

Dimensional Modelling Integrated with Business Objects

A Data Warehouse enables you to access your business data, deploy the information within and exploit it. The design of a Data Warehouse is fundamentally different from that of a traditional relational database.

BusinessObjects enables you to run reports, perform ad hoc queries and analyse the information held in the Data Warehouse in the most flexible and easy-to-use manner possible. This is done through an interface using business terminology, called a Universe. The optimum design of the BusinessObjects Universe takes into account both the user requirements and the database design.

This practical course introduces the main terms and techniques used in Data Warehouse design and in particular the Dimensional Modelling technique. It also covers how to optimise the design of the BusinessObjects Universe using more advanced techniques to provide the fastest, most flexible access to the data, taking advantage of the Data Warehouse design features. These two aspects of learning are fully integrated on the course.

On completion, delegates will be able to:

Design a Data Warehouse as a series of interlocking star schema data marts according to dimensional modelling design principles. Design a BusinessObjects Universe against that Data Warehouse to resolve many types of user requirements including tracking history, aggregate tables, and recursive relationships.

Who should attend?

This course is aimed at an audience of IT professionals who will be involved in the design, build or maintenance of a data mart or Data Warehouse, using BusinessObjects as the front-end query and reporting tool, and who need to understand the techniques involved in the design.

Prerequisites

A basic understanding of relational database concepts such as joins, tables, primary keys, foreign keys, attributes and lookup tables. Good experience of the BusinessObjects Designer module, as gained on the Universe Design course followed by some weeks practical use in the working environment.

Course Duration

5 days

Course Contents

Introduction to Data Warehousing; Principles of Dimensional Modelling; the Time Dimension and implementing Date requirements; Fact Table properties and implementing Measures; implementing Aggregate Tables; implementing Multiple Fact Tables; implementing solutions to Tracking

History requirements; implementing Recursive Relationships; Advanced Designer surgery to answer delegate questions about their own environments; Approach to Data Warehousing projects; Data Quality and Data Loading issues; End of Course Challenge to recap the key points of data mart design and implementation using BusinessObjects.

Related and Follow-On Courses

- Dimensional Modelling for the Data Warehouse

Acuma Education

All Acuma courses are delivered by trainers who are highly experienced consultant practitioners. This rich project experience coupled with professional training skills helps delegates to focus on how the course contents can be put into practice in their workplace.

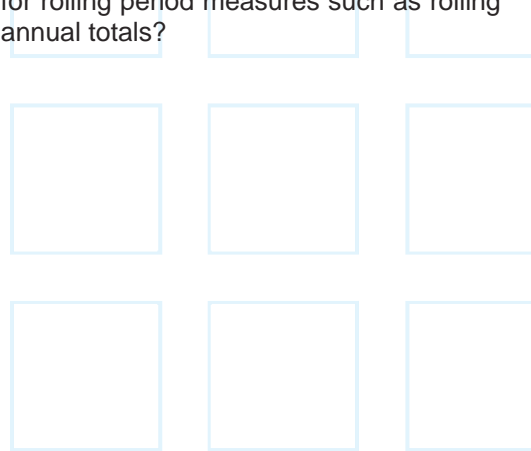
Acuma delivers courses from dedicated training facilities in Manchester, Birmingham and London, but also deliver training offsite using suites of laptops, with the option to customise courses to use your own business data and tailored to your exact training needs. The most appropriate training format depends upon your training objectives, number of learners, timescales, budgets and delivery logistics. Whatever your needs, Acuma will find the approach most suited to them.

Acuma Education's seal of quality is demonstrated through consistent achievement of the prestigious "Gold Standard" from the IITT (Institute of IT Trainers).



Course Key Learning Points

- **Why data warehousing?**
What are the main benefits of a Data Warehouse?
- **Why a dimensional modelling design?**
What are the differences between Relational and Dimensional Database Designs?
What are they each optimised for?
- **Approach to data warehousing**
When building a data warehouse, what is the best approach to ensure the greatest returns with the least risk?
- **Approach to building each data mart**
What is the best approach in building each Data Mart, to ensure you take into account complexities in the data?
- **Four types of star schema**
What are the four types of star schema, and what are the benefits of each?
What criteria should you use to compare designs?
- **Dimension Table tips**
What are the benefits of having a separate time dimension?
Why use artificial keys?
How to support multiple dates?
How to implement dimensions on a hybrid schema?
- **Fact Table tips**
How should Fact tables be designed?
What grain should you choose?
Which types of measure are best to implement?
How to implement more than one fact table?
- **Aggregate tables**
What are aggregate tables used for?
How to implement measures on aggregate tables. How to maintain a universe with aggregate tables.
- **Multiple fact tables**
How are custom tables used?
How to record events that did NOT happen. Why use snapshot fact tables?
What type of measure does a snapshot fact table contain, and how to implement such measures.
- **What approaches are there to the problems of tracking history on the data warehouse?**
How would you meet requirements to ignore history, to partition history, to enable recasting of history, and to report on when things changes? How do you adapt the approach for large or rapidly changing dimensions? How to distinguish current version from that at time of fact. How to make best use of effective dates.
- **Recursive relationships**
How can you meet requirements to report against a recursive hierarchy?
What if you have a variable depth or changing hierarchy?
How to implement recursive relationships?
- **Advanced Business Objects® Designer Tips**
How can you report all combinations of dimensions whether or not there are any relevant facts, without needing outer joins? How can you support requirements for rolling period measures such as rolling annual totals?



Acuma is an Information Management (IM) Specialist. Acuma is part of the Saksoft group and provides solutions, which are unique, flexible and cost-effective service blending local high value consultancy and global high quality project delivery. Acuma delivers business improvements by drawing together strategy, technology and methods of Information Management into a single philosophy called the Information Value Model (IVM).