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SUBJECT: DATABASE DESIGN AND DEVELOPMENT

Explain in detail the characteristics of big data 3Vs.

Big data is a field that treats ways to analyze data sets that are huge or too large or complex to be dealt with by traditional data-processing application software. Characteristics of big data 3v are **Volume**, **Variety,** and **Velocity.**

1. The Volume of Data.

Volume refers to the quantity of data. In our current world, the volume of data we create or generate every day has increased tremendously and can no longer be dealt with using the traditional data-processing application. For example, Facebook has over 2.19 billion monthly active users, and each user uploads at least one picture or video of themself or others every day. The data being collected by Facebook is huge 2.19 billion pictures or videos every day. This volume of data every day can't be treated or handled with traditional data-processing application software but requires a new and efficient and fast means to process and analyze those huge amounts of data being sent.

2. The Variety of Data.

Variety refers to the different forms and types of data. We generate different types of data every day as new technologies and applications emerge. For example, by using google maps we generate a different form of data compared to using Instagram. Likewise YouTube and a reminder application or note application or even Facebook. Facebook collects different forms of data every day examples being pictures, audio, videos, texts, location, and many more. Analyzing such diversity or varieties of big data is complex, time and resource-consuming hence cant be dealt with using traditional data-processing application software

3. **The Velocity of Data.**

Velocity refers to the speed at which the data is created. In the current world of instant messaging and other instant services, data or information are being created faster than we think. Hence the need for efficient ways to handle the data being created. Google handles billions of search queries every second. To match the speed and still maintain good performance for their active user then a new efficient skill or tool is needed other than the existing traditional data-processing application software.