Full-Stack Chat Application "CHAPP"

Daniel Fitzgerald

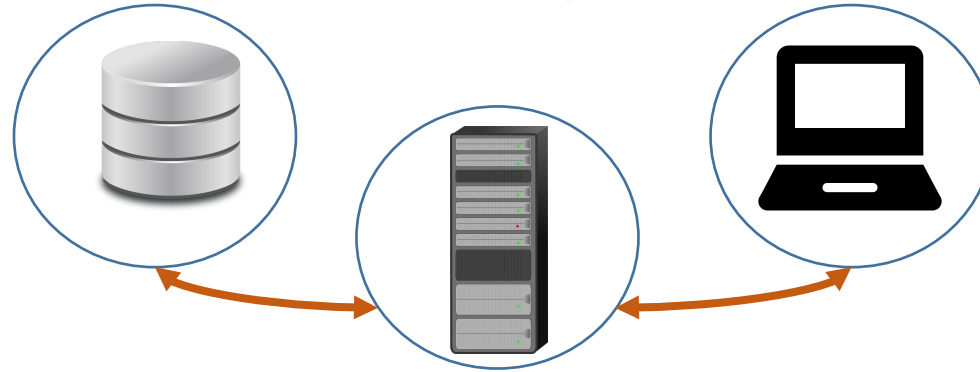## BEng Software & Electronic Engineering

Description

"Chapp" is a full-stack messaging application involving development across database, server and client technologies.

The application provides the experience of a chat environment between two users. The React-rendered User Interface provides the means to write messages to a one-to-one conversation, with the messages being sent to a Java server by HTTP request. The server then processes the requests and performs the necessary reads and writes to an Apache Cassandra database.

Applications

Messaging applications find use in the world of business communication, the personal sector and across social media platforms. Instant connection and communication drives project collaboration and digital global integration.

Technologies

- **Languages:** Java (server), React/JavaScript (client), CQL (database)
- Apache Cassandra Database
- Docker Containerization
- Tomcat Java Server using Webservlets
- React Client with User Interface
- HTTP/JSON for client-server communication
- Register and login authentication feature
- User Conversation Selection feature

Conclusion

The integration of the separate components has led to a successful messaging application. It demonstrates the networking, storage, processing and display requirement of a chat application.