



## MongoDB Essentials

**Duration: 2 Days**    **Course Code: MONGOE**    **Delivery Method: Company Event**

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### Overview:

The MongoDB Essentials course is designed to give delegates experience of installing and using the MongoDB database. This hands-on course introduces delegates to the concept of a document-oriented database then shows how to set up MongoDB for use. Delegates use the built-in shell and various APIs to build a database access application and manipulate data. We also investigate optimising queries using indexes and aggregating data with MongoDB functions.

### Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

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### Target Audience:

This course is aimed at application developers who wish to use MongoDB to store, access and edit data.

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### Objectives:

- By the end of the course delegates should be able to:
  - Install the MongoDB database
  - Use the MongoDB shell to access the database
  - Create, retrieve, update and delete data
  - Use aggregation queries
  - Appreciate the APIs used to interface with MongoDB
  - Understand the document based structure of the database
  - Use an API to develop applications
  - Optimise queries with indexes
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### Prerequisites:

An understanding of programming and database principles would be beneficial.

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## Content:

### MongoDB Essentials Training Course Course Contents - DAY 1

#### Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

#### Session 1: NOSQL DATABASES

- What are NoSQL Databases?
- Common Database Features
- NoSQL Versus Relational Approach
- Types of NoSQL Databases
- Data Storage
- Transaction Handling
- Key Features

#### Session 2: INSTALLING MONGODB

- Downloading in the Required Software
- Installing MongoDB
- Configuration Files
- Touring the File Structure
- Securing the Installation

#### Session 3: DATA MODELLING AND DESIGN

- Data Storage
- Working with Datatypes
- Collections
- Document Datatypes
- Creating \_id Fields

#### Session 4: QUERYING DATA

- Databases and Collections
- Querying Collections
- Working with Operators
- Referencing a Database
- Querying Dates MongoDB Essentials Training Course Course Contents - DAY 2

#### Session 5: THE AGGREGATION FRAMEWORK

- Aggregating Results
- Single Purpose Functions
- The Aggregation Pipeline
- Date Aggregation Operators

#### Session 6: MANIPULATING DATA

- Inserting Data into Collections
- Updates
- Deletes
- Atomic Operations
- Removing Data
- Capped Collections

#### Session 7: USING AN API

- Introducing Drivers
- Java
- PHP
- Ruby
- Python

#### Session 8: HIGH PERFORMANCE OPTIONS

- Creating Indexes
- Manipulating Index Behaviour
- Index Properties
- Specialised Index Types
- Replication
- Sharding

## Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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