Tabari Harvey, 01/10/2025, Module 1.3 Assignment

“A relationship in databases is a situation where there is a logical association between two or more database tables. It helps improve table structures and reduce redundant data. Understanding relationship in databases is important as it allows you to fetch data from multiple tables simultaneously and helps ensure that data in databases are consistent and updated.” (*What is A Relationship in Database?*) the first Example is one-to-one relationships. The information from the first table is associated with the information from the second table. An individual to their passport when airports are looking at their information or a company seeing their employee associated with their car that’s listed. A driver to their driver license. One-to-many relationships are when the information from table A is associated with multiple records and Table B is only associated with only Table A. A department from can have multiple employees. A school will have multiple children inside. A section in a store will have multiple of an item in that section. The advantages of relational databases are that they have good data accuracy, good data integrity, good security, they are easy to access, flexible, make modifications easy to update, they are normalized, and they are simplistic to use. NoSQL advantages can process large volumes of data at high speeds, their storage has a scalable capability, can structure data in different ways, support easy updates. Their whole point is to handle data on the internet, through cloud and server databases. Relational database disadvantages are the structure, maintenance issues, non-flexible, no scalability, and performance will decrease overtime. The disadvantages of NoSQL are their non-SQL capabilities. It was also designed to handle a massive amount of data that is disorganized whereas SQL is the opposite. The different brands of NoSQL are unique and that means there is no set standard to learn and there are different strengths and weaknesses applied. NoSQL does not support the four key properties of a transaction called ACID (Atomicity, Consistency, Isolation, Durability) and NoSQL’s lack JOINs which help make connections between database tables by matching columns. (NoSQL Databases: Advantages and Disadvantages) A feature of MySQL is that it has high performance. The storage engine makes it faster to use, and it has High productivity. It has stored procedures that allow higher productivity. A MongoDB feature is its’ schema-less database, which means that it can hold different types of documents from a collection. MongoDB is also very scalable, which it can move data into different servers. All that data is separated in large amounts and will be spread out into different physical servers.

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