

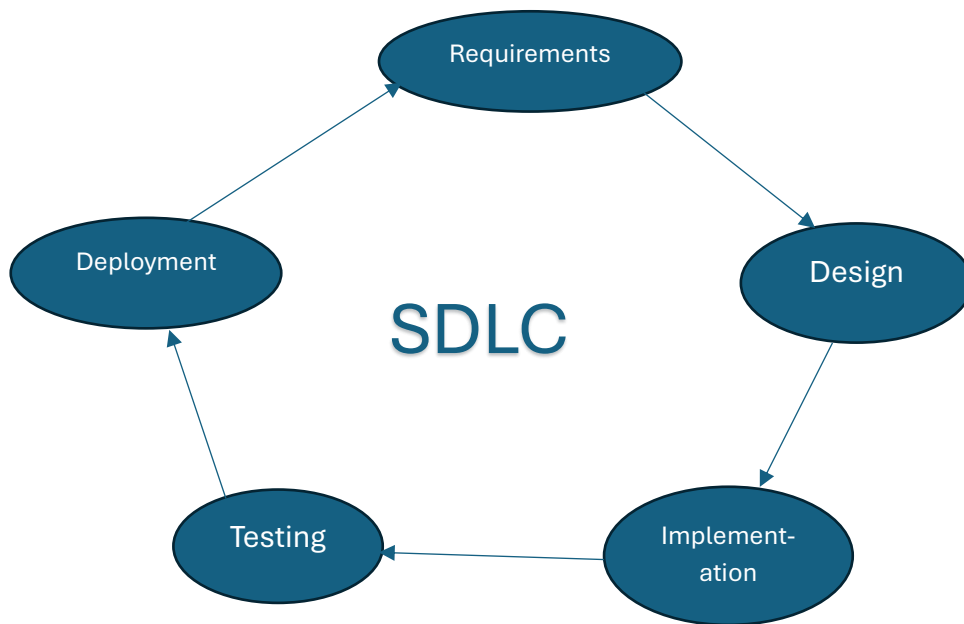
## **Assignment-1**

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**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.

SDLC Life Cycle:



### **1.Requirements Gathering:**

- This phase focuses on understanding the project's goals, what the end-user needs, and documenting them.
- Key Points:
  - Stakeholder discussions to gather inputs.
  - Identify functional (features) and non-functional (performance, security) requirements.
  - Output: A comprehensive Requirements Specification Document ensures clarity for all stakeholders.
- Prevents misunderstandings, reduces rework, and sets a clear scope for the project.

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## 2.Design

- This phase involves planning the structure and flow of the software.
- **Key Points:**
  - Creation of **wireframes** (visual layouts) and **mockups** (detailed design previews).
  - Define how different components will interact (system architecture).
  - Choose the **technology stack** (e.g., programming languages, frameworks, tools).
- Provides a blueprint for developers, ensuring the system is efficient, scalable, and aligns with requirements.

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## 3. Implementation

- Actual development and coding of the software based on the design.
- **Key Points:**
  - Divide work into manageable modules or tasks.
  - Use **version control systems** (e.g., Git) to track changes.
  - Follow coding standards to ensure consistency.
- Translates design into a functional product. Proper implementation minimizes bugs and development time.

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## 4. Testing

- Validate that the software works as expected and meets user needs.
- **Key Points:**
  - **Unit Testing:** Test individual components.
  - **Integration Testing:** Verify that different modules work together.
  - **System Testing:** Ensure the software works in its intended environment.
  - **User Acceptance Testing (UAT):** Verify that the software meets business needs.
- Ensures quality and reliability, identifies issues early, and builds user trust.

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## 5. Deployment

- Release the software to users and make it operational.
- **Key Points:**
  - Deploy in production environments.
  - Provide user training and support documentation.
  - Perform **post-deployment monitoring** to address any issues.
- Delivers the product to users, ensuring a smooth launch and adoption.