

Data analytics



The exam will be a combination of short-answer and multiple-choice questions. It is a closed-book, closed-notes exam. You will not be able to use a computer during the exam. The following is a list of items that you should review in preparation for the exam. Note that not every item on this list may be on the exam, and there may be items on the exam not on this list. The Things You Can Do With Data/The Information Architecture of an Organization What is the difference between data and information? Give examples.

Data = discrete, unrecognized, raw facts Quantity Sold, Course Enrollment, Customer Name, Discount, Star Rating. Information = transformation of those facts into meaning. Financial data (deposits), daily loans. What is a transaction? Action performed in a database management system What are the characteristics of an operational data store? Stores real time transactional data What are the goals of this type of database? Optimized for storage efficiency and data integrity Day to day operations What are the characteristics of an analytical data store?

Stores historical and summarized data Data extracted from operational database and reformatted Optimized for data retrieval and summarization Periodic and on demand analysis What is the relationship between an operational data store and an analytical data store? Analytical Data Store uses reformatted operational data store Info Relational Data Modeling Identify and define entities, relationships, and attributes Entity- square - a uniquely identifiable thing (person, order) Relationship - diamond - describes how two entities relate to one another Attribute - oval - a characteristic of an entity or relationship.

Cardinality Defines the rules of the association between entities One-to-one, One-to-many, many-to-many optional > O---- Be able to draw an RED based on a scenario description using the correct symbols and cardinality Identify when attributes describe entities and when they describe relationships Be able to relate an RED to its corresponding schema Understand and implement primary key/foreign key relationships.