SYSTEM DESIGN DOCUMENT

Team Agile Avengers – Group 1

Table of Contents

Dependencies

Front End
- Chakra UI
- Clerk
- Next
- React

Back End
- Mongoose
- Express
- Node
- Cors

Database
- MongoDB Atlas

CI/CD
- GitHub Actions
- DockerHub
- Google Cloud
- Newmann

The assumption is that the user will be on a web browser across any device.

Activity Diagram and Exception Handling

```
                    ●
                    │
                    ▼
         ┌──────────────────────┐
         │ The developer pushes │
         │   code to GitHub     │
         └──────────────────────┘
                    │
                    ▼
         ┌──────────────────────┐
         │ Build Client and Server │
         │   Image using GHA    │
         └──────────────────────┘
                    │
                    ▼
              ◇ Builds are ◇ ─────────────No──────────────┐
              ◇ succesful? ◇                               │
                    │                                       │
                   Yes                                      │
                    ▼                                       │
         ┌──────────────────────┐                          │
         │ Run Automated API Testing │                     │
         │     using Newman     │                          │
         └──────────────────────┘                          │
                    │                                       │
                    ▼                                       │
              ◇ Tests Pass? ◇ ──────────────No─────────────┤
                    │                                       │
                   Yes                                      │
                    ▼                                       │
         ┌──────────────────────┐                          │
         │ Deploy the images using │                        │
         │     Google Cloud     │                          │
         └──────────────────────┘                          │
                    │                                       │
                    ▼                                       │
              ◇ Deployment ◇ ───────────────No─────────────┤
              ◇ Successful? ◇                               │
                    │                                       ▼
                    ▼                               ┌──────────────┐
         ┌──────────────────────┐                  │ GHA Run Fails │
         │  GHA Run Successful  │                  └──────────────┘
         └──────────────────────┘                          │
                    │                                       │
                    ▼                                       │
                   ◉ ◄─────────────────────────────────────┘
```