Technical Assessment 2016/17   Version 2.0

We would like an opportunity to understand your approach to coding in Java without the added pressure of writing code in front of us on paper. You should aim to spend no more than a couple of hours on this assignment.

Of course, we will not be measuring how long you take to complete the assignment so timing is up to you. When you have completed your assignment please package up your code, with some accompanying documentation, and send it through to us.

We'd really like your assignment to be buildable using a common Java build tool such as maven or gradle.

We would like you to write an application which handles an incoming ticking stream of trades. The following is an illustration of the fields that we expect to be present on the trades:

Timestamp	Symbol	Price	Size	Flags
1481107485791	XYZ LN	200.01	968	Z
1481107485791	123 LN	98.60	746	X
1481107485790	XYZ LN	200.00	1000	A, B
…	…	…	…	…

Write a simple Java application that can:
- Handle incoming trades from a source and pass them into your application (this could be as simple as pushing trades in through a unit test)
- Provide code that subscribes to these trades and can answer the following questions:
    - What's the current largest trade for the instrument XYZ LN?
    - What's the average price for trades for the instrument 123 LN?
    - How many trades seen for the instrument 123 LN contain the 'X' flag?
- Importantly your code should be event driven in style and recalculate values as trades come into the system.
- Your code should be easily extensible to facilitate the adding of further calculations in the future. This is a chance to express a good eye for design patterns and SOLID coding principles.
- There's no need to write a UI or a complicated interface. The trade stream could be embedded literally in your code or you may choose to ingest the trades from a CSV file. We leave that decision up to you.

Please make any assumptions that you need in order to progress with the assignment and document any assumptions you think would help us understand your code.