

Why good database design is important in performing data operation? essay sample



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A good design is significant in performing data operation. Without the good design, it is difficult to make relationship with other database and it will not run competently and also securely (Knight, 2011). This report will discuss the important of good database design, which are crucial for the business in performing operation and making a decision.

Firstly, with the good design, data will be stored in consistent form.

Appropriately designed database offers you with entry to current and precise information (Office, n. d.). It has been suggested that investing in time to learn the principles of good design is important due to a correct design is necessary to achieve goals in working with database (n. d.). As a result, the well-prepared database will help to ensure the accurateness and reliability of your information and can easily adjust modification (n. d). For example, Microsoft Access is one of the programs that help to store database in a good form.

It is divided into four major steps, which are database creation, data input, query and report (Fizug, n. d.). Before the database is created, there should be the concern about what kind of data that should be stored. The complex group of data will be created in small, stable, but flexible and adaptive data structures to help keeping data in consistent shape (Laudon & Laudon, 2012). This process is called Normalization (2012). Since the database contains structures features like keys, columns, indexes and table and they are all enclosed in database design, during the process of designing, all related information are assemble (Sprinx, 2009). If there is a perfect design for all structures such as table layout, essential key limitations and application of primary keys, the data will be consistent (2009).

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Secondly, The perfect design database can help to eliminate redundant or duplicated data (Datanamic, n. d.). The duplicate information or redundant data waste space and increase the probability of errors and inconsistencies (Office, n. d.). The perfect design should be normalized because when the normalization is completed, the repetition data will be reduced and this can make size of the database smaller. It is also good for the expansion in the future if there is more data to be put into the database. If there are a lot of repetitive data and one occurrence of that data need to be changed, the change has to be done for all existing of the data. To reduce the problem of duplication, the table of possible values should be created (subject-based tables) and then a key should be use to refer to the value (Meloni, 2002). For example, from question 1, we designed Employee ID to be primary key because it is unique value and also cannot duplicate. Consequently, if the value changes, the change will occurs only once in the master table but the reference remains the same throughout other tables (2012).

Then, if there is a well-designed database, the queries and report process will be easy and simple. The queries displayed by the users are shown in simple form resulting to fast reaction for it (Sprinx, 2009). User also acquires information easily and gains data that is reliable, up to date and correct (2009). The good data design provides access with the information that business requires to connect the information in the tables jointly as needs (Office, n. d.). This also helps to adjust data processing and reporting requirements (n. d.). Moreover, the business will be able to retrieve all requirement data when it needed and it facilitate to reference to other queries if it is necessary as well. If your data comprises of wrong information,

any reports that pull information from the database will also include incorrect information (n. d.). Consequently, any decisions that are based on those reports will then be misled (n. d.)

Fourthly, a good performance always depends on a good database. This means the design of database is very important because the overall performance of the data operation is displayed by database. Designers of database should consider about how to make the best way to organize and link several of information together. As mentioned above that the good database should avoid redundant information, be able to satisfy the needs, be convenient to use and illustrate accuracy. With all of these factors, they will help the overall performance of the data operating of the business. Furthermore, the good database will provide extra assistance to cover information obstacle of the business since it will become one of the main assets. The more details, the better performance will show. It also helps in reducing of the overall data maintenance cost and develops the quality of database systems (Sprinx, 2009). The business can be assured of data accurateness and better trustworthiness (2009). If business have got any objectives and are working towards improvement of business, it can be supported by an applicable database design (2009). The business would get approach to well-structured and strategic conducts for data maintenance (2009).

Lastly, a database should be well designed so that it is easy to maintain. Database maintenance is designed to keep a database running smoothly. A library of information in a good organized and accessible format are used to maintain by database (WisegEEK, n. d.). Nevertheless, they are not stable <https://assignbuster.com/why-good-database-design-is-important-in-performing-data-operation-essay-sample/>

since changes are constantly being made as material is added, removed, and moved around. Users may change variables within the database, develop to use others indexing systems and vice versa. This can cause the database to start to defect. As a result, it is significant to keep a database easy to maintain in order when we want to change it. Database maintenance is used to make the information well organized and the database clean so that it is not going to lose functionality (WisegEEK, n. d.).

The most important for database maintenance is simply backing up the database because we do not know anything that will happens (n. d.). There should be another copy available (n. d.). Some maintenance systems actually do by automatic that send a back up to another location everyday or within any other set period of time (n. d.). Checking for signs of corruption in the database, looking for the problem areas, rebuilding indexes, and removing duplicate records should be include in database maintenance (n. d.). The main point is to keep the database able to smoothly use for user.

In conclusion, there are a lot of benefits of good designed and well-planned database. It helps to provide effective and secure data operation performing of the business. It is suggested to spend a lot of time to design the database so that the business will not have to waste time and cost more money to fix the problem that could happen from the data errors in the future.

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