## Assignment 1:

SDLC Overview - Create a one-page infografic that outlines the SDLC phases(Requirements,

Design, Implementation, Testing, Deployment), highlighting the importance of

each phase and how they interconnect

**SDLC :**

The Software Development Life Cycle (SDLC) is a structured process used to develop high-quality software. It ensures a systematic approach to software creation, focusing on delivering robust, efficient, and reliable systems.

**Phases of SDLC :**

There are following phases in SDLC Life cycle :-

1. Requirement Gathering

2. Design

3. Coding

4. Testing

5. Deployment

6. Maintenance

**Planning**

**Software**

**Development**

**Requirement**

**Analysis**

**Software**

**Design**

**Software**

**Testing**

**Software**

**Deployment**

**SDLC Phases Overview :**

1. **Requirements**
   * **Importance**: Gathering detailed and precise requirements is crucial to ensure the project's success. It involves understanding what the users need and expect from the software.
   * **Key Activities**: Stakeholder meetings, requirement analysis, documentation.
   * **Output**: Requirement Specification Document.
2. **Design**
   * **Importance**: This phase transforms requirements into a blueprint for constructing the software. It ensures that the system’s architecture is well thought out.
   * **Key Activities**: System design, architecture design, creating design documents.
   * **Output**: Design Specification Document.
3. **Implementation**
   * **Importance**: Actual coding and development happen in this phase. It’s where the software is built according to the design specifications.
   * **Key Activities**: Writing code, integrating systems, developing databases.
   * **Output**: Source Code, Executables.
4. **Testing**
   * **Importance**: Ensuring that the software is free from defects and meets the requirements. This phase helps in identifying and fixing bugs.
   * **Key Activities**: Unit testing, integration testing, system testing, acceptance testing.
   * **Output**: Test Plans, Test Cases, Test Reports.
5. **Deployment**
   * **Importance**: Deploying the software to a production environment where users can start using it. It also includes post-deployment support and maintenance.
   * **Key Activities**: Deployment planning, release management, monitoring.
   * **Output**: Deployed Software, Deployment Reports.

#### Interconnection of Phases

* **Requirements ↔ Design**: The design phase depends on the requirements phase to understand what needs to be built.
* **Design ↔ Implementation**: The implementation phase uses the design specifications to build the software.
* **Implementation ↔ Testing**: Testing checks the implemented code to ensure it meets the design and requirements.
* **Testing ↔ Deployment**: Once testing is complete and the software is deemed ready, it moves to deployment.