NANYANG TECHNOLOGICAL UNIVERSITY
SINGAPORE

School of Computer Science and Engineering
College of Engineering

SG Decoding

A Web-based speech recognition platform

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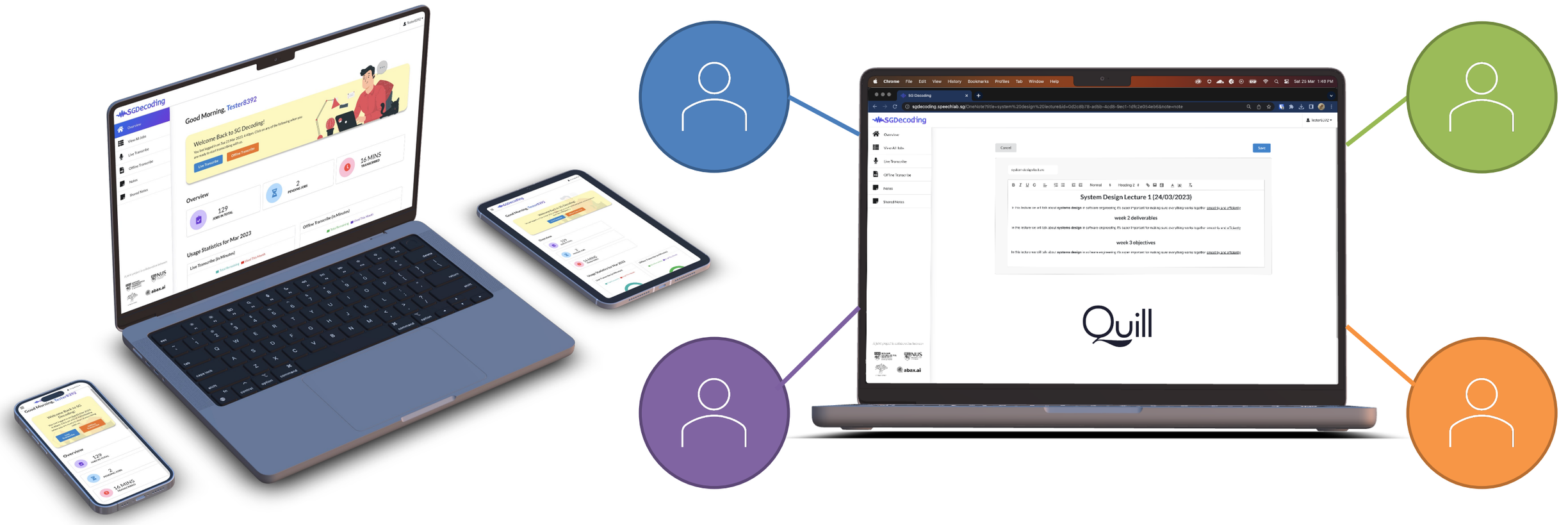
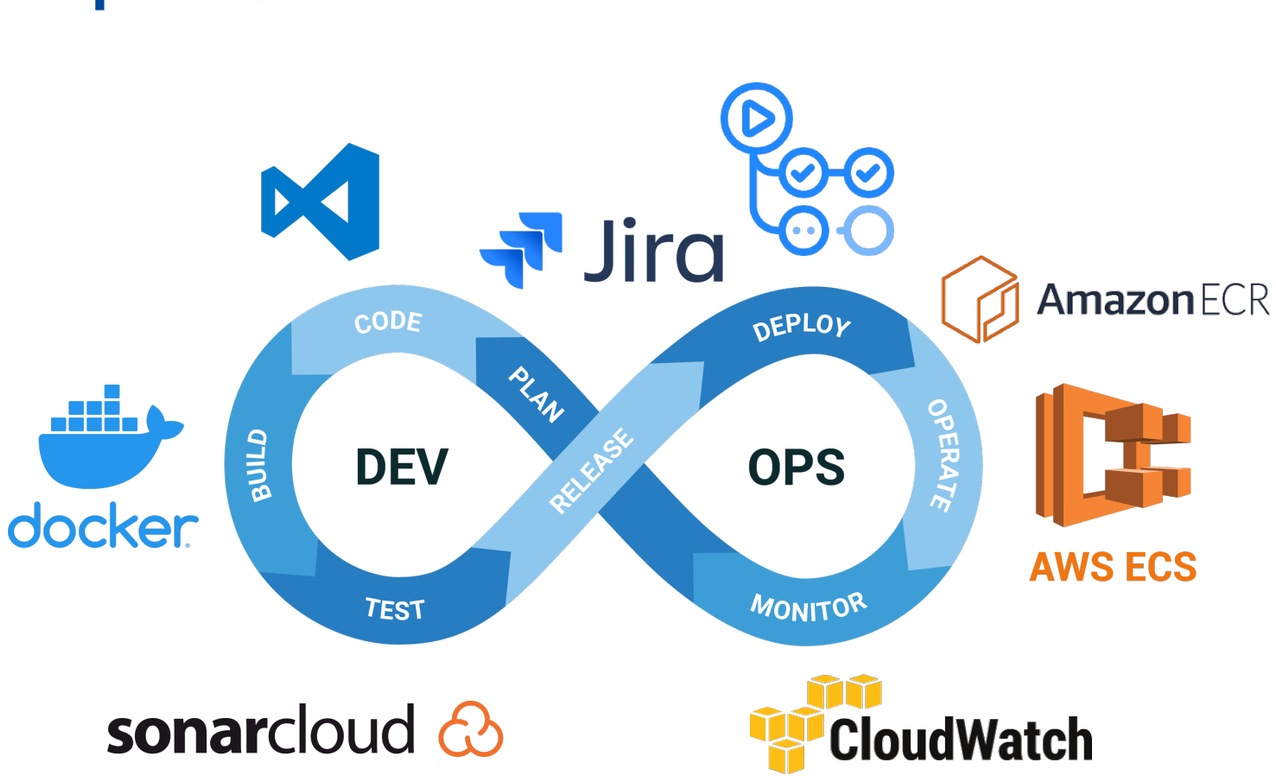


Project Objectives:

This project aims to improve a speech-to-text web application that enables users to transcribe audio both offline and in real-time using their microphone. It introduces new features, such as live transcription and collaborative editing, to enable users to create notes from the live audio transcription and collaboratively edit the notes in real-time. The project also uses modern cloud technologies to enhance the web application's reliability, security, and scalability and to speed up time to market.

Implementation



Core Features

- A WYSIWYG Text Editor Quill JS
- Operation Transformation algorithm for concurrency control in collaborative editing systems
- Containerized application with Docker
- Automated provisioning of cloud resources with Docker compose and AWS CloudFormation
- GitHub Action to automate deployment workflow
- AWS CloudWatch for monitoring and logging