
pyLottoSimu Documentation

Release 1.8

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Lotto Generator and Simulator

a simulation of Lotto Germany (pick 6 out of 49), Lotto Austria (pick 6 out of 45), EuroMillionen, Powerball Lottery US, Mega Millions lottery and Hot Lotto Sizzler system.

The pyLottoSimu program generates random lottery numbers and can simulate a draw. In the simulation view a Lotto Ball is visible on the numbers rotate faster and faster, and is finally available, this is the text, the first number of today's draw was the ... Maybe it was indeed actually the numbers of the next draw, of course are here, all the figures provided without guarantee.

pyLottoSimu can be started in these languages:

English, German, French, Spanish, Italian, Danish, Dutch, Polish and Russian

CHAPTER 1

Start

The program requires [Python 2.7](#) or 3.x and [Qt5 for Python](#).

Start with:

```
python lotto.pyw [de|dk|fr|es|it|nl|pl|ru]
```


CHAPTER 2

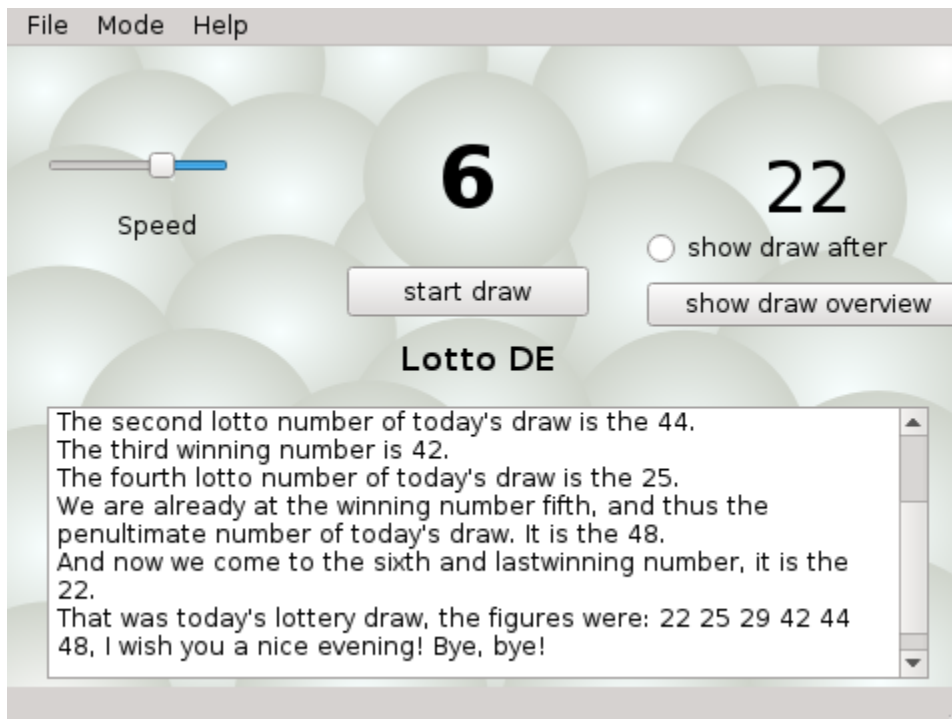
Documentation

Make the documentation as .html file:

```
cd docs
make html
```

Add new modules with:

```
cd docs
sphinx-apidoc -f -o . ../pylottosimu
```



Contents:

2.1 Installation

Installing pyLottoSimu should usually be quite easy, as you can simply unpack and run pyLottoSimu in place if you wish to do so.

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- *Installation*
 - *dependencies*
 - *Installing Debian or Ubuntu*
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2.1.1 dependencies

You'll need these dependencies to run the program:

- [python](#) - The python programming language along with python-setuptools
- [pyQt5](#) - Qt5 for Python

build the help

- [Sphinx](#) - Documentation

code test

- [pep8](#) - Python style guide checker
- [pycodestyle](#) - Python style guide checker
- [isort](#) - import sorting and checking tool
- [nose](#) - start nosetests to run the tests

version control system Git

- [Git](#) - Git - distributed version control system

2.1.2 Installing Debian or Ubuntu

First you need to your computer these programs: Python, pyQt5 and version control system git:

```
# sudo apt-get install python python-pyqt5 python-pyqt5.qtsvg git
# sudo apt-get install python3 python3-pyqt5 python3-pyqt5.qtsvg git
```

Then you copied the source code of the program on your computer, either download the zip file of the project or download with the version control system:

```
# git clone https://github.com/MarkusHackspacher/pyLottoSimu.git
```

change the directory and run:

```
cd pyLottoSimu
./lotto.pyw
```

alternative:

```
python lotto.pyw [de|dk|fr|es|it|nl|pl|ru]
python3 lotto.pyw [de|dk|fr|es|it|nl|pl|ru]
```

2.1.3 Contribute

Feel free and send a pull request to <https://github.com/MarkusHackspacher/pyLottoSimu> . If you have an idea, tell it at <https://gitter.im/MarkusHackspacher/pyLottoSimu> . Thank you in advance.

2.2 Translate

2.2.1 GUI Translate

To translate the program or make a translation in your language, insert in the `complete.pro` your language code.

```
cd pylottosimu
pylupdate5 complete.pro
```

translate your language file: `lotto1_xx.ts`, and produce the `.ts` translation files with:

```
lrelease complete.pro
```

At Linux should you install the `pyqt5-dev-tools` to use the `pylupdate5` command and `qttools5-dev-tools` for the `lrelease`:

```
apt-get install pyqt5-dev-tools qttools5-dev-tools
```

2.2.2 Documentation Translate

this documentation is in English and translated in German, generated by [Sphinx](#).

Extract document's translatable messages into pot files. As a result, many pot files are generated under `_build/locale`. With `sphinx-intl` command update the `docs/locale/de` directory:

```
cd docs
make gettext
sphinx-intl update -p _build/locale -l de
```

translate the `.po` files in `./locale/de/LC_MESSAGES/` and build mo files:

```
sphinx-intl build
```

To build local the docu in German:

```
make -e SPHINXOPTS="-D language='de'" html
```

2.3 History

Contents

- *History*
 - *Version*
 - * *Version 1.6.1*
 - * *Version 1.6*
 - * *Version 1.5*
 - * *Version 1.4*
 - *Preview*

2.3.1 Version

The current version is 1.7 from June 3, 2017.

Version 1.6.1

Version 1.6.1 from September 2, 2015.

Version 1.6

The version 1.6 from June 3, 2015 could be choose between four lottery systems, the German 6 out of 49 is default, the Austrian 6 out of 45 with a bonus number, the Euro 5 million from 50 with two Super numbers 1-11 and as well as the American Powerball Lottery 5 of 59 and a Bonus number in the range 1 to 35th Under the hood, the program logic of the surface is no longer dependent and it will in the next version also use the program without a graphical Enter surface. So the program structure is clearly arranged and it may be better to reuse parts of the program in other programs. Furthermore can be with Python tools create an .exe file:

```
python setup.py py2exe
```

If anyone would like to offer this program as a gimmick on his website, thereby adjusts the link to the homepage it can do like to feel free.

Version 1.5

The Version 1.5 from February 20, 2014, can be start with Qt4 or QT5.

Version 1.4

The renewals in Version 1.4 of October 3, 2013 from pyLottoSimu is multilingualism there are now nine languages. And in Program window there is a major change, it can now Select whether the number overview window to appear automatically after the draw.

2.3.2 Preview

The program starts with the last selected lotto system.

2.4 pylottosimu

2.4.1 pylottosimu package

Subpackages

pylottosimu.dialog package

Submodules

pylottosimu.dialog.lottosettingdialog module

class LottoSettingsDialog

Manage the GUI of setting dialog. Use lottosystem.ui.

```
class pylottosimu.dialog.lottosettingdialog.LottoSettingsDialog(sysdat, parent=None,
test-case=None)
```

Bases: PyQt5.QtWidgets.QDialog

The GUI of Settings.

Parameters

- **sysdat** (*string*) – Lotto setting
- **parent** (*string*) – parent window

static get_values (sysdat, parent=None)

static method to create the dialog and return (dialog.values, accepted)

Parameters **sysdat** (*string*) – Lotto setting

Returns dialog.values, accepted

Return type array of int, bool

sep_addit_numbers ()

if the checkbox with separate additional numbers is active then enable to set the number

Returns

set_values ()

Set Values

Returns

values ()

Values

Returns

with_addit ()

if the checkbox with additional numbers is active then enable to set the number

Returns

`pylottosimu.dialog.lottosettingdialog.qt_loadui (uifile)`

pylottosimu.dialog.show_drawing module

class DlgShowDrawing

show a Dialog with all the ball numbers from the draw and the bonus numbers.

class `pylottosimu.dialog.show_drawing.DlgShowDrawing` (*ballnumbers*, *highestnumber*, *bonusnumbers=False*, *highestbonus=False*)

Bases: `PyQt5.QtWidgets.QDialog`

Show the numbers in a dialog box

Parameters

- **ballnumbers** (*tuple of int*) – the number of draw
- **highestnumber** (*int*) – the number of the PushButtons
- **bonusnumbers** (*int*) – the bonus numbers
- **highestbonus** (*int*) – the highest bonus number (separate numbers)

Returns None

initbuttons ()

Array of buttons from 1 to the highest number and buttons for the additional numbers

Returns None

Module contents

additional dialogs

Submodules

pylottosimu.lottosystem module

class `pylottosimu.lottosystem.LottoSystemData`

Bases: `object`

loads predefined lottery systems. And read and write a json file of the data set.

Dataset:

- **name**: name of the lottery system,
- **max_draw**: highest number of draw
- **draw_numbers**: number to pick
- **with_addit**: with additional number
- **sep_addit_numbers**: with separate additional number, the additional number are not in the same pot

- `addit_numbers`: additional number to pick
- `max_addit`: highest additional number in the separate pot

static fixdata()

Data of predefined lottery system.

The following are predefined: Lotto Germany (pick 6 out of 49), Lotto Austria (pick 6 out of 45), EuroMillionen, Powerball Lottery US, Mega Millions, Hot Lotto Sizzler

If you miss your favorite lottery system than could you add here.

Returns data

projectpath()

open in the home path and create a direction.

Returns path of the project

readfile()

read lottosystems.json

Returns data

writetofile()

write lottosystems.json

Returns none

pylottosimu.pylotto module

class LottoSimuDialog

Load the GUI and manage the signals for the program of the pyLottoSimu. Use the lottosimu_gui.ui

class drawlotto

simulate a lotto draw. draw the lotto numbers and give the draw text back

```
class pylottosimu.pylotto.DrawLotto(name='Lotto DE', max_draw=49, draw_numbers=6,
                                     with_addit=True, addit_numbers=1,
                                     sep_addit_numbers=True, max_addit=9,
                                     name_addition='Superzahl')
```

Bases: `PyQt5.QtCore.QObject`

simulate a lotto draw

Parameters

- **name** (*string*) – name of game
- **max_draw** (*int*) – maximal draw numbers
- **draw_numbers** (*int*) – the draw numbers
- **with_addit** (*bool*) – with additional number
- **addit_numbers** (*int*) – the additional numbers
- **sep_addit_numbers** (*bool*) – separates additional numbers
- **max_addit** (*int*) – maximal additional numbers

draw()
draw of the lotto numbers

Returns none

picknumber(turn)
pick of a lotto number

Returns pick

class pylottosimu.pylotto.LottoSimuDialog
Bases: PyQt5.QtWidgets.QMainWindow

The GUI and program of the pyLottoSimu.

action_lottosim()
Changing the layout for simulation or generation and change the visible of the buttons.

Returns none

onbtn_draw_overview()
show dialog of the draw

Returns none

onbtn_start()
Start simulation with the first drawing init timer with the value from the Scrollbar the next drawing starts with the timer event.

Returns none

onclean_output_text()
Clean the output text

Returns none

onclose()
Close the GUI

Returns none

oninfo()
Set the text for the info message box in html format

Returns none

onrandom_numbers_generator()
Show the output from the random number generator.

Returns none

onsystem()
show dialog of the draw

Returns none

ontimer()
Start time to show a number.

Returns none

static onwebsite()
Open website

Returns none

show_next_number()

Simulation of the draw and show the next Number on the Screen.

Returns none

`pylottosimu.pylotto.qt_loadui(uifile)`

load Qt ui file

Parameters `uifile` –

Returns

Module contents

Manage a Lotto simulation draw.

2.4.2 tests package

Submodules

tests.test_drawlotto module

class `tests.test_drawlotto.DrawLottoTestCase` (*methodName='runTest'*)

Bases: `unittest.case.TestCase`

Test the lotto draw with some input numbers

setUp()

Init class pylotto.drawlotto

Returns none

test_draw()

test draw without a additional number

Returns none

test_draw_addit()

test draw with a additional number

Returns none

test_draw_addit_sep()

test draw with a separate additional number

Returns none

test_drawone()

test draw one number without a additional number

Returns none

test_drawthree()

test draw three number without a additional number

Returns none

test_drawtwo()

test draw two number without a additional number

Returns none

```
test_drawzero ()  
    test set draw to no number and make sure to set to one number  
  
    Returns none  
  
test_setting ()  
    Test lotto.data  
  
    Returns none
```

tests.test_lottosettingdialog module

Test the dialog module

lottosettingdialog

Setup for testing, create the UI_lottosystem.py file:

```
cd dialog/ pyuic4 -output UI_lottosystem.py lottosystem.ui
```

```
class tests.test_lottosettingdialog.LottoSystemDataTestCase (methodName='runTest')  
    Bases: unittest.case.TestCase  
    Test of drawing  
  
    setUp ()  
        Creates the QApplication instance  
  
        Returns none  
  
    tearDown ()  
        Deletes the reference owned by self  
  
        Returns none  
  
    test_dialog ()  
        test
```

tests.test_lottosystemdata module

Testcase for module pylottosimu.lottosystemdata

```
class tests.test_lottosystemdata.TestCodeFormat (methodName='runTest')  
    Bases: unittest.case.TestCase  
    Test the code format of the file  
  
    setUp ()  
        load LottoSystemData  
  
        Returns  
  
    test_readfile ()  
        read the lottosystems.json file
```

tests.test_show_drawing module

Test the dialog module show_drawing

```
class tests.test_show_drawing.ShowDrawingTestCase (methodName='runTest')
    Bases: unittest.case.TestCase

    Test of drawing

    setUp ()
        Creates the QApplication instance

    tearDown ()
        Deletes the reference owned by self

    test_ballnumber ()
        test with one ball numbers

    test_bonusnumbers ()
        test ball numbers and bonus numbers in a maximal draw of 5 numbers

    test_bonusnumbersseparate ()
        test separate bonus numbers

        Returns none

    test_highernumbers ()
        test with higher draw numbers as the highest number in the draw in the ball numbers and in the bonus
        numbers

        Returns none

    test_samenumbers ()
        test the same ball numbers and bonus numbers in a maximal draw of 5 numbers

        Returns none

    test_twoballnumber ()
        test with two ball numbers
```

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test case

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