**Individual Weekly Report – Week 6**

**Project: E-commerce Web Application TechPlaza**

**Role: DevOps Engineer**

**Completed Tasks:**

1. **Dev Environment Configuration:** Further enhanced our Docker Compose-based development environment. We ensured efficient container configuration through proper port mapping, environment variables, and working directory setup.
2. **Testing and Production Environment Optimization**: Streamlined the Dockerfile for both testing and production environments. By separating the client and server builds in our Dockerfile, we ensured the final Docker image for deployment is as light and efficient as possible.
3. **Optimization Techniques**: Leveraged Docker volumes for hot-reloading and efficient build times. We’ve made changes to our local application files immediately propagate to the Docker container and optimized React components' rebuild time.
4. **Environment Configuration and Azure App Service Implementation**: Designed and set up a multi-environment (dev, testing, and production) infrastructure. We used Azure App Services for deploying our application in the test and production environments, ensuring easy deployment, scalability, integrated DevOps capabilities, and managed service advantages.

**Ongoing/In-Progress Tasks:**

1. **Azure Services Optimization**: Ongoing refinement of Azure Services to ensure optimized performance, cost-effectiveness, and scalability.

**Issues/Challenges:**

1. **Issue 1:** Some team members are still grappling with Docker concepts and usage. We're mitigating this by providing additional Docker training and resources.
2. **Issue 2:** Seamlessly integrating Docker, Express.js, React, and Azure Services in our development and production process is challenging. We're managing this through rigorous testing and iterating on our configuration.
3. **Issue 3**: Ensuring fast build times and hot-reloading efficiency with Docker volumes requires careful configuration and management. We are continuing to optimize our Docker Compose setup to address this.