1. Describe the characteristics of Big data in detail?

Answer:

i)Variety

\*There can be variety of sources to big Data i.e (Data Sources)

\*There are different types of data like structured, unstructured , semi-structured etc.

\*These different kinds of data contribute to Big Data.

ii)Volume

\*It refers to the size of data(Data Size)

\*The size of data can be very large ranging from tera Bytes to peta Bytes

Example in which large volume of data can be present is social media sites, online shopping sites.

iii)Velocity-

\*It refers to the speed at which the data changes.

\*Examples in which data keeps changing is weather forecast, stock etc.

2.Explain the possible solutions to handle Big data?

Answer:

i)Scale Up

* It is nothing but Increasing the configuration of a single system

• Like adding additional resources to the existing system

* Disk capacity, RAM, data transfer speed

ii) Scale Out

• Increasing the efficiency of the existing system by adding additional systems

* Use multiple additional machines and distribute the load of storage/processing among them
* It is cheap and fast to implement as it focuses on distribution of work among the systems
* 3.Explain the differences between scaling up and scaling out

|  |  |
| --- | --- |
| Scale up | Scale out |
| Adding resources to the existing system to make it more efficient, that is scale up | Increasing the efficiency by adding extra systems with the existing system |
| Scale up is not widely used method | Scale out is widely used method when compared to scale up |
| Efficiency is low | Efficiency of scale out is better when compared to scale up |
| Processing is not simple and easy | Processing is easier and simple in scale out when compared to scale up |
|  |  |