

C++ in Quantitative Finance I

Labs #9

Pricing path-dependent options

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Exercise01

In project01, write an `AsianOption` class that will be able to perform Monte Carlo analysis to find the theoretical price for arithmetic and geometric Asian calls and puts.

- a) Design appropriate functions:

```
getArithmeticAsianCallPrice(int nReps)
getArithmeticAsianPutPrice(int nReps)
getGeometricAsianCallPrice(int nReps)
getGeometricAsianPutPrice(int nReps)
```

- b) Overload the `()` operator in order to get the prices by:

```
AsianOption myAsian(252, 96, 95, 0.2, 0.0, 1);
myAsian('A', 'C', 10000);
myAsian('A', 'P', 10000);
myAsian('G', 'C', 10000);
myAsian('G', 'P', 10000);
```

Thank you!

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