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INFSCI 1017

Implementation of Information Systems

Assignment 2

The information system I’ve chosen to decompose is Facebook.

1. If I were implementing this system, I think the most challenging part to design would be either the recommend friends algorithm or the relevant news feed algorithm. I think these two would be the most difficult because of their complexity, variations, and the need to validate, sanitize, and secure the information that users input into the system.
2. Facebook uses an array of different technologies to implement their data layer. This is because they have both the resources and the demand to require the use of the listed technologies.
3. my SQL - for structured data storage like wall posts, user info etc.
4. MEMCACHED - used to speed up dynamic database driven websites
5. Haystack - for managing photos
6. Cassandra - for inbox search
7. Varnish – for datalogging
8. Hip hop - for php handling
9. Scribe – for application integration
10. Today, Facebook supports almost every client imaginable. It would be easier to list everything that it doesn’t support. Firstly, Facebook supports any web browser because it was originally developed targeting the web browser, however, it also has an application version for use on devices that lack a web browser, such as the Nintendo Switch, or some smart refrigerators. The list is seemingly endless, and with the way technology progresses, you can now even access Facebook on retro devices that were built long before Facebook existed.
11. Facebook uses its own web server located at Facebook Data Center. I imagine at one point it did require the use of a web service, however, it has grown to the level of requiring its own.
12. As in question b, Facebook has uses multiple components in the backend.
13. PHP - core language, used in compiling
14. Apache HBase – for maintaining data across distributed systems
15. Ajax
16. Java
17. MapReduce – for analyzing data
18. Apache Hive – for analyzing data

<https://www.quora.com/What-do-big-websites-like-Facebook-Google-Twitter-and-LinkedIn-use-for-their-database-What-would-be-the-pros-and-cons-of-what-they-use-and-why>

<https://www.scribesoft.com/>

<https://docs.datadoghq.com/integrations/varnish/>

<https://www.polygon.com/2017/3/3/14802574/how-to-get-facebook-twitter-nintendo-switch>

https://www.lemon64.com/forum/viewtopic.php?t=52267&sid=b851728103dca9fd1d886a986d0f7bde