

interview answer document & challenge

ASSIGNMENT 3 – COMM3700 PROFESSIONAL PRACTICES FOR IT



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# Employability Questions

* **How would you start a project that requires you to use technology?**

When I start a project, I always read the details of the project first. I would summarize the details and group it into what the project is, what does it require, what results do we wish to get from the project, and what methods can we use or how can we achieve the results. Once I have grouped the information regarding the project, I start to break it down even more, going into section by section.

When I must use technology, especially new ones, I try to do research on it. I check the pros, to see how I can maximize the use of the technology. I also check the cons, so I can anticipate what can go wrong, that way I can be ready to troubleshoot or even have measures in place to avoid them. If the project is done by a team, I would ask my teammates if anyone is well-versed with the software or technology we need to use. By doing this, we can have someone that has more experience take the lead or guide us in using the technology.

Last year, in our professional practice class, we were tasked to create a presentation to culminate our work plan for the semester. Our group decided to do a video presentation. Because we chose to do a video presentation, we had to use technology, in this case, a cellphone with a camera and video editing software. Our group decided to use my cellphone as they thought it had the best camera quality and I was the only one with some video editing experience. Even with my experience, however, I still did not know what software to use. I did research and was able to find a few that stood out. I talked to one of my friends in NSCC that did video editing as a career and he was able to help me find the best one. Me and my teammate that helped with the editing, did research on how to use the software, pros, and cons, and watched YouTube tutorials.

This approach towards using technology in the project proved useful because the video came out great and our teacher was very impressed with our performance. He gave us a perfect grade and even asked our permission to show other classes our presentation and even the chair of the department.

* **Tell me about a time you were asked to perform a task that you did not understand.**

In February of this year, I was hired to work in a medical office as a medical secretary. I have never tried working as a secretary before, or even in the healthcare field. I was very much out of my element and the only thing that comforted me was my interest to learn, be organized, and do well. With the position, I was exposed to software that I have never heard of, with functions I have never used. I was exposed to terminologies new to me, as well as processes and procedures in doing business that I have not used before.

I was trained during the first week of the job, watched instructional videos, shadowed the current secretaries, and was always left with someone in case I had questions. However, around my second week of the job, I had to be left alone, it was not too bad because I was in the evening shift with lesser patients and calls, but there were still countless times that I did not know what to do or did not understand how to do certain tasks. To cope with this, I asked follow-up questions when I was given a task I did not understand. I was honest with what I knew because to me, the priority was doing a great job and making sure I did not make any mistakes. Every time I asked a question, I took my notebook and wrote notes. I learned with each task, with each inquiry, that way I did not have to repeatedly ask the same questions.

My methods proved to be effective because I was able to stand up on my own and was able to do tasks without having to ask someone for help. I proved to be a fast learner and even shocked some of the doctors, because they knew I was new and out of my element.

* **What motivates you to perform**

I have a drive to do a great job which motivates me to perform. I have this need to do the best at anything and everything I do. It does not matter how big or small a task or project is, I always put my 110% on it. I do not feel good if I am unable to do this. I try to tackle things one at a time which is why I can put my focus on to a task. I also try to schedule my time. When I am given multiple projects or tasks at once, I assess each task or project and estimate the maximum time I need for each one and allot additional “emergency time”. This allows me to tackle everything within a time frame and with the most effort put towards each one. Allotting emergency time allows me to go back to each task or project and review them before I mark them as complete or submit them if needed.

I have effectively exercised this in my school life, wherein I have multiple things due at a specific deadline. Last year, for example, during the last few weeks before winter break, I made a list of all the things that need to get done. I listed in the dates and organized them by priority. I made a schedule on how long I would take with each assignment each day, and when I need to finish each one. It was hard to stay motivated, especially when you are tired, sleep deprived, and stressed. It was my drive to do a great job, to be the best, that kept me going. Some people might say it is a competitive drive, and yes, it might just well be a competitive drive. I see this as an advantage, as long as keep it healthy, then this competitive drive would help me a lot.

Another thing that drives me is setting goals. One thing I have learned from my first semester in NSCC is setting S.M.A.R.T. Goals. This has really been a good basis when I set goals for myself. I set goals like, finish half of assignment one for class A, read chapter two of class B, or plan out the website design for the assignment for class C. Setting these goals are helpful because they are **S**pecific, **M**easurable, **A**ttainable, **R**elevant, and **T**ime-Bound.

# DBA Technical Questions

* **What is the difference between a candidate key and a primary key? Give a good example of something that would make a good primary key and explain would make a good primary key and explain why.**

Both a primary key and a candidate key is unique and identifies a record uniquely inside the table. The primary key, however, cannot be nullable, whereas a candidate key can be nullable. You can also only have one primary key in a table but can have multiple candidate keys in a table. This means that a primary key is a candidate key, and a candidate key can be a primary key.

For example, in a store database, you have a table named Customer and have the fields Customer\_ID, Customer\_LastName, Customer\_FirstName, Customer\_Email. The Customer\_ID and Customer\_Email would be the candidate keys, but the Customer\_ID would be the primary key. This is because the Customer\_Email is nullable, whereas the Customer\_ID cannot be nullable.

Another example would be in a school database, you have a table named Student and have the fields Student\_ID, Student\_LastName, Student\_FirstName, Student\_PhoneNum. Student\_ID and Student\_PhoneNum are both candidate keys, but only the Student\_ID is the primary key. The Student\_ID must be the primary key because the Student\_PhoneNum can be nullable and a primary key cannot be null.

* **If given a database table called “students” with a property called “first name” write a SQL statement to select all students with first name “Marc”.**

In creating selecting specific records in the database, one can use a SELECT SQL statement. To specify a specific value, the WHERE clause can be used. **SELECT** [FIELD NAME HERE], **FROM** [TABLE NAME HERE] **WHERE** [CONDITION HERE]**;**

In the statement that needs to be created for the task, the first name must be enclosed in brackets [] because the naming convention has a space in between.

To select all the students with the first name Marc, the SQL statement would be:

SELECT [first name]

FROM students

WHERE [first name]='Marc';

* **Explain the normalization procedure on a relationship database (up until third normal form).**

There are three main reasons to normalize a database. First, normalizing a database would minimize duplicate data. Second, database normalization would minimize or even avoid data modification issues. Lastly, database normalization can simplify queries.

There are three normal forms in data normalization. In the first normal form, the characteristics are that there is a table format, a primary key is identified, and there are no repeating groups. For example:

Student

|  |  |  |  |
| --- | --- | --- | --- |
| StudentID | StudentFirstName | StudentLastName | ContactNumber |
| 001 | Rachel | Green | 902 745 5555, 902 222 1111 |
| 002 | Monica | Gellar | 121 233 5432, 224 624 6422, 475 767 7777 |
| 003 | Phoebe | Buffay | 477 458 8877 |

The table above shows the original database before it is normalized. There is duplication on the ContactNumber in the original table, thus, it must be split into a separate table. Once it is normalized into first normal form, it will look like this:

Student Name Student Contact Number

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| StudentID | StudentFirstName | StudentLastName |  | ContactNumID | StudentID | ContactNumber |
| 001 | Rachel | Green |  | 1 | 001 | 902 745 5555 |
| 002 | Monica | Gellar |  | 2 | 001 | 902 222 1111 |
| 003 | Phoebe | Buffay |  | 3 | 002 | 121 233 5432 |
|  |  |  |  | 4 | 002 | 224 624 6422 |
|  |  |  |  | 5 | 002 | 475 767 7777 |
|  |  |  |  | 6 | 003 | 477 458 8877 |

In the second normal form, everything in the first normal form is included and there are not partial dependencies. For example:

Car Models

|  |  |  |  |
| --- | --- | --- | --- |
| Manufacturer | Model | Model Name | Manufacturer Country |
| Lamborghini | Aventador | Aventador S Roadster | Italy |
| Ferrari | Ferrari 812 | Ferrari 812 GTS | Italy |
| McLaren | McLaren 12C | McLaren 12C Spider | England |

The table above shows the original table before it is normalized. There are partial dependencies in the table, specifically the Manufacturer and the Manufacturer Country. Once this is normalized, it will look like this:

Car Manufacturers Car Models

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Manufacturer | Manufacturer Country |  | Manufacturer | Model | Model Name |
| Lamborghini | Italy |  | Lamborghini | Aventador | Aventador S Roadster |
| Ferrari | Italy |  | Ferrari | Ferrari 812 | Ferrari 812 GTS |
| McLaren | England |  | McLaren | McLaren 12C | McLaren 12C Spider |

In the third normal form, everything in the second normal form is included and there are no transitive dependencies. For example:

|  |  |  |  |
| --- | --- | --- | --- |
| StoreID | StoreName | StoreCityLocation | PostalCode |
| 0123 | ABC Jeans | Dartmouth | B23 4G7 |
| 0124 | DEF Sweaters | Halifax | L12 2C4 |
| 0125 | GHI Bags | Dartmouth | J12 7T7 |

The StoreCityLocation is transitively dependent on the PostalCode. To fix this, we can split them into tables so that the columns are not reliant on one another.

Store PostalCode

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| StoreID | StoreName | StorePostalCode |  | PostalCode | StoreCityLocation |
| 0123 | ABC Jeans | B23 4G7 |  | B23 4G7 | Dartmouth |
| 0124 | DEF Sweaters | L12 2C4 |  | L12 2C4 | Halifax |
| 0125 | GHI Bags | J12 7T7 |  | J12 7T7 | Dartmouth |