**Capstone Assignment Assessing Software and Systems by Masyn Grisel**

**1. What Do I Know? (Competencies, Skills, and Knowledge)**

* Familiarity with database management systems (DBMS) (e.g., MySQL, PostgreSQL)
* Knowledge of API development and integration
* Foundations of HTML/CSS
* Foundations of SQL
* Basics of software testing (unit testing, integration testing)
* Awareness of version control systems (Git, GitHub)

**2. Where Am I Weak? (Least Confident and Proficient)**

* Understanding of software development methodologies (e.g., Agile, Waterfall)
* Advanced cloud computing and DevOps practices
* Deep knowledge of system security and encryption
* Scalability and performance optimization of large software systems

**3. What Do I Wish I Knew or Might Be Missing?**

* How to effectively secure a software system against cyber threats
* Full Java/Python/HTML/CSS libraries
* Best practices for optimizing database performance
* More experience with full-stack development
* Practical application of software testing strategies in large-scale systems

**4. Examples of My Work & Knowledge Sources**

* Examples of Work:
  + Built a Django-based web application with authentication and API endpoints
  + Integrated Google authentication for user login (OAuth)
  + Designed a database schema for a recipe-sharing application
  + Worked with SQL queries and joins for data retrieval
  + Deployed a simple web app on a cloud platform
* Sources of Knowledge:
  + Course materials
  + Hands-on practice with Django, Python, and SQL
  + Tutorials from YouTube
  + Online courses on Python and Web Development
  + Django 5 by Example by Antonio Mele

**5. Summary of Capabilities and Preparedness**

Through my coursework and hands-on projects, I have built a solid foundation in database management, API development, software testing, and web application development. I have experience working with Django, SQL, and cloud deployment, and I have applied authentication techniques such as OAuth integration with Google. Additionally, I have worked with version control systems like Git/GitHub, which has helped me manage and track project changes effectively.

However, I recognize areas where I need further development, particularly in software development methodologies (Agile, Waterfall), cloud computing and DevOps, system security, and performance optimization for large-scale systems. I also seek to strengthen my knowledge of full-stack development, advanced database optimization techniques, and software testing strategies to improve system efficiency and security.

For my Capstone portfolio and prototype project, I aim to leverage my knowledge in database design, API development, and web applications while improving my proficiency in security best practices, full-stack development, and large-scale system optimization. This will ensure my final project demonstrates a well-rounded understanding of software and system development, practical problem-solving skills, and the ability to integrate various technologies effectively**.**