COMP9900 Assignment 2 - Advanced Web Development & Security

Due Date: 2025-12-15

Duration: 3 weeks

Estimated Hours: 15 hours

Description:

This assignment focuses on advanced web development concepts including security implementation, performance optimization, and deployment strategies using React, Django, and cloud services.

Tasks include:

1. Implement advanced authentication (OAuth, JWT)

2. Add real-time features using WebSockets

3. Implement comprehensive security measures

4. Optimize application performance

5. Deploy to cloud platform (AWS/Azure)

6. Implement monitoring and logging

7. Write security test cases

Technical Requirements:

- Use Redis for caching

- Implement rate limiting

- Add HTTPS/SSL configuration

- Database optimization

- API documentation with Swagger

- Container deployment with Docker

Deliverables:

- Enhanced source code repository

- Security audit report

- Performance benchmarking report
- Deployment documentation
- Live production demo

Grading Criteria:

- Security implementation (35%)
- Performance optimization (25%)
- Code quality & architecture (25%)
- Documentation & deployment (15%)