UNIVERSITY OF MADRAS
MASTER OF COMPUTER APPLICATIONS (MCA) DEGREE PROGRAMME
SYLLABUS WITH EFFECT FROM 2023-2024

Title of the Paper	**Data Engineering and Management Lab**		
Elective- II Practical - II	I Year & I Semester	Credit:3	435E1D

Course Objectives:

To acquire basic scripting knowledge in MongoDB

To learn CRUD Operation on MongoDB database

To comprehend MongoDB using DbVisualizer

To be familiar with Zoho CRM features

1. To customize your application using Zoho CRM

2. Write a script to create a MongoDB database and perform insert operation

3. Write a MongoDB script to perform query operations

4. Write a MongoDB Script to perform update operations

5. Write a MongoDB Script to update documents with aggregation pipeline

6. Write a MongoDB script to delete single and multiple documents

7. Write a MongoDB script to perform string aggregation operations

8. Design a Data Model for MongoDB using DbVisualizer

9. Perform CRUD operations using DbVisualizer

10. Create a Zoho CRM account and organize your Tasks, Meetings and Deals

11. Create and maintain a project using Zoho CRM features

Course Outcomes

On the successful completion of the course, students will be able to

Course Outcome	Description	Knowledge Level
CO1	Comprehend the scripting knowledge in MongoDB and perform basic operations in shell prompt.	K1-K6
CO2	Implement, Create, Read, Update and Delete Operations on MongoDB database.	K1-K6
CO3	Analyze MongoDB using DbVisualizer.	K1-K6
CO4	Assess Zoho CRM features for managing the customer relationships.	K1-K6
CO5	Create a customized application in Zoho CRM.	K1-K6

K1- Remember, K2- Understand, K3- Apply, K4- Analyze, K5- Evaluate, K6- Create

Mapping with Programme Outcomes:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	S	S	S	S	S	M	S	S	S	M
CO2	S	S	S	S	S	S	S	S	S	S
CO3	S	M	S	S	M	S	M	S	S	S
CO4	S	S	S	M	S	S	S	L	S	S
CO5	S	S	S	S	M	S	S	S	S	S

S- Strong; M-Medium; L-Low