**Day 2 Assignment 2: Software Development Life Cycle (SDLC) phases within the context of a real-world engineering project. Here’s how you can approach it:**

**1. Project Overview:**

o Choose an engineering project (real or hypothetical) that interests you. It could be related to software development, hardware design, or any other engineering domain.

o Briefly describe the project, its purpose, and the problem it aims to solve.

**2. SDLC Phases:**

o Discuss each SDLC phase in detail:

 Planning: Define project goals, scope, and requirements. Identify stakeholders and create a project plan.

 Analysis: Gather detailed requirements, perform feasibility studies, and analyse existing systems.

 Design: Create system architecture, high-level design, and detailed design specifications.

 Development: Implement the system based on the design. Write code, create databases, and build components.

 Testing: Verify system functionality, perform unit testing, integration testing, and system testing.

 Deployment: Roll out the system to production. Ensure scalability, security, and reliability.

 Maintenance: Monitor the system, fix bugs, and make updates as needed.

**3. Real-World Application:**

o Apply these phases to your chosen project. Describe how each phase contributes to the project’s success.

o Highlight any challenges faced during implementation and how they were addressed.

**4. Examples:**

o Data Science: Imagine developing a machine learning model to predict customer churn for a telecommunications company. Apply SDLC phases to this scenario1.

o Big Tech Companies: Consider Amazon’s recommendation engine. How does SDLC play a crucial role in its development and deployment?1

o Healthcare Sector: Explore how SDLC is essential for developing and implementing electronic health record (EHR) systems1.

Remember, SDLC isn’t a linear process; it’s iterative and adaptive.