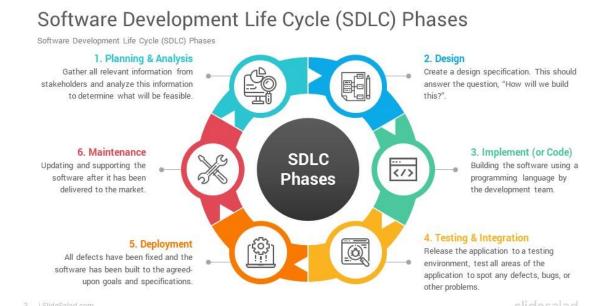
Assignment 1: SDLC Overview - Create a one-page infographic that outlines the SDLC phases (Requirements, Design, Implementation, Testing, Deployment), highlighting the importance of each phase and how they interconnect.

### **Solution:**

# **Software Development Life Cycle (SDLC):**



# 1. Planning & Requirements Gathering

- **Purpose:** Define the scope, objectives, and feasibility of the project.
- **Importance:** Ensures that all stakeholders have a shared understanding of the project's goals and constraints.
- Output: Project plan, requirements specification.

#### 2. Design

- Purpose: Create a blueprint for the software's architecture and detailed design.
- **Importance:** Provides a clear structure for developers to follow, reducing ambiguities and enhancing quality.
- Output: High-Level Design (HLD), Low-Level Design (LLD) documents.

# 3. Implementation (Coding)

- **Purpose:** Transform design specifications into functional software.
- Importance: Actual development of the software product.

• Output: Source code, executable programs.

## 4. Testing

- **Purpose:** Identify and fix defects to ensure the software meets requirements.
- Importance: Ensures software reliability, performance, and security.
- Output: Test plans, test cases, bug reports, tested software.

# 5. Deployment

- Purpose: Release the software to users for production use.
- **Importance:** Making the software available to end-users and ensuring it operates as intended in the production environment.
- Output: Deployed software, deployment documentation, user manuals.

#### Interconnections and Flow

#### Flow arrows connecting each phase in sequence:

- Planning & Requirements → Design
  - Arrow Label: Detailed requirements guide the design process.
- Design → Implementation
  - Arrow Label: Design documents are used to develop the actual code.
- Implementation → Testing
  - Arrow Label: Developed code is rigorously tested to find and fix issues.
- Testing → Deployment
  - Arrow Label: Once tested and verified, software is deployed to users.
- Feedback Loop:
  - Deployment → Planning & Requirements
    - Arrow Label: User feedback from deployment informs future planning and enhancements.