

Big Data: Need and Working with features

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Abstract: . Data is very important for getting the vital and useful information. If data size is small or medium ,then it is not very tough task for handle and maintain it. But ,if data size is large then it is difficult to handle such type of data. Large data means collection of data sets. So ,for handling such type of data and maintaining huge collection of data sets, a mechanism is needed. Such mechanism or concept is known as big data. Big data is a concept that is used in these days for handling large data sets. Concept of Big data is very broad in its sense. But, the basic concept of the Big is Described during this paper. This Research paper focuses on all the various important aspects of the Big Data including the need of Big Data, features and applications of big data and so on.

Key Words: Datasets ,Vital ,Mechanism, Aspects, Concept.

1. INTRODUCTION:

In past, traditional data processing software were used for handling the large datasets and huge database. [1]But, these software were not successful for complete maintenance of the database .[2]That's why a new concept introduced known as Big Data. [3]Big data term was first time coined by John Mashey in 1990.As the size of data is increasing from gigabyte to terabyte and then terabyte to petabytes, the need of big data is increasing after every year with the introduction of the large datasets.[4] It is not necessary that Big Data will use any particular method or technique for maintaining or managing the database.[5] All it depends upon the type of the data. Depending upon the type of data, appropriate technique or method is used for it.[6] We cannot say how big data is ,but the need of appropriate techniques and applications that can handle the available data, helps to define that how big data is.

2. NEED:

Data sets are collection of data that is extracted from the database depending upon the category of the data. Data sets are used for making the process of managing and maintain the database smoother. But, sometimes database is huge or collection is database is needed to maintain. In such type of conditions it is difficult to handle and maintain the database using the datasets only. Further added mechanism is needed for managing the whole database. Big data is a concept that deals with maintaining, managing and handling the database.

3. WORKING:

Big data uses various methods for transforming the acquired information from the database into values by categorizing the information based upon various characteristics like velocity, specific technology to be used ,volume of data and so on. Big data uses the various techniques for revealing the various forms of data that can be possible from the database. Big data uses various methods for managing and maintain the database, but the most commonly method used by Big Data is Map Reduce. This method can be considered to understand the working of Big Data.

- **Map Reduce Method:** In this method data in raw form is transformed into meaningful information .Various types of computations are performed on the a number data sets on same time but at multiple systems. This method include two steps. These steps are given below:
 1. **Map Function:** In first step the mapping is done by using filtering and sorting the data and categorize the data depending upon the type of the data.
 2. **Reduction Function:** This is second step of Map Reduce method. Reduction function includes the process of reducing the data. In this step, data is analyzed and combined at one place.

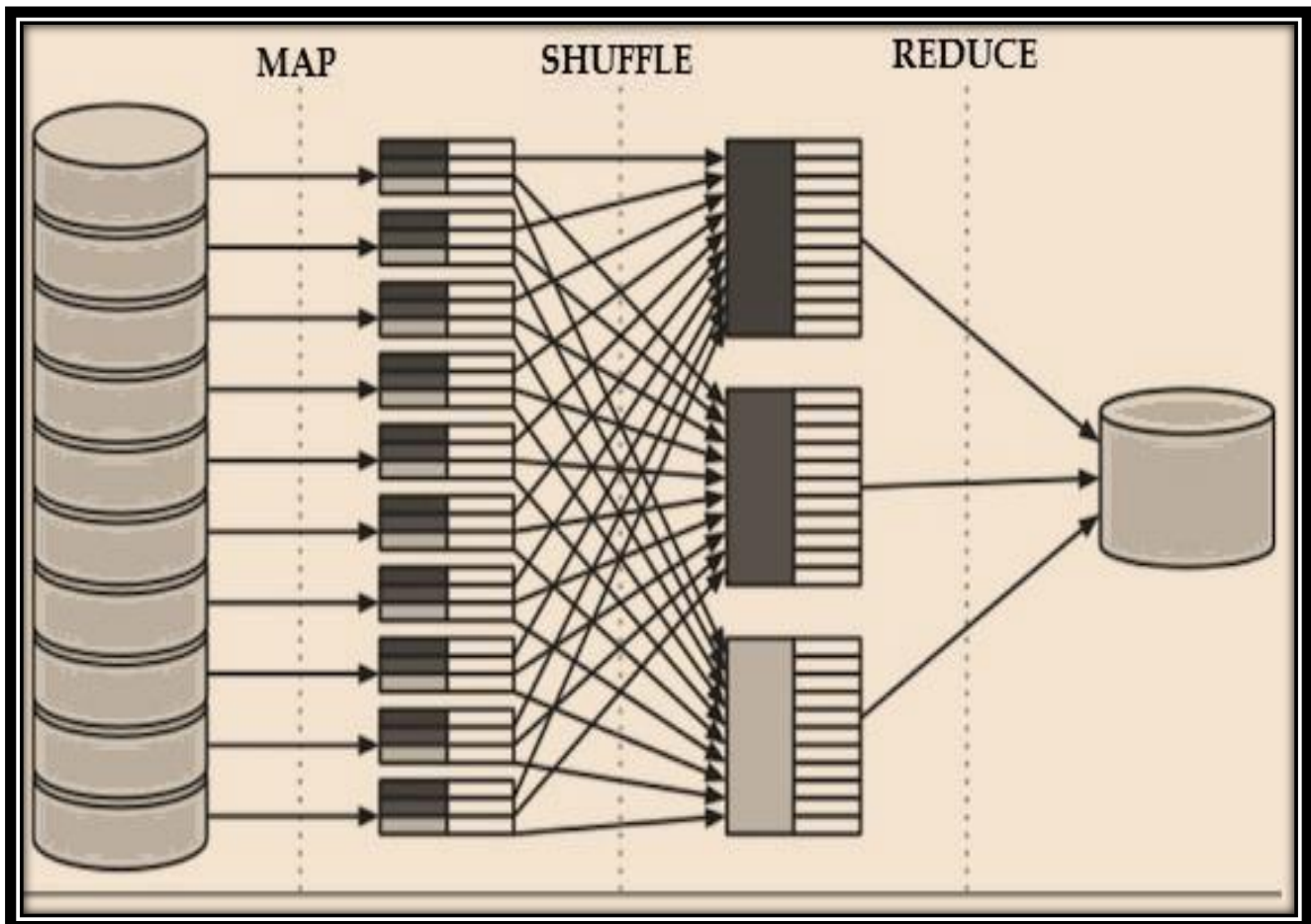


Fig. 1: WORKING OF BIG DATA USING MAP-REDUCE METHOD

4. CHARACTERISTICS: There are different types of characteristics of Big Data. Various characteristics of the big data are given below:

- **Velocity:** It means that the pace or speed at which generation of data is made. It also considers speed of the processing the challenges or hurdles that occur during the development of new forms of data.
- **Volume:** Amount of the data that is stored or that is generated. The amount of data specifies the depth of the data and possible forms of the data. By this specification, decision can be taken for this that data should be considered or not.
- **Veracity:** It considers the quality of the data. Analysis of data can be affected with the variation in the quality of the data of the database.
- **Variety:** This concept considers the variety of data. This includes nature of the data and what type of the data is. In this way it becomes easy to analyze the data and possible forms.
- **Variability:** Variations or changes in the database effects the data. In this way, it becomes difficult to handle data sets with changes .

5. FEATURES: Features of the big data is given below:-

- Various business organizations use the concept of big data for making the future plans for the business by using accessing the various social websites like twitter, facebook and so on.
- Customer feedback systems uses the concept of big data for collecting the feedback of the customers on large scale. In this way Big data increased the customer service improved.
- Big data is also helpful for detection of the risks related with various products available in the market, that can occur in the future.
- Big data is also useful for identifying the data that is not used frequently before moving the data from database to new data sets.
- Another feature of the big data is that it is more efficient than the traditional techniques used in the past that were not capable to process the large data.
- Big Data is capable for handling the large data sets like data sets with size of gigabytes, terabytes or petabytes. It was not possible with the traditional data processing software.

6. APPLICATIONS: There are applications of the big data. Some of them are given below:-

- Big data is also used in the banking sector for maintaining the database of the account details as well as for managing the security. By using big data, it is easier to detect about various frauds that can be occur in the future.
- Big data is also used in Entertainment sector. People want music and videos on demand. For this, maintenance of database is needed, this can be achieved by using the big data.
- Another use of big data is in the field of health care. Information of various health problems with their solutions is available online. To maintain such type of database, big data is used.
- In education sector, big data play a major role for maintaining the database .Online education is provided by using the educational videos and eBooks that are stored in the form of database.
- In manufacturing sector ,data about the supply chain management is available in the form of database, which is handled by the techniques of the big data.

7. ACKNOWLEDMENT:

While making this research paper, I have put all of my best and possible efforts for making this research paper. I hope this research paper will be useful and helpful for the authors who want to do further research Related to big data and its techniques.

7. CONCLUSION:

There is no doubt that need of big data is increased as the development of storage of data is increasing from gigabytes to petabytes .Big data made the processing of data more smooth and efficient. With the advancement of technology and new trends in area of computing, the needs of storage increase. With the need of storage ,major developments made in the area of storage. For handling big collection of datasets, big data played a major role. In future, the storage capacity will be increase and on the other side for handling the more huge storage new techniques will came into existence for handling the large data sets. With the growth of storing capacity, the need of big data is increased .In future there will be more developments in area of big data.

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