Code Specification

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The application is developed in Python 3.
Besides the Python's standard library, the application requires additional libraries to be installed. Bellow we can see all the dependencies that this app uses:

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- altgraph==0.16.1
- cx-Freeze==5.1.1
- future==0.17.1
- macholib==1.11
- mido==1.2.9
- numpy==1.16.4
- pefile==2019.4.18
- Pillow==6.1.0
- pretty-midi==0.2.8
- progress==1.5
- pygame==1.9.6
- PyInstaller==3.4
- regex==2019.6.8
- six==1.12.0
- torch==1.1.0
- torchvision==0.3.0
- tqdm==4.32.2

The file *'requirement.txt'* which is located in the root directory contains all the requirements and they can be installed through *pip*, using the command: **pip install -r requirements.txt**.

The graphical user interface is developed using the TkInter library which is part of the Python's standard library.

The *'main.py'* scrpt is the main script that executes and main loop of the application.
In order to run the application through the terminal, that script needs to be executed in the following way: **python main.py**.

The following directories can be found under the root directory:

- build

- dist

- generator

- gui

- music_generator

- stats

- venv

The *build and dist* directories are created in order to make the executable file.
The executable file is located at *dist/main/main.exe*.

The *generator* directory contains the text generation scipts, the datasets and the model weights.

The *music_generation* directory contains the scripts that are required for the music generation part.

The *gui* directory contains a script for the graphical interface (the actual desktop application). All the functions are in the **gui_functions.py** script.

The *stats* directory contains two spreadsheets: *music_stats and text_stats*. In these spreadsheets are stored all the options that the user has chosen and also the outout text that has been generated.

The *venv* directory is the virtual environment where all the dependencies are installed.