**Business Intelligence and Data Warehouses**

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**Business Intelligence and Data Warehouses**

1. **Outline the main differences between the structure of a relational database optimized for online transactions versus a data warehouse optimized for processing and summarizing large amounts of data.**

First, what is a data warehouse It is a large store of data accumulated from a wide range of sources within a company and used to guide management decision. It is one which was made to simply the decision making by people in the high position. In addition, it was made with a purpose of out put the result of a query and analysis rather than for transaction processing, and it contains historical data derived from transaction data while a relational database is for online transaction which is made up of data that is inserted, updated and deleted Data Warehouse is so big because of load of dealing with data from different places. Moreover, more data is being read than it is been written and updated. A data warehouse system can be made to consolidate data which is coming from different places which can made the tasks easy to a accomplished.

1. Data Warehouse is a database which is designed to process for query and analysis rather than for transaction processing, and it is usually contains historical data derived from transaction data, but can include data from other sources while relational database optimized for online transaction which includes insertions, updates and deletion.  
   Basically Data Warehouse is defined as a subject-oriented, non-volatile and time –variant collection of database which support management’s decisions. Data Warehouse is very distinct from online transaction systems. Some of distinctions are given below:  
   \* One of main difference, a data warehouse you can do separate analysis workload form transaction workload which makes it very much read-oriented systems.  
   \* They deal higher amount of volume in comparisons to online transaction database.  
   \* They have a far higher amount of data reading versus writing and updating. This enables far better analytical performance and avoids impacting your transaction systems.   
   \* A data warehouse system can be optimized to consolidate data from many sources to achieve a key goal.  
   \* it prevents many disputes and enhances decision-making efficiency  
   2. Differences between database requirements for operational data and for decision support data  
   Operation data is a data that is being used for the day to day operations of a company like it could be tracking the project status while decision support data is a data in which tools are designed for processing and analysing the data like if manager must analyse the sales by region, they must…...
2. **Outline the main differences between database requirements for operational data and for decision support data.**

Operation data is the data which is used for the daily operations of a company. The operational database is where the **data warehouse** gets data from. If like it could be tracking the project status while decision support data is a data in which tools are designed for processing and analysing the data like if manager must analyse the sales by region, they must

Operational data and decision support data fill diverse needs. Most operationalinformation is put away in a social database in which the structures (tables) have atendency to be very standardized. Operational information stockpiling is streamlined tohelp exchanges that speak to every day operations. For instance, each one time a thing issold, it must be represented. Client information, stock information, et cetera, are in asuccessive upgrade mode. To give viable upgrade execution, operational frameworksstore information in numerous tables, each with a base number of fields.From the information examiner's perspective, choice help information varies fromoperational information in three fundamental zones: time compass, granularity, anddimensionality.

Time compass:Operational information covers a brief timeline. Conversely, choice help informationhave a tendency to cover a more drawn out time span. Administrators are at times keenon a particular deals receipt to client X; rather, they have a tendency to concentrate ondeals created amid the most recent month, the most recent year, or the most recent fiveyears

1. **Describe three (3) examples in which databases could be used to support decision making in a large organizational environment.**

One example in which databases could be used to support decision making in a large organizationenvironment would be a large company that provides products for people online which requirestransactions to be made online and a lot of data to be used, a database could useful to helporganize the data within the company such as customer information, shipping, sales, and productinventory.•Second, databases can be useful to help organizations come to a decision quicker withinorganizations when it comes to financial decisions such as how to balance the companies profits,sales, liabilities and etc.•Lastly databases can be helpful in making structured decisions for a organization thoroughlythinking decisions through with the correct data can produce high quality decisions for yourorganization and have positive outcomes.

1. 
2. **Describe three (3) examples in which data warehouses and data mining could be used to support data processing and trend analysis in large organizational environment.**

**Data mining could be used to support data processing and trend analysis in large organizational environment by finding the amount of the increase in the organization during a certain time.**

**Data mining could be used to support data processing and trend analysis in large organizational environment by using the data which is available to to help a business make a better desion of the project how much sales they can expect in the future.**

First, data mining could be used to support trend analysis by helping to calculate change whether increase or decrease within a company over a certain period of time.

•Second, data warehouses support data processing by gathering data that is needed and delivering it to users

Data warehouse can be used to support data processing which is stored and can be retrieve, select the one which is needed by the system administrator who can used it.

.•Lastly, data mining can support trend analysis by recognizing relationships, trends, patterns, and anomalies. Data mining can predict customer loyalty, data mining can use past data collected within a business to help predict future sales

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