000) NoSQL is very barebones and forgoes a lot of the functionality that is in SQL so there is less overhead to be worried about when scaling your databases/ servers.

001) My favorite data structure would have to be a matrix because a matrix is perfect for storing large amounts of data for complex problems, but is really overkill for really small data sets that can be placed into an array/ list.

010) So you would be correct if the list was relatively small and we had no concerns for optimization/ time concerns, but it would be an issue if we had a huge list (training data for one instance) that we needed a return on in a decent amount of time.

100) The “Mark-and-Sweep” Algorithm consists of two phases which are the mark phase (upon object creation, mark bit is set to 0/ false, but if a user can refer to the object, then mark bit is set to 1/ true) and the sweep phase (sweeps/ clears all objects with a mark bit of 0/ false), but the downside to the algorithm is that it halts the program in order to execute the algorithm.

101)

Efficiency, time

Compute to complete all rites

Meet deadlines on time

110) So… I know this wasn’t anywhere in the question list, but the Assignment description did say this is more of a personality/ communication assignment so I intend to try and do so. I took a look at the questions in the assignment and, honestly, I was confused for the some parts. Of course I did look up some of the questions not for answers, but for clarification. I wanted to understand that if the answer that I was thinking of actually made sense. Now, being honest, for questions “000”, “011”, and “100”, I had to look these up in order to actually understand and research what was the most viable and concise answer I could give. All answers are of my own wording and understanding of course. Typically, in previous projects that I needed further understanding for, I would talk with my manager to see if I was addressing the problem correctly and constantly researching to make sure my approach was correct. What I did for this assignment is nearly the same as what I do for most of my assignments. I would have joked with answers a bit as well to put some fun in them, but the allowed amount of space was so constrained that I had to use explanations in parentheses in order to full answer most of the questions (got to keep under than one sentence limit, you know, haha). Regardless, thank you for your time and I definitely look forward to hearing from you all!

Regards,

Riyan Imam

Side note: Sorry for the long block of text. Thought it would be good to provide some explanation of what I was doing/ what was going through my head while answering the questions!