RESEARCH PROPOSAL FORM

Student Name   : ABDUL RAHEEM RIHAM AHAMED.

Date   : 20/08/2021

Center Name   : IDM-Kalmunai

Tutor   : Mr. Rafee Careem

Unit   : Computer Research Project

Proposed Title   : Problems faced by beginners when using SQL.

Title:
Problems faced by beginners when using SQL
Objectives:
- Identifying the major problems faced by beginners when using SQL.   - Identifying potential solution to the initial problem above
Reasons:
- I'm a full stack web developer, and wish to help people that I often meet online that complain it's difficult to learn SQL.   - Database programming has always been an interesting topic for me.   - Data science is predicted to become one of the most demanded professions in the near future.
Literature Sources:
- TheSkyPirate (2018). *How hard is it to learn SQL?* [online] Available at: https://www.reddit.com/r/learnprogramming/comments/7uy6bq/how_hard_is_it_to_learn_sql/ [Accessed 8 Sep. 2021].   - www.quora.com. (n.d.). *How hard is it to learn SQL? - Quora.* [online] Available at: https://www.quora.com/How-hard-is-it-to-learn-SQL-1 [Accessed 8 Sep. 2021].   - TablePlus. (2018). *Why is SQL the most important skill to learn?* [online] Available at: https://tableplus.io/blog/2018/08/why-sql-is-the-most-important-skill-to-learn.html [Accessed 8 Sep. 2021].   - Obaido, G., Ade-Ibijola, A. and Vadapalli, H., 2018, June. Generating SQL queries from visual specifications. In Annual Conference of the Southern African Computer Lecturers' Association (pp. 315-330). Springer, Cham.   - Ahadi, A., Behbood, V., Vihavainen, A., Prior, J. and Lister, R., 2016, February. Students' syntactic mistakes in writing seven different types of SQL queries and its

application to predicting students' success. In *Proceedings of the 47th ACM Technical Symposium on Computing Science Education* (pp. 401-406).

- Ahadi, A., Prior, J., Behbood, V. and Lister, R., 2016, July. Students' semantic mistakes in writing seven different types of SQL queries. In *Proceedings of the 2016 ACM Conference on Innovation and Technology in Computer Science Education* (pp. 272-277).

- Sadiq, S., Orlowska, M., Sadiq, W. and Lin, J., 2004, June. SQLator: an online SQL learning workbench. In *Proceedings of the 9th annual SIGCSE conference on Innovation and technology in computer science education* (pp. 223-227).

Research Approaches:

The research will be conducted in order to identify "The difficulties in learning SQL, as a newbie to programming or an experienced developer, and reasons". The reason as to why such a research problem was chosen by my hand was because I quite often saw in the Diploma classes and even HND classes of where I learn at (IDM and Hardy Ampara), quite often struggle at learning or even understanding certain SQL concepts. As such my audience is obviously developers. It wasn't just SQL, it was the whole context of database programming, however though since I do not have sufficient time to conduct a research of that magnitude, I slimmed down and focused on the main culprit which Is SQL. So the research question is "Is SQL difficult to learn?".

Identifying to find out what problems they have using **online questionnaires** for beginners. Use reddit and Stack overflow to do quantitative and qualitative analysis to find relationships, pattens etc.

Comments and agreement from tutor:

I confirm that the project is not work which has been or will be submitted for another qualification and is appropriate.

- Agreed: Yes
- Name: Mr. Rafee Careem
- Date: 30/08/2021