OptionPayOffer

A tool for option trading

April 24 2019

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CONTENTS

Overview

What our project goes for

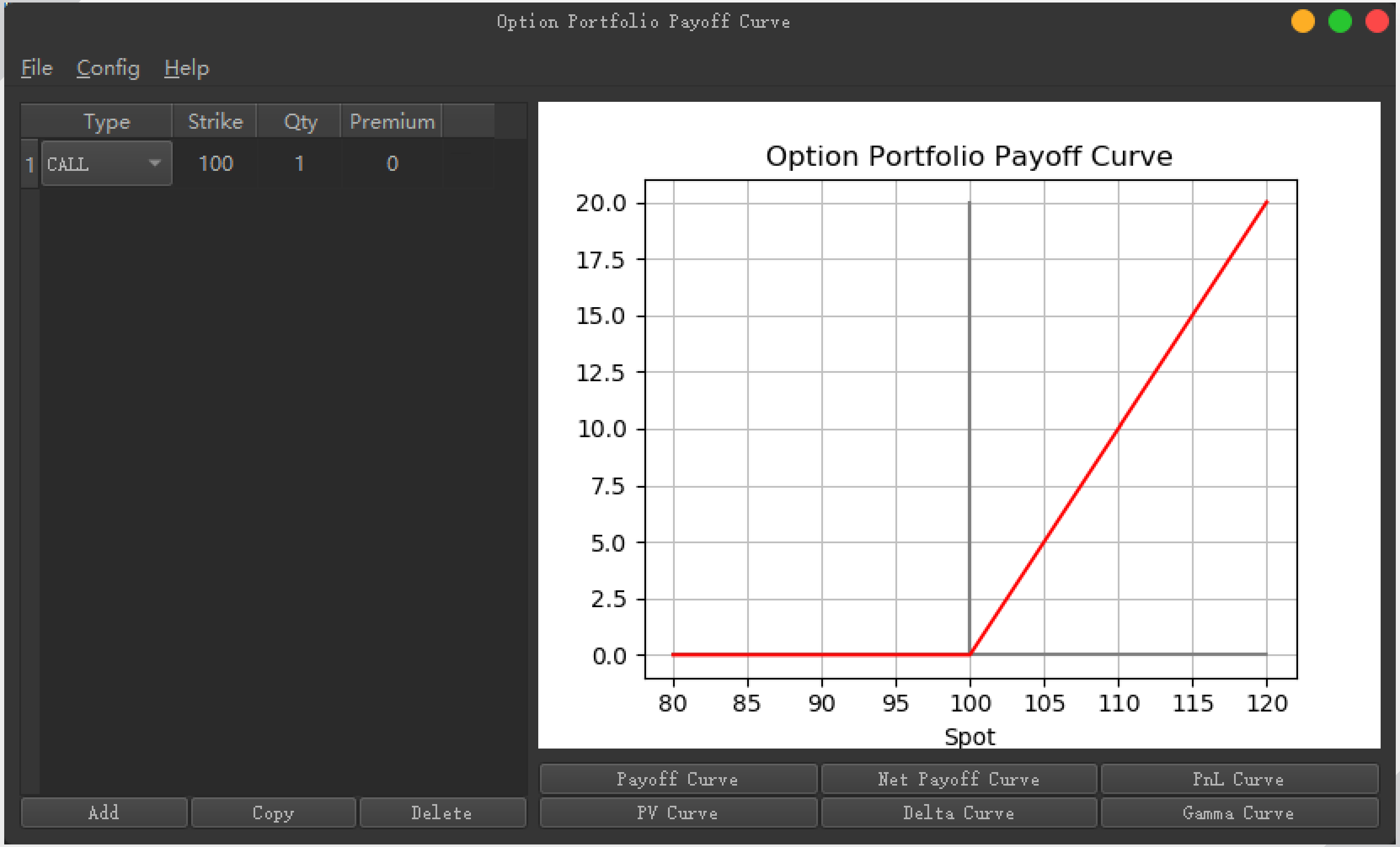
A tool to estimate the different spot-based curves of vanilla portfolios.

Pricing is dvailable for vanilla options based on Black-Scholes or Monte-Carlo methods.

Only vanilla option is available (barrier is not supported)

Can estimate option payoff under different level of spot

Can evaluate option price under different market using different evaluation engine


Option Portfolio Payoff Curve
File
Config
Help
Type
Strike
Qty
Premium
1
CALL
100
1
0
Option Portfolio Payoff Curve
20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
80
85
90
95
100
105
110
115
120
Spot
Payoff Curve
Net Payoff Curve
PnL Curve
PV Curve
Delta Curve
Gamma Curve
Add
Copy
Delete

Performance

Project Show

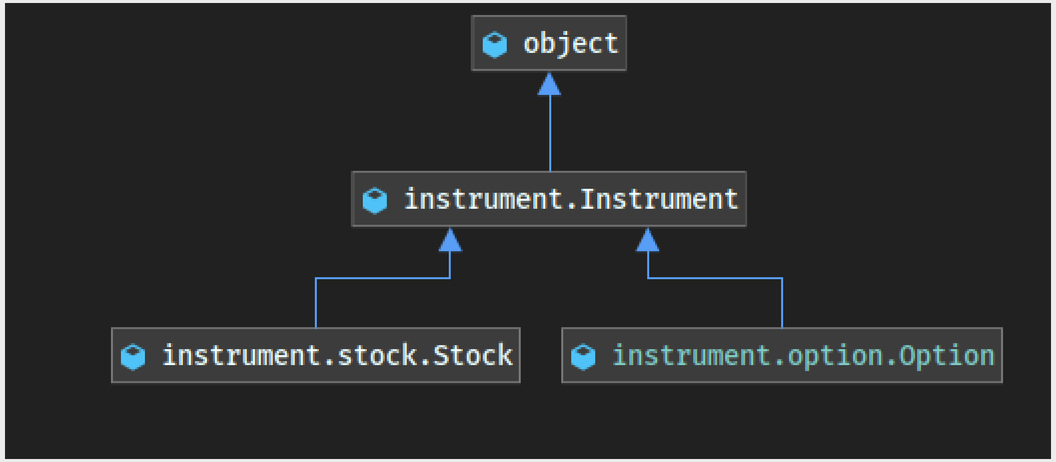
Our Program design of traders, by traders and for traders

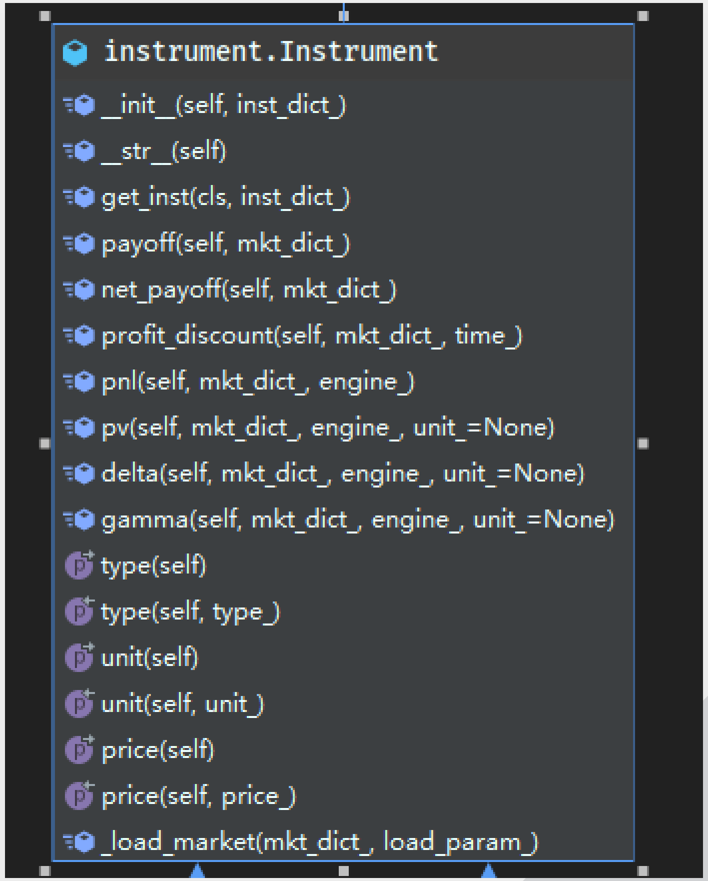
Logic & Code Design

Why we design like this

Data Structure

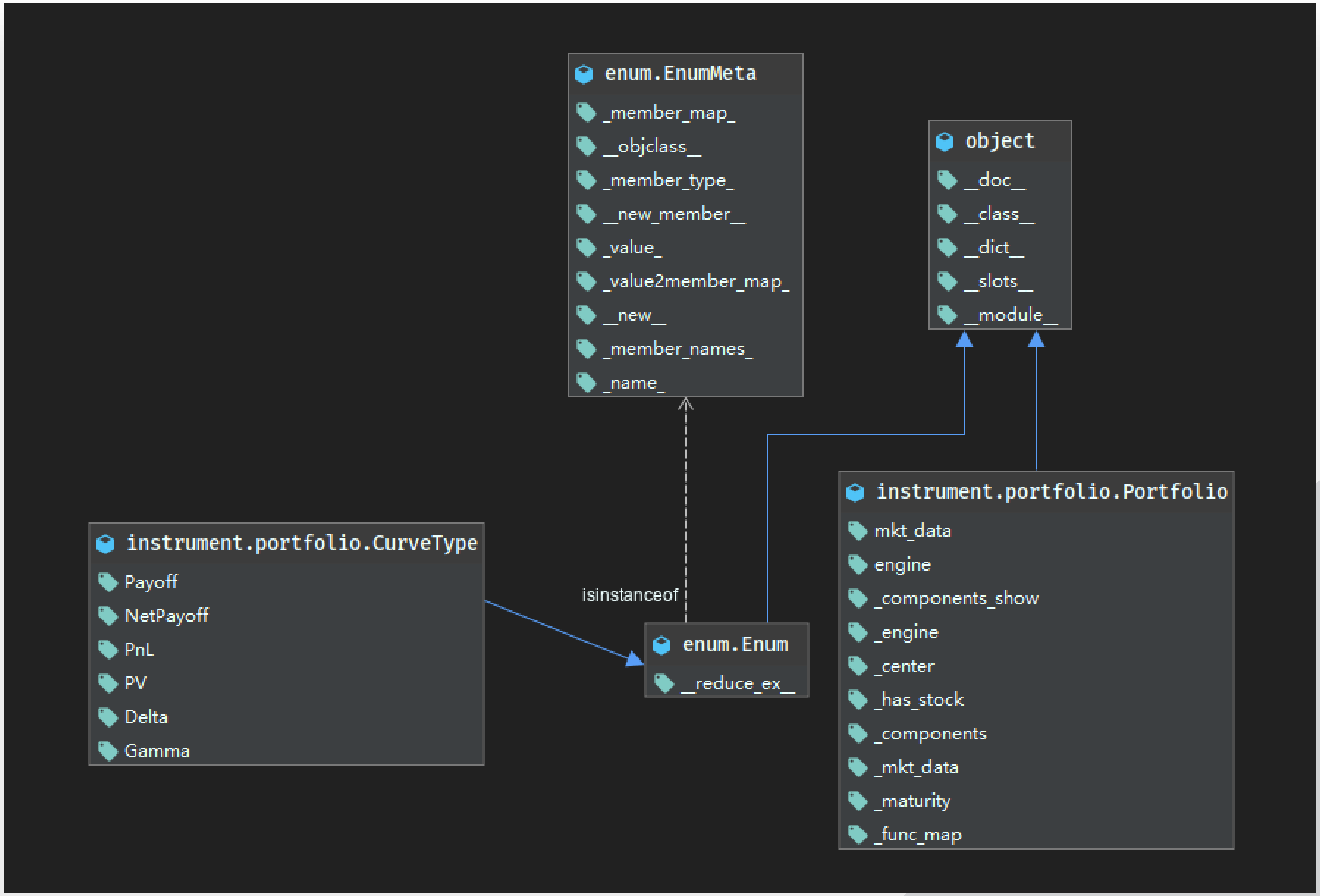
Basic Data Classes





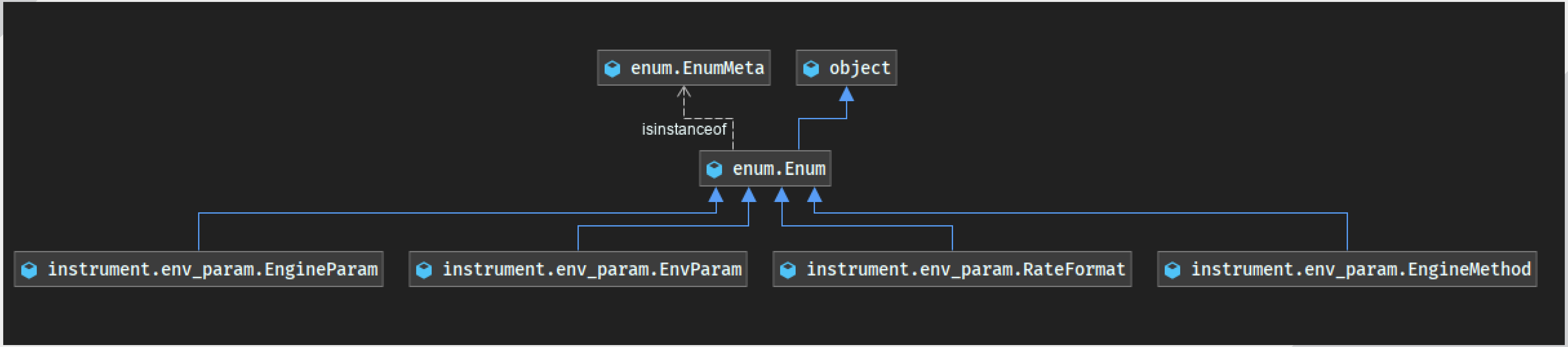
Data Structure

Portfolios



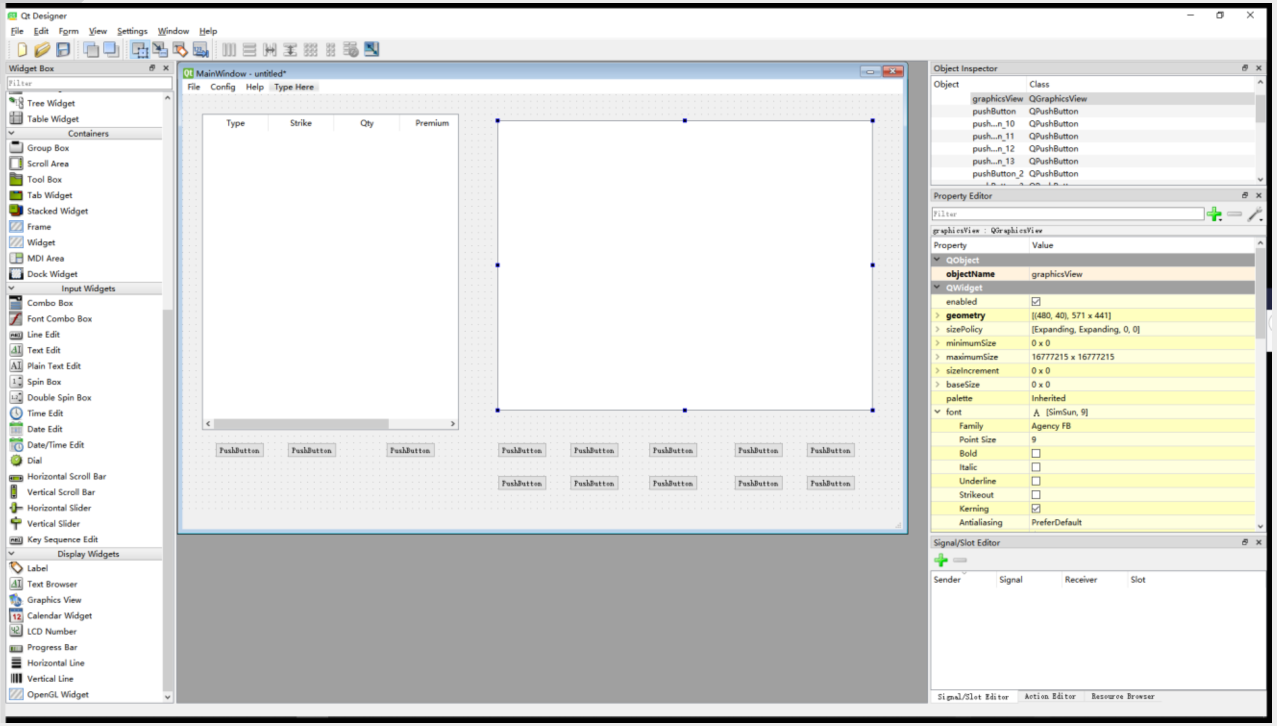
Environment

General setting for option pricing and option Greeks



GUI

Based on PyQt 5.12.0



QtDesigner

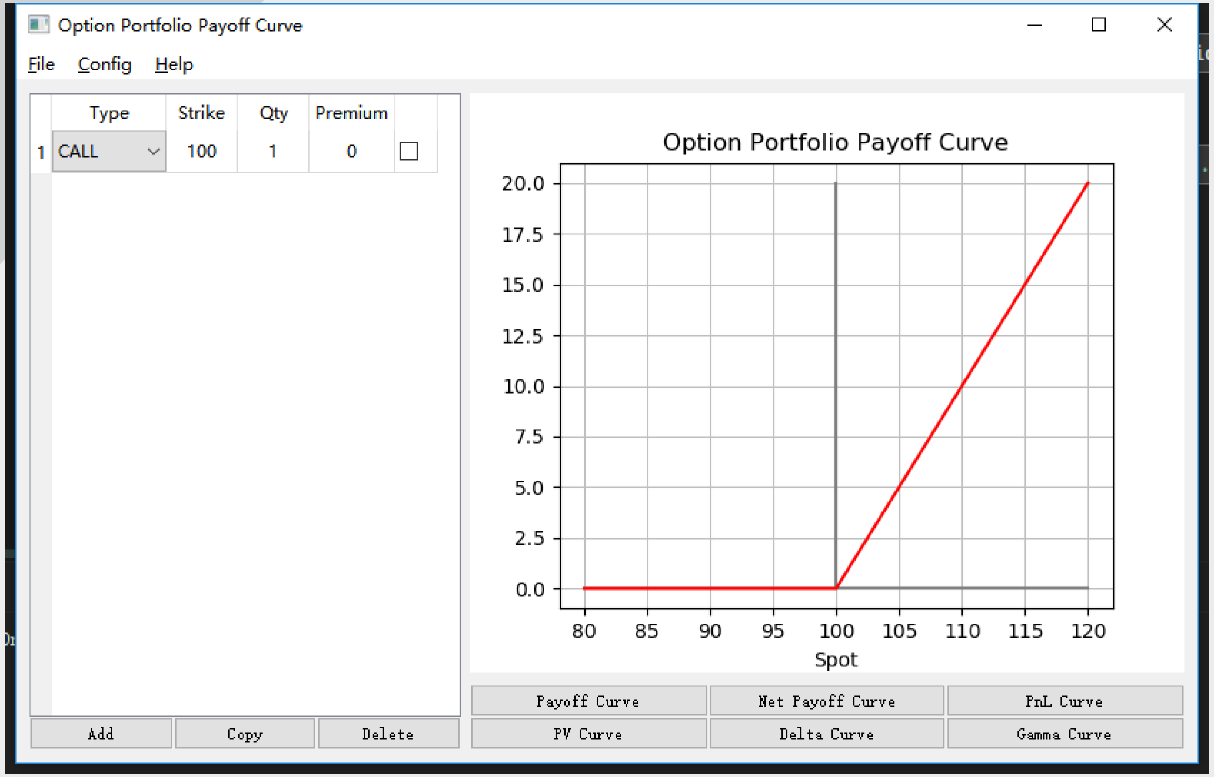
+

QtUIC

+

QtRCC

Main Window


Option Portfolio Payoff Curve
File
Config
Help
Type
Strike
Qty
Premium
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CALL
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Option Portfolio Payoff Curve
20.0
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Spot
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PnL Curve
PV Curve
Delta Curve
Gamma Curve
Add
Copy
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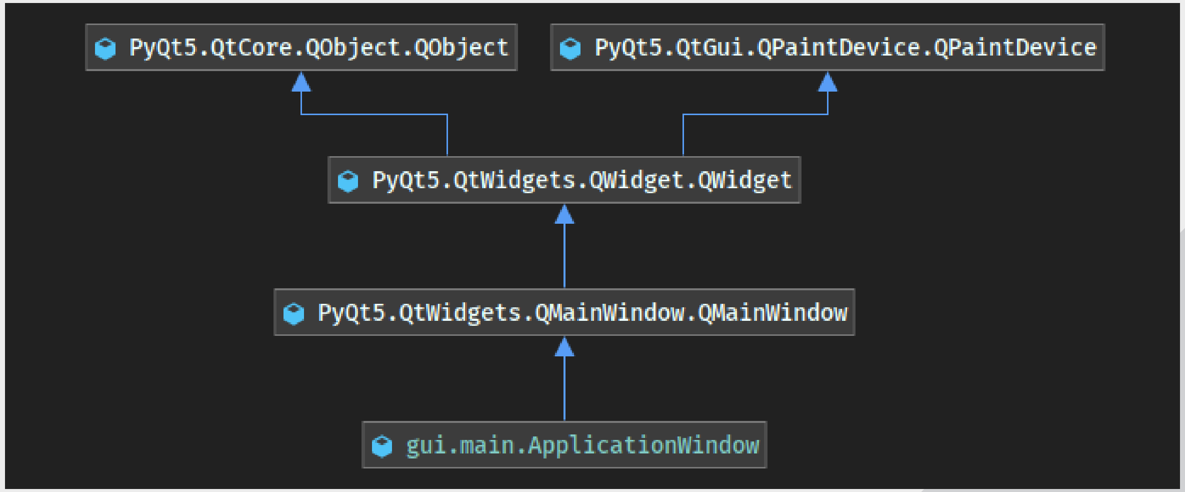
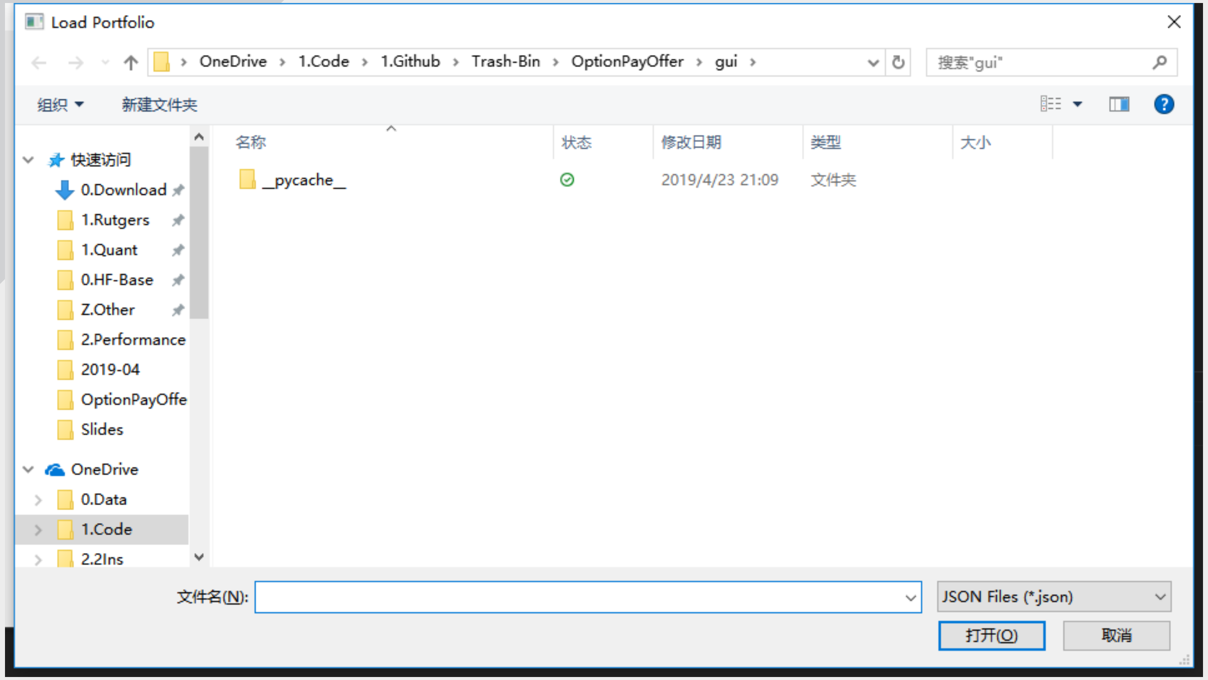
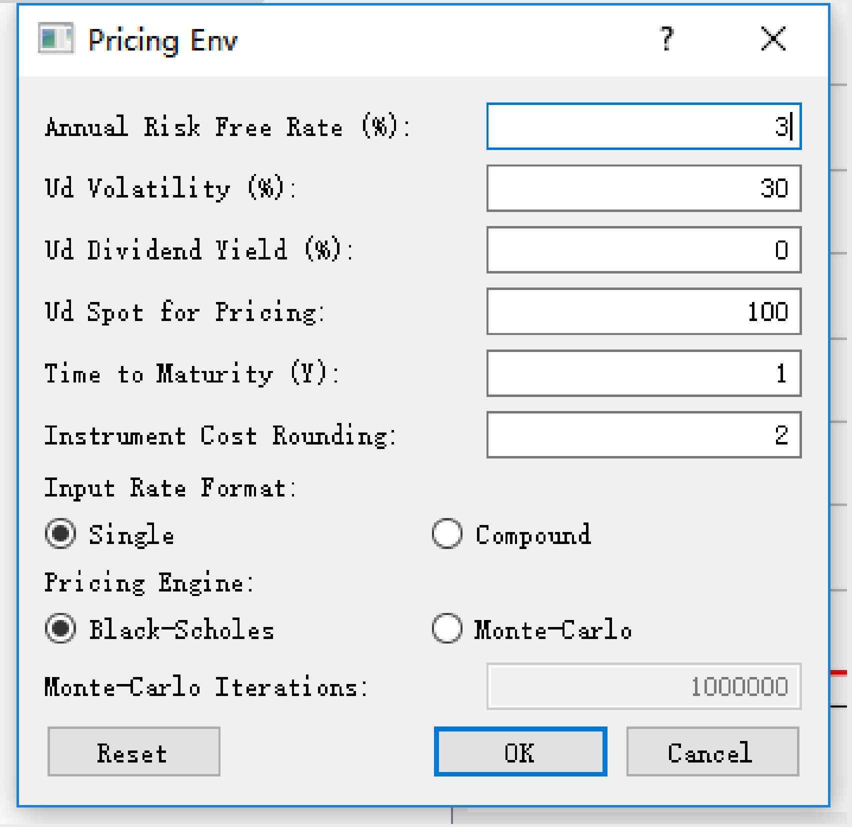

PyQt5.QtCore.QObject.QObject
PyQt5.QtGui.QPaintDevice.QPaintDevice
PyQt5.QtWidgets.QWidget.QWidget
PyQt5.QtWidgets.QMainWindow.QMainWindow
gui.main.ApplicationWindow

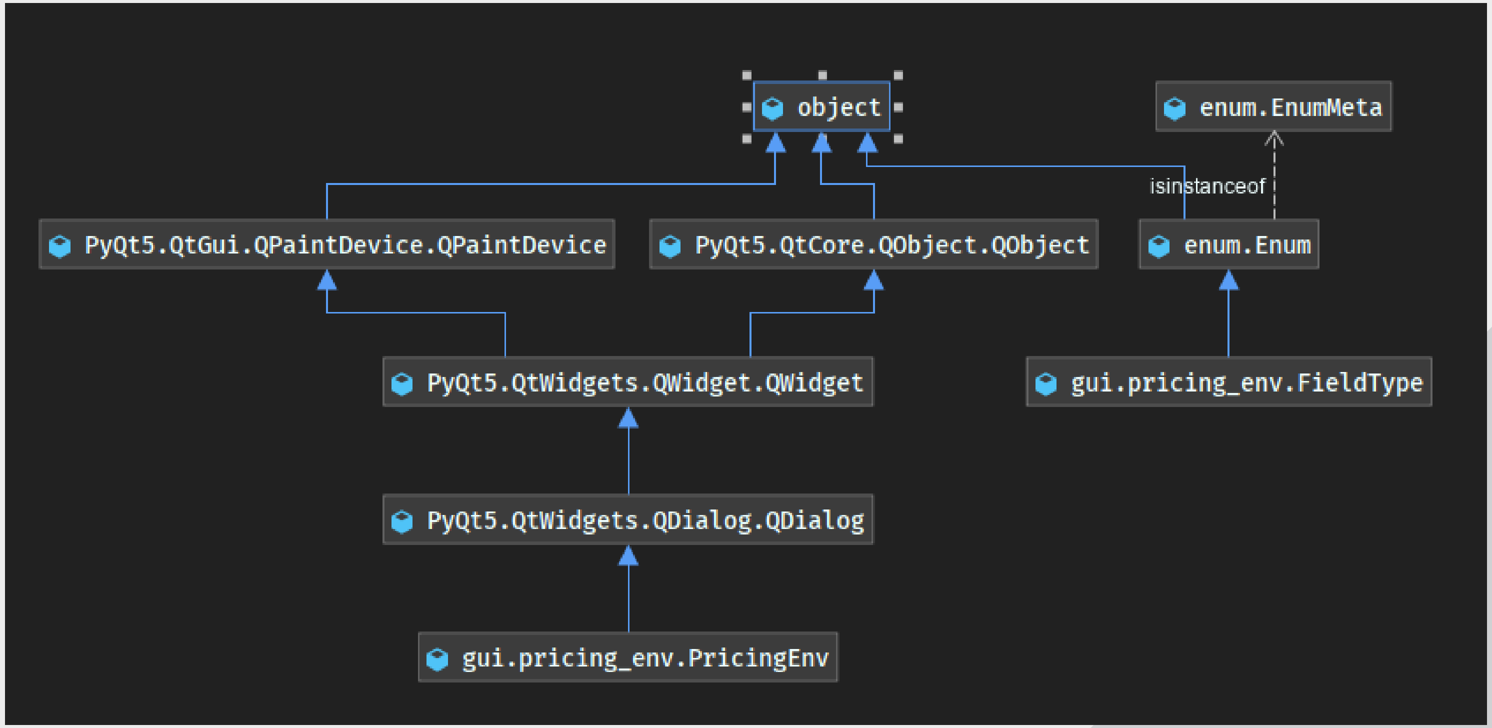
Load / Save / Export



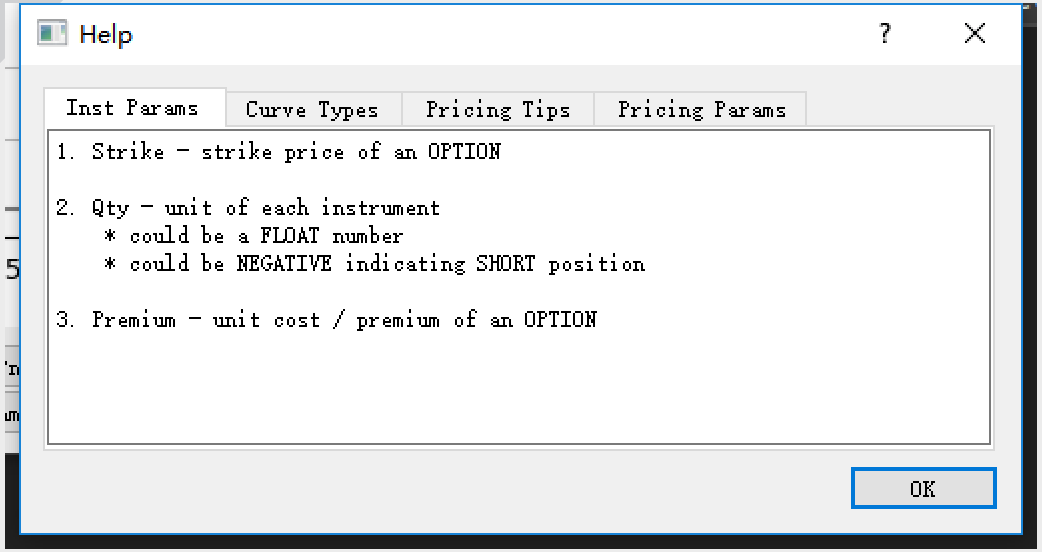
PyQt5.QtWidgets.QFileDialog.getOpenFileName

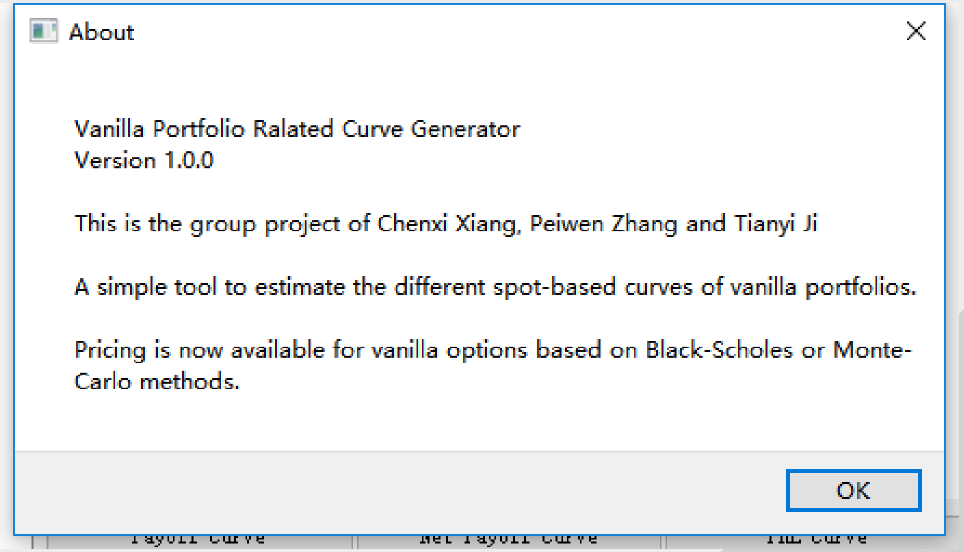
Setting Dialog



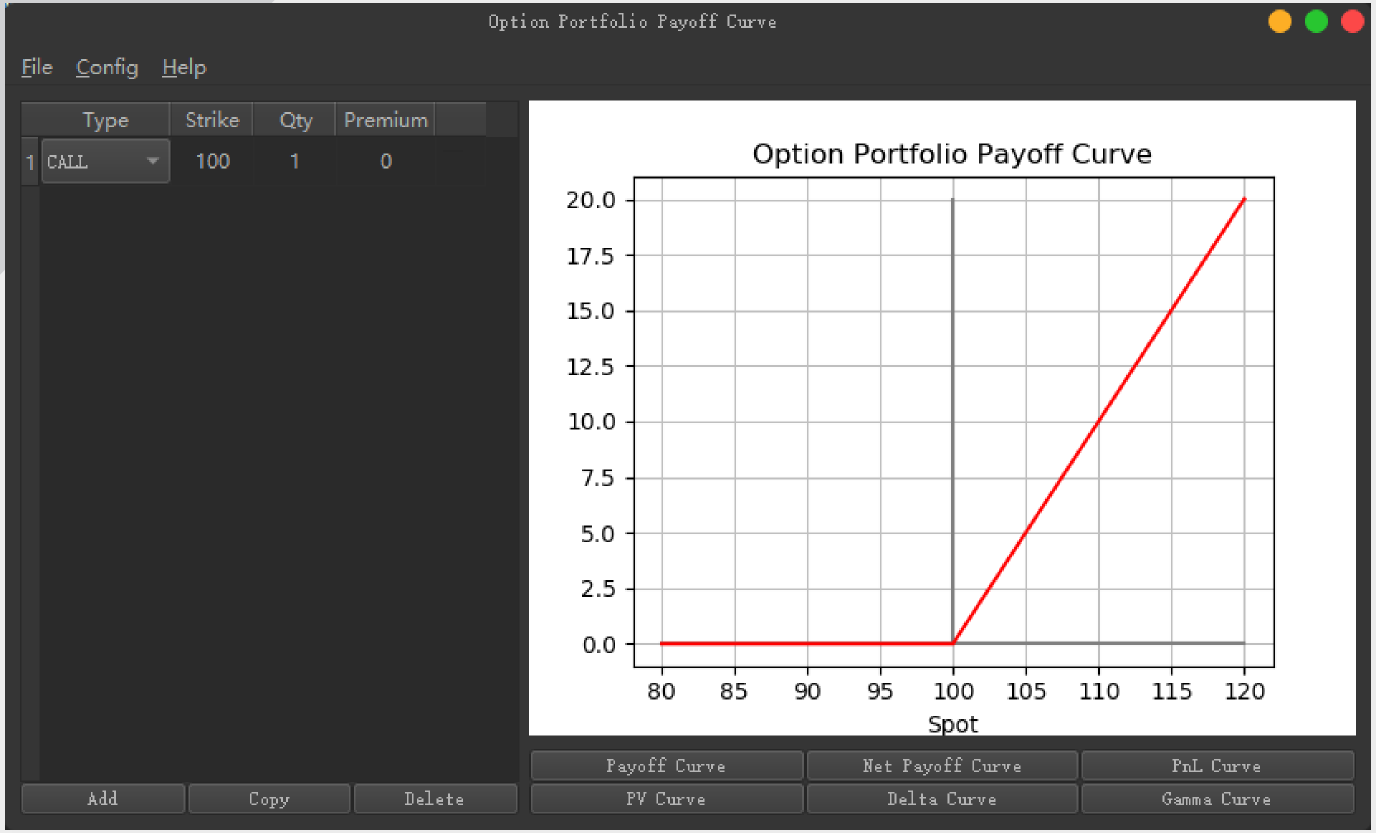


Help & About


Help
?
Inst Params
Curve Types
Pricing Tips
Pricing Params
1. Strike - strike price of an OPTION
2. Qty - unit of each instrument
* could be a FLOAT number
* could be NEGATIVE indicating SHORT position
3. Premium - unit cost / premium of an OPTION
OK


About
Vanilla Portfolio Ralated Curve Generator
Version 1.0.0
This is the group project of Chenxi Xiang, Peiwen Zhang and Tianyi Ji
A simple tool to estimate the different spot-based curves of vanilla portfolios.
Pricing is now available for vanilla options based on Black-Scholes or Monte-Carlo methods.
OK

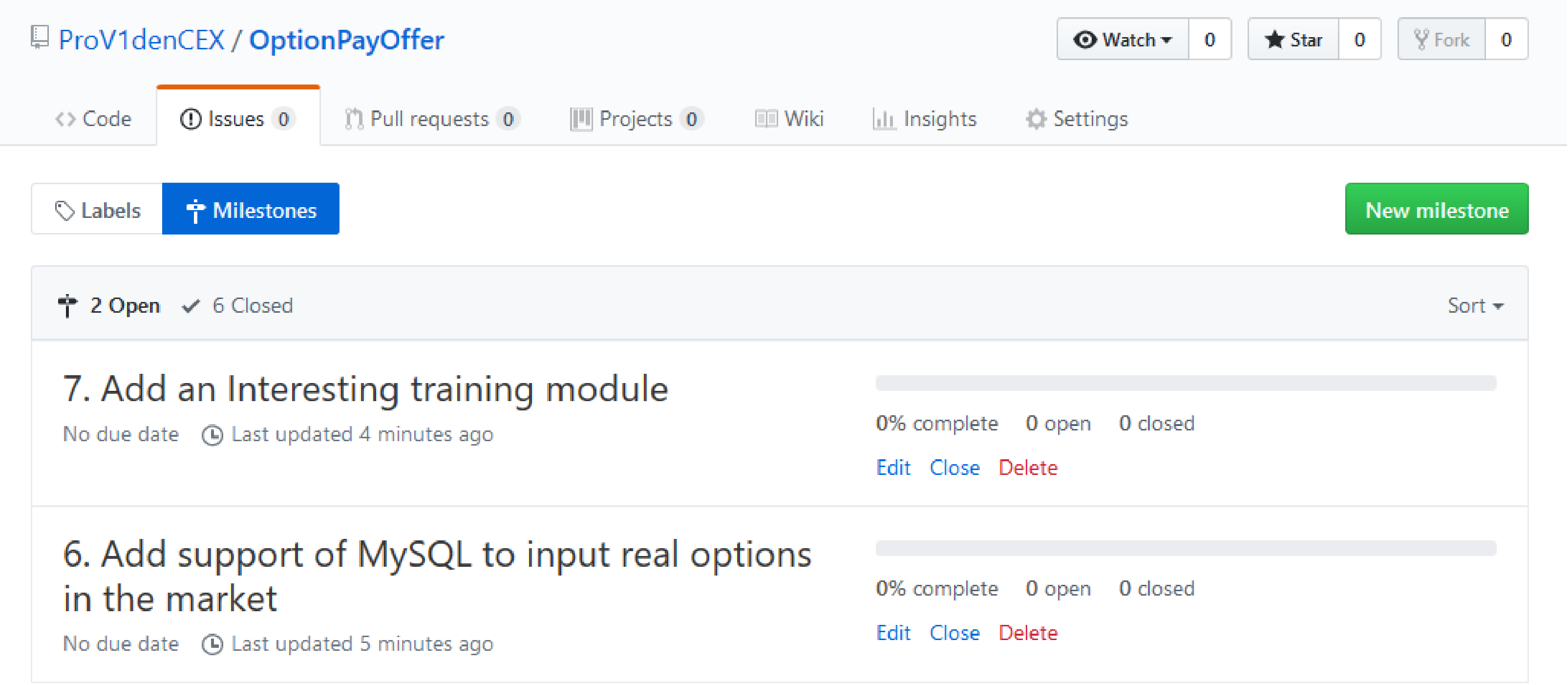
Style



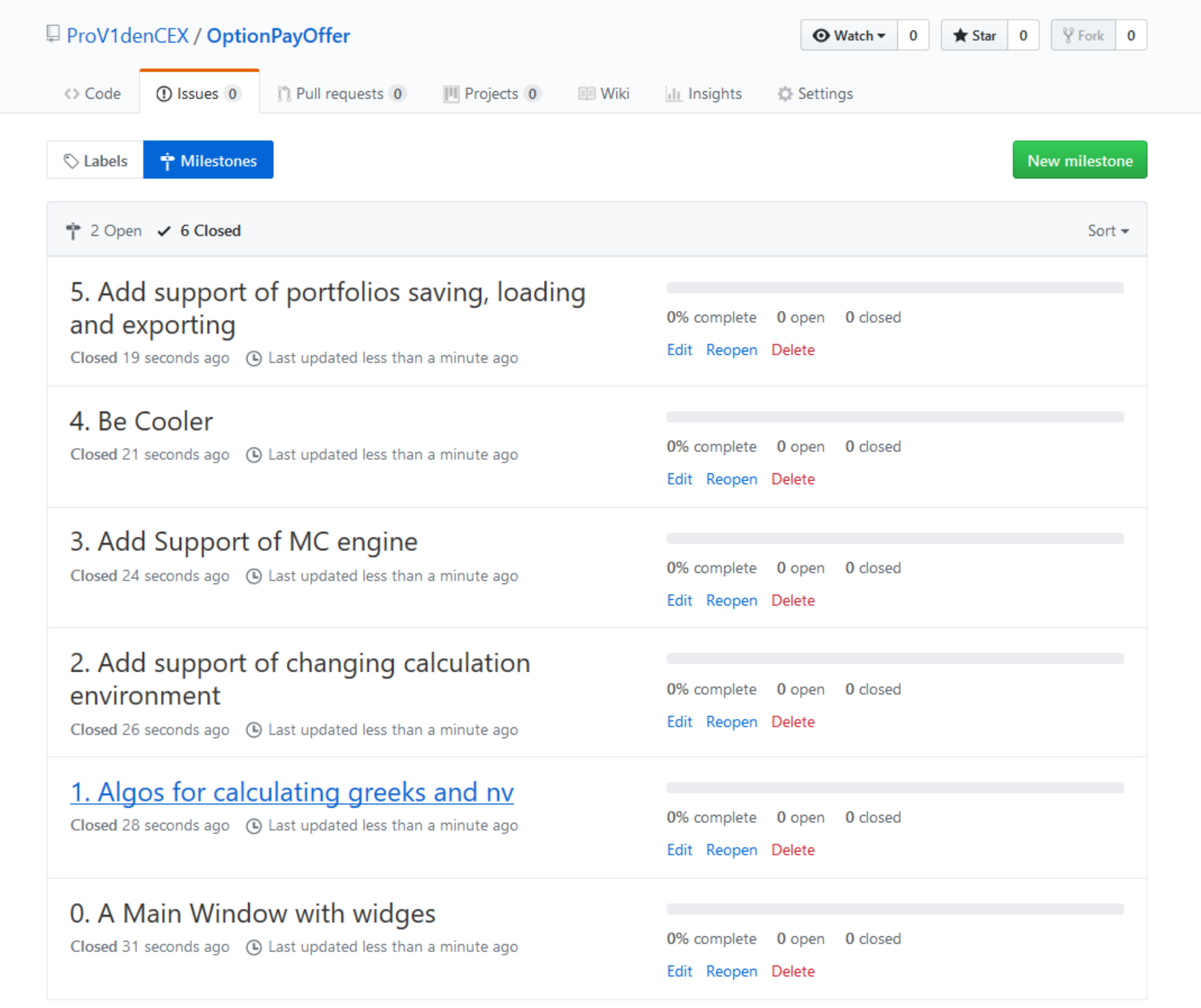

```python
from PyQt5.QtWidgets import QApplication
from sys import argv as sys_argv, exit as sys_exit
from gui.main import ApplicationWindow
from qtmodern.styles import dark as qtdark
from qtmodern.windows import ModernWindow

if __name__ == '__main__':
    app = QApplication(sys_argv)
    main = ApplicationWindow()
    qtdark(app)
    mw = ModernWindow(main)
    mw.show()
    sys_exit(app.exec_())
```

Backlog


ProV1denCEX / OptionPayOffer
Watch 0
Star 0
Fork 0
Code
Issues 0
Pull requests 0
Projects 0
Wiki
Insights
Settings
Labels
Milestones
New milestone
2 Open
6 Closed
Sort
7. Add an Interesting training module
No due date
Last updated 4 minutes ago
0% complete
0 open
0 closed
Edit
Close
Delete
6. Add support of MySQL to input real options in the market
No due date
Last updated 5 minutes ago
0% complete
0 open
0 closed
Edit
Close
Delete

Milestones



ProV1denCEX / OptionPayOffer
Watch 0
Star 0
Fork 0
Code
Issues 0
Pull requests 0
Projects 0
Wiki
Insights
Settings
Labels
Milestones
New milestone
2 Open
6 Closed
Sort
5. Add support of portfolios saving, loading and exporting
Closed 19 seconds ago Last updated less than a minute ago
0% complete 0 open 0 closed
Edit Reopen Delete
4. Be Cooler
Closed 21 seconds ago Last updated less than a minute ago
0% complete 0 open 0 closed
Edit Reopen Delete
3. Add Support of MC engine
Closed 24 seconds ago Last updated less than a minute ago
0% complete 0 open 0 closed
Edit Reopen Delete
2. Add support of changing calculation environment
Closed 26 seconds ago Last updated less than a minute ago
0% complete 0 open 0 closed
Edit Reopen Delete
1. Algos for calculating greeks and nv
Closed 28 seconds ago Last updated less than a minute ago
0% complete 0 open 0 closed
Edit Reopen Delete
0. A Main Window with widges
Closed 31 seconds ago Last updated less than a minute ago
0% complete 0 open 0 closed
Edit Reopen Delete

OptionPayOffer

Thank you for your attention!

April 24 2019

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