

Technology Justification Updated Version

Group 25

We have identified that the database of the system is well structured because any unexpected data will not be input to the database. There will be relations between records. And also the consistency of data is very important. So we identified that a relational database is well suited for our project. PostgreSQL is a relational database management system based on SQL which satisfies the requirements.

We are not looking for a distributed database for modern transactional and analytical applications that are working with rapidly changing, multi-structured data, so we choose PostgreSQL instead of MongoDB. and a SQL database fits our needs, then Postgres is a great choice.

We can follow the PERN stack consisting of PostgreSQL, Express, React and Node.js. Combining these technologies, we can build a full-stack web application with CRUD operations.

Our database must ensure security as it store sensitive data of uses, PostgreSQL database ensure security by,

1. Database file protection - All files stored within the database are protected from reading by any account other than the Postgres superuser account.
2. Client connections can be restricted by IP address and/or user name via the `pg_hba.conf` file in `PG_DATA`.

We use Postgres database instead of using MySQL because of, Postgresql is a Relational Database which is similar to mysql and has many more features.

Postgres is an object-relational database, while MySQL is a purely relational database. This means that Postgres includes features like table inheritance and function overloading, which can be important to certain applications. Postgres also adheres more closely to SQL standards.