Centurion University
Shaping Lives...
Empowering Communities...

# SCHOOL OF ENGINEERING AND TECHNOLOGY

## Record of Applied and Action Learning (Programming Practice)

**Subject Name:**

**Subject Code:**

**Semester:**

**Name:** _____

**Registration No.:** _____

**Program/Branch:** _____

**Specialization:** _____

**Academic Year:** _____

**Campus:** _____


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# CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT ODISHA

# *Certificate*

This is to certify that Mr./Ms. ..... having Registration No. ..... of ..... Semester, ..... Program, ..... School, ..... Campus has completed ..... number of experiments in ..... Applied and Action Learning Laboratory and fulfils the.....course requirements.

***Signature of the HoD/Dean*** ***Signature of the Faculty***

***Office Seal***

# INDEX

| Sl. No. | Date | Name of the Experiment | Page No. | Remark | Faculty Signature |
|---|---|---|---|---|---|
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School: ..... Campus: .....

Academic Year: ..... Subject Name: ..... Subject Code: .....

Semester: ..... Program: ..... Branch: ..... Specialization: .....

Date: .....

# Applied and Action Learning

(Learning by Doing and Discovery)

**Name of the Experiement :** Installation and Practice over Non sql Database

## * Coding Phase: Pseudo Code / Flow Chart / Algorithm

- **About the NoSql database-:**
  databases are a type of database that provide flexible and scalable ways to store and manage data, differing from traditional relational databases (RDBMS). They are designed to handle large volumes of unstructured, semi-structured, or structured data and are optimized for high availability, horizontal scaling, and fast read/write operations.

- now a days we are using lots of the NoSql database but here we are going to perform the all operation over the **MongoDB-:**

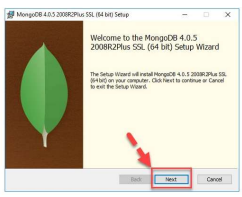
**Installation of the MongoDB**

THESE ARE THE FOLLOWING STEPS ON WHICH THE MONGOBD WILL BE INSTALLED

**Download & Install MongoDB on Windows**

**Step 1**) Go to https://www.mongodb.com/try/download/community and Download MongoDB Community Server. We will install the 64-bit version for Windows.

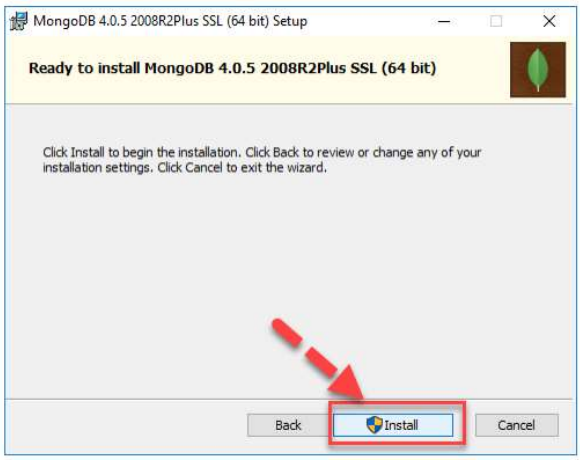

**Step 2)** Once download is complete open the msi file. Click Next in the start up screen



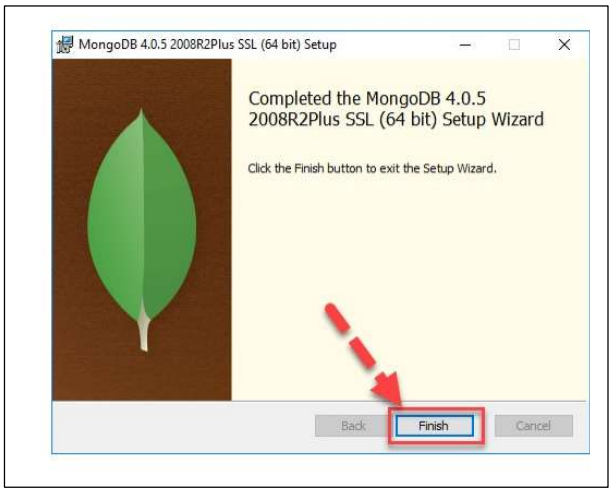



**As applicable according to the experiment.*
*Two sheets per experiment (10-20) to be used.*

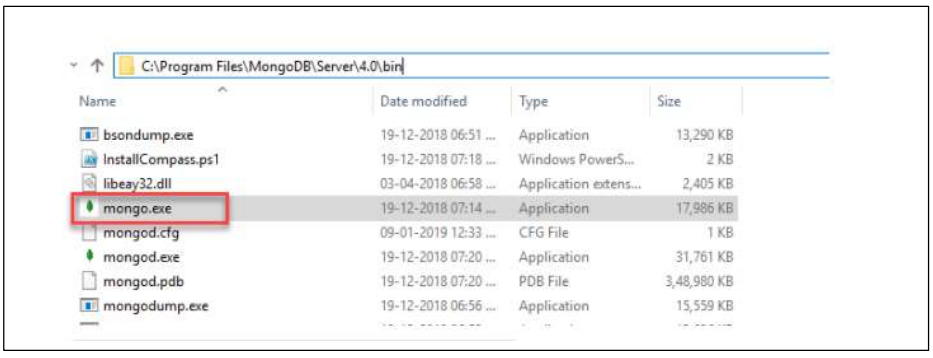
**Step 3)** Click on the Install button to start the installation.




**Step 4)** Click on the Finish button to complete the installation




**Step 5**) Go to " C:\Program Files\MongoDB\Server\4.0\bin" and double click on mongo.exe Alternatively, you can also click on the MongoDB desktop item

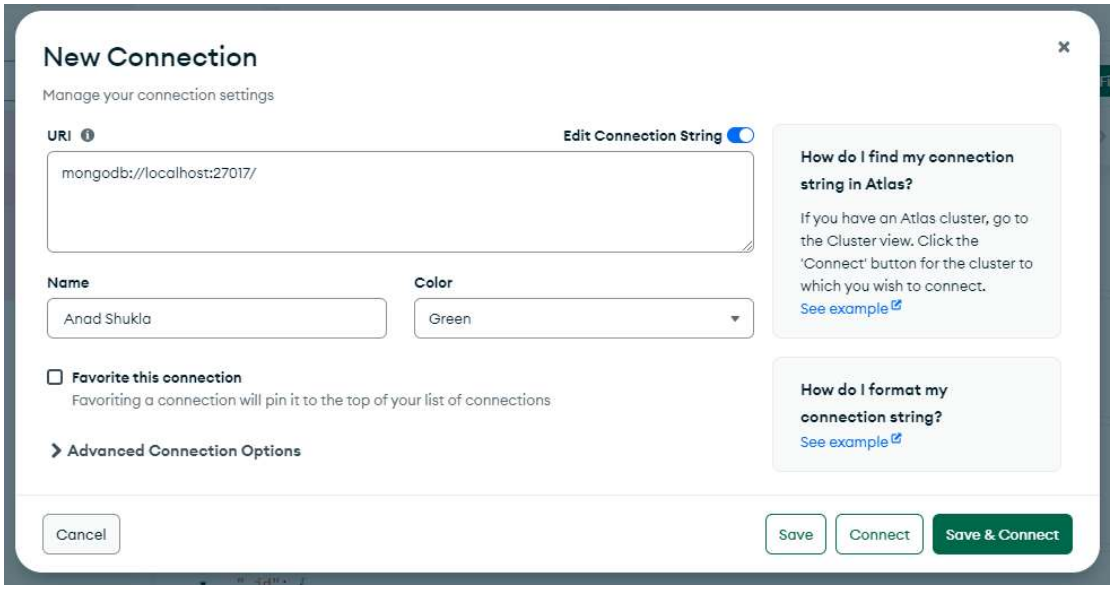




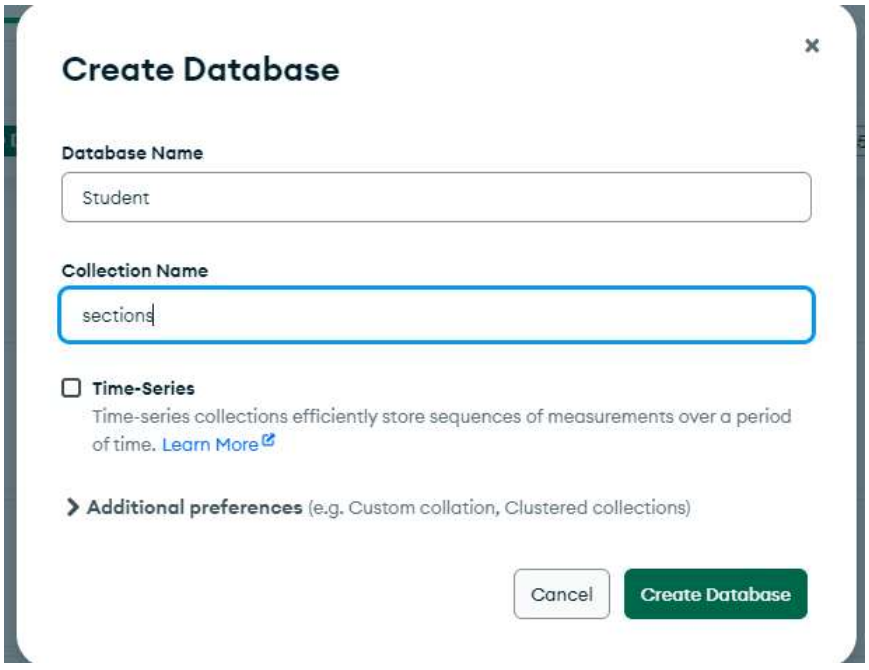

*✱As applicable according to the experiment.*
*Two sheets per experiment (10-20) to be used.*

# * Operation in MongoDB

Here We Will make the connection of the MongoDB to Compass for clear visualization




Then by Clicking on the + icon we will Create A new database



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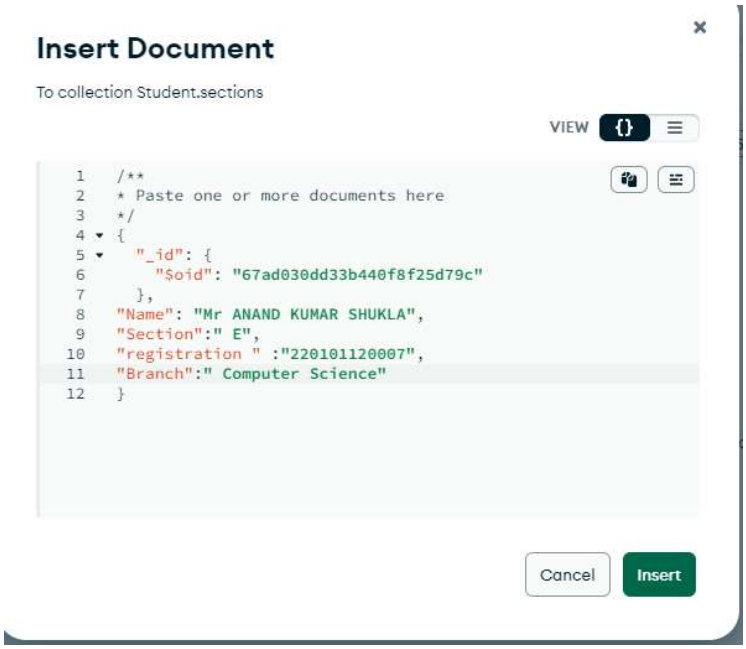


By This Process we will Insert tha Data in MongoDB

## * Implementation Phase: Final Output (no error)

### Study of MongoDB and Implementation of CRUD Operations

*Introduction to MongoDB:*

MongoDB is a NoSQL database that stores data in a flexible, JSON-like format called **documents**. It is widely used for handling large amounts of data efficiently.

*Installation of MongoDB:*

1. Download MongoDB from the official website.
2. Install it and start the MongoDB server.
3. Use the MongoDB shell (`mongosh`) or GUI tools like **Compass** to interact with the database.

*CRUD Operations in MongoDB:*

1. **Create (Insert Data)**
   - Used to add new records (documents) in a collection.

```
db.students.insertOne({ name: "Anand Shukla", age: 20, course: "CSE" });
```



**As applicable according to the experiment.*
*Two sheets per experiment (10-20) to be used.*

1. **Read (Retrieve Data)**
   - Used to fetch data from the database.

```
js
CopyEdit
db.students.find();
```

2. **Update (Modify Data)**
   - Used to change existing data in the database.

```
js
CopyEdit
db.students.updateOne({ name: "anand " }, { $set: { age: 23 } });
```

3. **Delete (Remove Data)**
   - Used to delete records from the database.

```
js
CopyEdit
db.students.deleteOne({ name: "anad" });
```

*Conclusion:*

MongoDB is a powerful NoSQL database that provides fast and flexible data storage. CRUD operations allow us to insert, retrieve, update, and delete data easily.

## ASSESSMENT

| Rubrics | Full Mark | Marks Obtained | Remarks |
|---|---|---|---|
| Concept | 10 | | |
| Planning and Execution/ Practical Simulation/ Programming | 10 | | |
| Result and Interpretation | 10 | | |
| Record of Applied and Action Learning | 10 | | |
| Viva | 10 | | |
| **Total** | **50** | | |

***Signature of the Student:***

***Name :***

***Regn. No. :***

***Signature of the Faculty:***



**As applicable according to the experiment.*
*Two sheets per experiment (10-20) to be used.*

# ASSESSMENT

| Experiment | Full Mark | Marks Obtained |
|---|---|---|
| Experiment - 1 | 50 | |
| Experiment - 2 | 50 | |
| Experiment - 3 | 50 | |
| Experiment - 4 | 50 | |
| Experiment - 5 | 50 | |
| Experiment - 6 | 50 | |
| Experiment - 7 | 50 | |
| Experiment - 8 | 50 | |
| Experiment - 9 | 50 | |
| Experiment - 10 | 50 | |
| Experiment - 11 | 50 | |

| Experiment | Full Mark | Marks Obtained |
|---|---|---|
| Experiment - 12 | 50 | |
| Experiment - 13 | 50 | |
| Experiment - 14 | 50 | |
| Experiment - 15 | 50 | |
| Experiment - 16 | 50 | |
| Experiment - 17 | 50 | |
| Experiment - 18 | 50 | |
| Experiment - 19 | 50 | |
| Experiment - 20 | 50 | |
| **Average Total** | **50** | |

***Date:*** _____ ***Signature of the Faculty***

## * LEARNING OUTCOMES:

**How the Applied and Action Learning encourages Critical Thinking, Problem Solving, Idea Generation and Skill Development etc.?**

**How the Applied and Action Learning encourages Leadership, Team Work, Reflection and Decision Making Capability etc.?**

***Date:*** _____ ***Signature of the Student***



** One sheet per learning record to be used*

# COURSE OUTCOMES (COs) ATTAINMENT

- **Expected Course Outcomes (COs):**
  **(Refer to COs Statement in the Syllabus)**

- **Course Outcomes (COs) Attained:**
  **How would you rate your learning of the subject based on the specified COs?**

| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| LOW | | | | | | | | | HIGH |

- **Learning Gap (If any):**

- **Books/Manuals Referred:**

***Date:*** _____ ***Signature of the Student***

- **Suggestions / Recommendations:**
  **(by the Course Faculty)**

***Date:***_____ ***Signature of the Faculty***



** One sheet per learning record to be used*

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## CAMPUSES:

**Paralakhemundi Campus**
Village Alluri Nagar
P.O. – R Sitapur, Via- Uppalada
Paralakhemundi, Dist.- Gajapati
Odisha, India. PIN– 761211

**Bhubaneswar Campus**
Ramchandrapur
P.O. – Jatni, Bhubaneswar
Dist.- Khurda, Odisha,
India, PIN– 752050

**Balangir Campus**
Behind BSNL Office
IDCO land, Rajib Nagar
Dist.- Balangir, Odisha
India, PIN-767001

**Rayagada Campus**
IDCO Industrial Area
Pitamahal, Rayagada
Dist.-Rayagada, Odisha
India, PIN-765001

**Balasore Campus**
Gopalpur,
P.O.-Balasore
Dist.-Balasore, Odisha
India, PIN-756044

**Chatrapur Campus**
Ramchandrapur,
Kaliabali Chhak,
P.O-Chatrapur, Dist.-Ganjam
Odisha, India, PIN-761020