

# **Java Desktop Application: Options Tool**

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## **Abstract**

This project involved creating a Java desktop financial application to calculate how much profit or loss people will make from the combination of different options (such as different expiry dates, puts or calls) and calculate if there is arbitrage opportunity or not. The original data comes from the Financial Times website

(<http://markets.ft.com/RESEARCH/markets/DataArchiveFetchReport?Category=EQ&Type=UKOPT&Date=date>). In financial markets, people can use options to make more profit, but options are riskier than other financial products. For that reason, investors try to use different strategies to reduce the risk. This application can help them find out how much they will gain or lose when the price goes up or down by using different strategies.

In my application, different kinds of strategies can be selected to generate a line chart. This is a useful function when people want to know what will happen to their strategy if the price changes. The Put Call Parity function lets people know the option has the opportunity to do arbitrage. To solve the problem, different techniques were attempted: asking my supervisor, searching on the internet and reading. This project was close to reaching its goals, but the pricing part is unfinished due to the lack of financial technique.