

# NoSQL Database - MongoDB

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03 Weeks (2 Hrs. per day)

*Online Course*

Medium of Instruction: Bilingual (English & Hindi)

### Objective

In this course, students will learn about the most advanced Database Management Systems on the large volume of unstructured data generated through social media and many other platforms. Existing Relational Database Management Systems are expensive and not in a position to support these unstructured data. NoSQL database technology is now getting popularity to manage these data. The objective of this course is to make candidates familiarize with NoSQL Technology and give some hands-on on one of the most popular NoSQL database MongoDB.

### Prerequisite

Graduate (passed/appearing) with basic knowledge of Computer

- ✓ Candidate must have latest computer/laptop with preferably 4 GB RAM or higher
- ✓ Software: MongoDB (can be downloaded from respective websites)
- ✓ Internet connection with good speed (*preferably 2Mbps or higher*)

### Certificate

Rs. 1550/- incl. GST & all other charges.

Certificate will be provided to the participants, based on minimum 75% attendance and on performance (minimum 50% marks) in the online test, conducted at the end of the course.

### How to Apply?

- ✓ Instructor-led live classes
- ✓ Instructor-led hands-on lab sessions.
- ✓ Content Access through e-learning portal
- ✓ Assessment and Certification

**Step-1:** Read the course structure & course requirements carefully.

**Step-2:** Visit the Registration portal and click on apply button.

**Step-3:** Create your login credentials and fill up all the details, see the preview and submit the form.

**Step-4:** Login with your credentials to verify the mobile number, email ID and then upload the documents, Lock the profile and Pay the Fees online, using ATM-Debit Card / Credit Card / Internet Banking / UPI etc.

### Eligibility

### Course Fees

### Methodology

### Course Content

Day	Topic	Day	Topic	Day	Topic
Day #01	<ul style="list-style-type: none"> <li>• Need of a database</li> <li>• Different types of database,</li> <li>• Relational vs. Non-relational database,</li> <li>• Installation of MongoDB</li> </ul>	Day #02	<ul style="list-style-type: none"> <li>• Introduction to NoSQL Databases,</li> <li>• NoSQL features, Different types of NoSQL databases</li> <li>• Introduction to MongoDB,</li> <li>• MongoDB architecture,</li> </ul>	Day #03	<ul style="list-style-type: none"> <li>• Data modelling in MongoDB,</li> <li>• Advantages of MongoDB over RDBMS,</li> <li>• Mongo Shell,</li> <li>• Configuration file in MongoDB,</li> </ul>
Day #04	<ul style="list-style-type: none"> <li>• JSON File format for storing documents</li> <li>• Introduction to Documents, Collections,</li> <li>• Database Commands in MongoDB,</li> <li>• Inserting and Saving Documents</li> <li>• Inserting multiple documents</li> </ul>	Day #05	<ul style="list-style-type: none"> <li>• Updating Documents</li> <li>• Removing Documents,</li> <li>• Document Replacement</li> <li>• Operator and Modifiers,</li> </ul>	Day #06	<ul style="list-style-type: none"> <li>• Indexing in MongoDB,</li> <li>• Single index</li> <li>• Finding index</li> <li>• Multikey index</li> </ul>
Day #07	<ul style="list-style-type: none"> <li>• Aggregation Framework</li> <li>• Pipeline Operations- \$match, \$sort, \$group</li> </ul>	Day #08	<ul style="list-style-type: none"> <li>• Pipeline Operations- \$project, \$unwind, \$limit, \$skip,</li> </ul>	Day #09	<ul style="list-style-type: none"> <li>• MapReduce,</li> <li>• Aggregation commands</li> </ul>
Day #10	<ul style="list-style-type: none"> <li>• Replication,</li> <li>• Advantages of replication</li> <li>• Implementation of replication</li> <li>• Managing Configuration File in MongoDB</li> <li>• Setting up replica set in MongoDB,</li> </ul>	Day #11	<ul style="list-style-type: none"> <li>• Replication configuration</li> <li>• Checking the Configuration</li> <li>• Change replication configuration,</li> <li>• Replication status</li> <li>• Remove members</li> <li>• Adding new port in replica set</li> </ul>	Day #12	<ul style="list-style-type: none"> <li>• Terminologies used in replication,</li> <li>• Help on replication,</li> <li>• Adding arbitrator</li> <li>• Stepping down a member</li> </ul>
Day #13	<ul style="list-style-type: none"> <li>• Backup and restore</li> <li>• Export and import of data</li> </ul>	Day #14	<ul style="list-style-type: none"> <li>• Importing from JSON file</li> <li>• Choosing the right database,</li> <li>• Database era</li> <li>• Taking decisions on database,</li> </ul>	Day #15	<ul style="list-style-type: none"> <li>• Strengths and weakness of database</li> <li>• Free and open source database</li> </ul>

### Course Coordinator

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