**Synopsis**

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Class (Year): T.E Computer

Division: B

Roll No: 3471

Seminar Topic: MongoDB – A NoSQL Database

Area of Topic: Database

**Motivation**

Modern application are more networked, social and interactive with the network.

This is driving new requirement to support

* Big data
* Fast feature development
* Flexible deployment strategy.

But applications are storing more and more data and accessing it high and higher rates. If the database runs on single server then scaling limit will be reached.

Productivity

* Agile development and continuous deployment accelerated road maps.
* If your data model isn’t flexible. You can slow development down.
* Mongo DB increases productivity
* Modeling document simpler.

**Objective**

Objectives behind developing mongoDB are :

* Replica Set/Shard Visualizer
* Log Visualizer
* Query Analyzer
* Database/Collection Explorer
* Enhanced Query Interface
* Document Editor

**Outline**

* **Introduction to MongoDB -** In this section the need and definition will be covered.
* **Features -** In this part theaspects which will make mongoDBstand apart from other databases will be discussed.
* **Architecture** – In this part the architecture and the terminologies related to it will be discussed.
* **Data model** – This part covers the details regarding the actual storage of data using mongoDB architecture.
* **Documents and Collections** – In this section the basic building blocks of database created using mongoDB will be discussed.
* **Replication** – In this part the duplication of data using servers known as replica sets will be covered.
* **Sharding** – In this part the details regarding distribution of data among several machines will be coverd.
* **Querying –** The syntax of different mongoDB core operations will be discussed.
* **Comparison –** In this part the mongoDb will be compared with Oracle and other noSQL databases.
* **Applications** – In this section the use of mongoDB in various fields will be covered.