

## **Program Statement**

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Abstract: STEM Academy is a self-funded Program which is to help K-12 students get involved in college attendance and participation in the STEM fields to make them better in the future. However, they have to collect useful and creditable survey data to persuade their sponsors to fund. The survey data is the most intuitive evidence that STEM Academy are making a difference. That is why a great database for STEM Academy is significant. Thus, we need to communicate with their employees who are fully understand their program using our personal skills and technological skills to come up to their expectations. The better data they get, the more easily they can convince their funders.

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### PROBLEM STATEMENT

**Due Date: Monday, 9 October, 23:59:59**

STEM Academy provides a great many quality programs with K-12 students every year. Nevertheless, no one would know what differences these programs can make if no one uses some ways to do a research. Resulting in that no one would be interested in funding STEM Academy. 21st century is the data era. There is no doubt that using a database system is the best way to do this kind of research because technology is changing our lives. It is terrible that send questionnaire to students, collect questionnaire, and count. It takes much time and money. In contrast, database system takes much less time and money contributing to saving budget. Likewise, it not only collects the data, but also organizes and analyses the data. And then, the data collected needs to generate in a fully usable format, including graphics. STEM Academy employees would share this information with funders to tell them what differences STEM Academy made and convince them to keep funding.

To achieve this kind of goal, programmers have to know about what the problems and needs are clearly by talking with STEM Academy employees so that programmers can know what they need to solve and achieve to design a wonderful database system appropriately to meet all of STEM Academy's needs. Programmers need to study the current coding of the existing database and develop additional coding that will modify the database address the remaining concerns of the Program because a Capstone team developed a database system last year. Unfortunately, the database developed in the last year did not meet all of STEM Academy's needs. Thus, programmers need to review the coding from last year's project and improve on the database system in several ways, as well as implement some standard reporting, including graphics, that is pre-programmed into the system. Also, the database system need to have ability that allow for changes in the survey data. Based on the current database system, programmers need to achieve the let needs and make the current database better in many ways, like cost, time, learnability, safety, etc. In one word, the database system needs to give STEM Academy employees a better user experience.

However, programmers can't provide a good solution so far because we still have not met with our client and got access to the current coding of the existing database. We need to evaluate the current coding of the existing database first. And then modify the current database system based on STEM Academy's needs.

As for performance metrics, according to the information we got from the assignment description, we meet all of needs as long as we can make the database system that can solve the remaining concerns of the program, generate reports in an organized format, including graphics, and allow STEM Academy employees to change in the survey data. For more expectations, we can not know them until we meet our client later. Anyway, we need to be able to absolutely do anything that our client requires to help them provide more and more quality programs in STEM filed with people in the future.