SARVAJANIK COLLEGE OF ENGINEEIRNG & TECHNOLOGY
INFORMATION TECHNOLOGY DEPARTMENT
BIG DATA ANALYTICS [3161607]
PRACTICAL LIST [Even 2023]

1) Study of Big Data
   Prepare a document on big data containing below given topics:
   - What is Big Data
   - Different Formats of Big Data
   - Characteristics (Four V's) of Big Data
   - Challenges of Big Data
   - Applications of Big data
   - What is Big Data Analytics?
   - Types of Big Data Analytics
   - How Big Data Analytics helps in development of smart city?

2) To install Hadoop framework, configure it and setup a single node cluster. Use web based tools to monitor your Hadoop setup.

3) With the help of Java shell commands perform the operation of how to include a file in HDFS.

   Show the working of different Java shell commands to work in HDFS.

4) Perform the following MongoDB query based on CRUD operation and aggregate functions.

   1. Write a MongoDB query to create a collection.Store the basic information about students such as id, name, subject,marks,age,city,status of student using various collections. And make a document with at least five entries.(i.e collection name:student_info)Write a MongoDB query to see the created collection Student_info.
   2. Write a MongoDB query to see all collections.
   3. Write a MongoDB query to print the output on screen of student_infocollection.
   4. Write a MongoDB query to print output on screen as prettiest form.
   5. Write a MongoDB query to print output with only name=”Kriti” field.
   6. Write a MongoDB query to print data without id.
   7. Write a MongoDB query to set age=21 where name=”Rohan”.
   8. Write a MongoDB query to delete the row whose subject is=”JAVA”.

9. Write a MongoDB query to display the Result whose city=”Surat”.

10. Write a MongoDB query to display the result of students whose age is less than 25.

11. Write a MongoDB query to display the id and name of students whoseage is greater than equal to 30.

12. Write a MongoDB query to display the result upto limit 3.

13. Write aMongoDB query to insert one field with id=6 name=”Ranbir”,Subject=”Maths” ,marks=75,city=”Jaipur”,age=27..

14. Write a MongoDB query to update city=”Bhopal” where city=”Jaipur”.

15. Write a MongoDB query to delete the field where Name=”Kartik”.

16. Write a MongoDB query to display the field by skipping the 1st field.

17. Write a MongoDB query to count the number of students whose marksare greater than 80.

18. Write a MongoDb query to get only Maths data as an output with only subject field.

19. Write a MongoDB query to drop the database CScorner.

20. Write a MongoDB query to get subject Algorithm data as an outputwithout only the subject field.

21. Write a MongoDB query to sort the data of the student info databaseaccording to city.

22. Write a MongoDB query to display the distinct name of the city from thestudent_info collection.

23. A typical course feedback system functions as per following features:

    - Course management.
    - Subject management of course.
    - Faculty subject engagement.
    - Student registration for the course.
    - Student feedback for faculty for the subject.

    Design MongoDB schema for above application. (Necessary assumptionscould be made for detailed design.)

24. Requirement specification for a meeting dashboard application in anorganization is as follows:
    - Any member in an organization can host a meeting and send invitations to other members within an organization.

- Invitees can accept or reject the meeting with proper reason.
- Every meeting has the title, timestamp and place/location associated.
- Every meeting has predefined agendas and documents associated.
- Meeting discussion concludes with identifying tasks to accomplish.
- Every task has a title, priority, deadline and note associated with it.
- Tasks can be assigned to any attendee of the meeting.

5) Study Installation steps and explore hive query Language.

6) Use Hive to create, alter, and drop databases, tables. To create HDFS tables and load them in Hive and implement joining of tables in Hive.