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Skills for a secure future

Certified Business Intelligence Professional Sample Material

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V-Skills

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1. CHAPTER 1

Business Intelligence is collection of technologies and applications which combined together for gathering, analyzing and storing data (or information) which can be fruitful for an organization, and helps the organization employees to make better, smart and profitable business decisions. Business Intelligence is an act of deep study which can be applied to any organization for benefits of organization when carefully used.

1.1. Evolution

The term "Business Intelligence" was used as early as in 1958 in an article by Hans Peter Luhn, an IBM Researcher. He defined intelligence as: "the ability to apprehend the interrelationships of presented facts in such a way as to guide action towards a desired goal."

The term "Business Intelligence" evolved during early 1960s from the Decision Support System and is fully functional by mid of 1980s. The decision support system was used for planning and making decision in computer aided industry. In late 1980s, the business intelligence along with Decision Support System, OLAP, data warehouse and some other technique came into the focus.

In 1989, Howard Dresner said that "Business Intelligence is concept and method based on fact support system, analyzed properly to improve business making decisions."

In September 1996, Gartner Group report said "By 2000, the forward thinking organization will have information democracy, with the Business Intelligence the information will be available to employee, customer, and consultant and will be available in public. The key to survive in a competitive marketplace is to stay ahead of the competition. Making smart business decision based on current and accurate information is more important rather than following intuition. Data analysis, data query tools and data reporting tools provide business users a pool of valuable and synthesized information. Today these tools collectively come into category of Business Intelligence."

1.2. Need and Benefits

✓ Central Data: The Business Intelligence tools (like data warehouse, data mart, package application etc) collects the data from globe and store it in a single central system, so that all the data available at a central point and one can access all the information form this

central location. With the help of such tools an employee or business analyst can prepare report and can drill down the information with spending much of time searching for information.

✓ Applicable for every part of Organization: The business intelligence tools and techniques can be applied to every party of organization either its Marketing, Finance, Production etc.

✓ Quick answer to problem: The time taken by Business Intelligence tools to drill down the information and represent data in the form of presentation like chart, graphs etc is very quick and these presentation can be used to get answer to several business queries. Business Intelligence tools not only provide static information but can be used for the dynamic analysis of the business queries.

✓ Cost Effective: By providing central data to the employees and customer the cost of gathering information and solving query reduces. Thus it provides a cost effective mechanism to an organization.

✓ Find cause of Problem: It can be used to find the root cause of any problem which may arise due to previous action, or can be arrive in future within the organization. Sometime the information stored can be used to back trace the actions which are helpful in some other project or to find the chance of improvement in that method.

✓ Minimize the Risk of Failure: When the study carried out in right direction using Business Intelligence tools and methods, the risk of getting failure reduces, otherwise if it deployed with incorrect inputs it leads to a downfall. That's why one should be careful when dealing with BI tools.

✓ Capable to Look in Future: The Business Intelligence methods and tools are capable of look in future. It can predict the output based on certain input data. Thus the organization can be informed in advance about the downfall which may arise in future and can take needful steps to prevent that risk/downfall.

1.3. Technical Terms

✓ Adhoc Query: The ability to create a query in a Business Intelligence Tools (software) format so that the BI tool can drill down the information to response to a question quickly.

✓ Aggregation: Combine all the information into a single user understandable form like sets, list or graphs so that in a predefine pattern.

✓ Atomic Data: The top most level of granularity of data present in data warehouse.

- ✓ Attribute: Any specification of an object. Attribute used as the column or in other form when preparing reports in tabular format, graphical format or in textual format.

- ✓ Cube: A computer based online analysis technique used for business intelligence. It can represent the data into 0 or multidimensional format which can be viewed from any angle and can also apply "Drilldown method" or "Slice and Dice method" to search the data.

- ✓ Data: The raw facts and figure. Most crucial part of Business Intelligence tools. Every report is prepared using the past, present or future (expected) data.

- ✓ Data Mart: A collection of data set from date warehouse which are logically related and can be used to serve the problem of business particularly of a department or a particular subject area.

- ✓ Database: A central system which store all the data in a structured (sometime semi-structured or unstructured) form so that the data can be obtain in a convenient manner and a very quick data retrieval.

- ✓ Data warehouse: A central repository which contains n number of databases is known as data warehouse. For a well organized corporation data warehouse is compulsory as to attain the integrity and maintainability of organization projects.

- ✓ Forecasting: A process used in decision making using prediction model methodology.

- ✓ Measures: Any piece of information, which is valuable for analysis for a particular department or particular subject area.

- ✓ Matrix: Represent the data into the forms of rows and column.

- ✓ Normalization: Standards followed while creating a database.