

- a) Databases are the cornerstone of any Software Application, and nearly all kind of software applications need to use one or more databases when developing. Basically, database are software systems used to store, retrieve and run queries on data. With the rise of Microservices, cloud, distributed applications, and etc. The traditional SQL databases are now joined by various NoSQL, NewSQL, and Cloud databases.

Kamaruzzaman, M. (2021, March 22). Top 10 databases to use in 2021. Medium. Retrieved September 28, 2022, from <https://towardsdatascience.com/top-10-databases-to-use-in-2021-d7e6a85402ba>

What is a database? What Is a Database | Oracle United Kingdom. (n.d.). Retrieved September 28, 2022, from <https://www.oracle.com/uk/database/what-is-database/>

- b) Physical Data Independence is defined as the ability to make changes in structure of the lowest level of the Database Management System without affecting the higher-level schemas. Hence, modification in the Physical level should not result in any changes in the Logical or View levels. This makes database system maintenance becomes affordable, and no need to alter data structure in application programs. Also, it can easily make modifications in the physical level is needed to improve the performance of the system.

Peterson, R. (2022, August 25). Data Independence in DBMS: Physical & logical with examples. Guru99. Retrieved September 28, 2022, from <https://www.guru99.com/dbms-data-independence.html#7>

Physical and logical data independence. GeeksforGeeks. (2021, December 24).

Retrieved September 28, 2022, from <https://www.geeksforgeeks.org/physical-and-logical-data-independence/>