**BBC London Assessment Centre – Technical Questions**

**Name: Ian McNaughton**

**Technical Questions:**

1. **We're looking for people with a real passion for collaboratively creating great software.**

**Please give an example of a software component you have designed and written from**

**Concept to deployment, outlining the steps you took. (1000 character limit)**

I was tasked with designing and implementing, from scratch, a system that would retrieve a large data set from our database, compare it with the previous data set, and create 2 csv files, one for data that was pulled from the database and a file for data that had been deleted (in the previous dataset but not in the new). I went about it the same way I did this tech assessment.

I first identified at a high level, what the end goal was, communicated with product owners and technical experts of the systems I would be using to identify how to do this. And while working, would assess if what I was doing could be done better, and if I was still on course at regular intervals.

The final product was a executable jar that read data in from a domain, and the file store the CSV's were saved to, calculated what needed to be in the new files, then formatted and posted them to the CSV's FTP server.

**2. Using the example that you provided above, tell us about a significant decision you made**

**to solve a technical challenge. Give details of technologies that you chose and why you**

**chose them. (1000 character limit)**

One of the decisions that had to be made on this product, was how to identify what files had been recently uploaded. While each file name contained the upload date, I did not want to pull all of the file names in the directory and sort them to find the most recent. So I decided to upload a third file called 'recentUploads.txt' that contained a json array of the 7 most recent files for both the create and delete file my system would post.

This allowed me to look up a static file with the exact information I wanted. the idea to keep the 7 most recent files came from talking with the developers of the system that would use my files, and my own needs, we agreed that having the most recent 7 file names on hand would allow both of our systems to utilize recentUploads.txt, saving his developers the work of identifying the most recent files as well.

**3. Using the example that you provided above, tell us about how you ensured your software**

**was fit for purpose and of high quality. What did you learn and what would you do**

**differently next time to do a better job? (1000 character limit)**

I was able to ensure my product was of high quality by having 100% code coverage, and working with the developers who would consume the output of my application. We tested our combined solution in lower environments, and monited the logging of both applications to ensure everything went smooth.

I had also asked my boss (a Sr. developer, and the one who had tasked me with this work) to code review my work at appropriate intervals. He was able to guide my code to even higher standards and offered alternatives methods of implementing tasks, some recommendations were adopted into the code, some were not, but all were debated and mutually agreed upon.

If I could do it again, I would have tried to communicate more clearly with the product owners. A month after the system went into production, a Jr, developer had to modify the app to catch an overlooked error in in what was trying to be accomplished. Ever since, I have tried to gain a better understanding of the big picture and how my work fits in.

**4. Please tell us about the ideal position you are looking for and also confirm your key technical skills? Please use this opportunity to tell us about a positon you most prefer so we can ensure you are matched into the right position should you be successful (500 character limit)**

I am looking for a stable mid level developer position mainly in the java sphere (java, scala, groovy, android, if it runs on the JVM, I'll be very confident in my skills). Ideally, I want to spend at a minimum, 4 years at my next company, and become a key figure in whatever organization I end up at next. I’m getting tired of moving for work every few years, Stability is very high on my list of priorities.