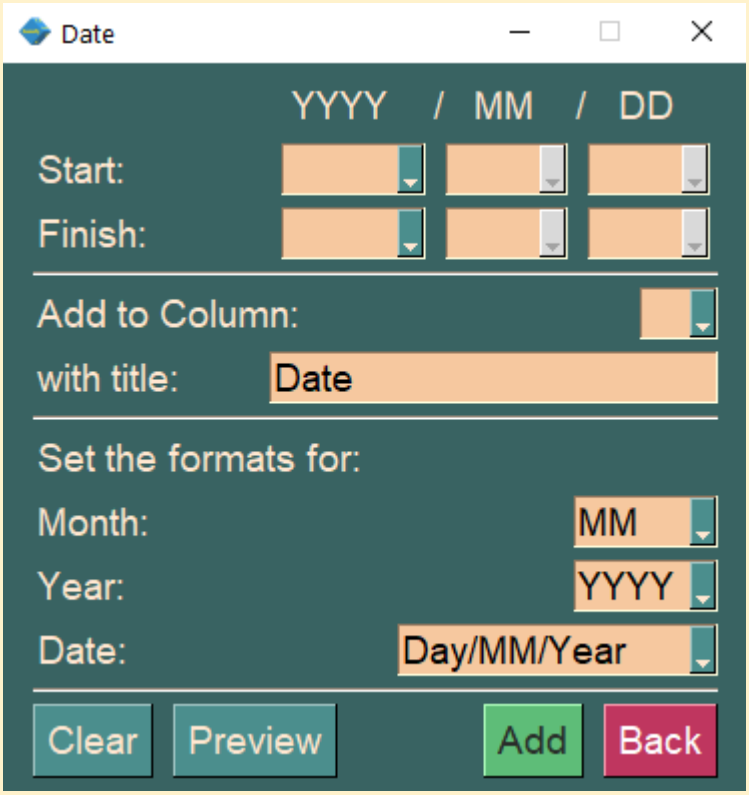
At the top of the Location Configuration window, you will see three lists of sample data that will be used to generate the random location data.

In the next section, check the checkbox 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 of Street name, City and State. Street number and Postal Code are not included in this option, but you can add them with the Number data type.

Finally, in 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 3.4: Date



The Date Configuration Window

At the top of the Date Configuration window, you can specify the starting and finishing date, between which the random dates will generate.

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.

In the following section, you can specify the month, year, and date format, by selecting from the dropdown menus.

Finally, in the last section you can clear the data in this window by restarting it, 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

> ***It is advisable to save the dictionary before generating the Excel file. While there are many fail-safes in place, the application could still crash and you will lose the data!***

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.

Disclaimer

All data produced by the application is random, any profanities or similarities with real life information is not intentional.

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