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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.

Solution :

- Software development life cycle (SDLC) is a structured process that is used to design, develop, and test good-quality software. SDLC, or software development life cycle, is a methodology that defines the entire procedure of software development step-by-step.
- The goal of the SDLC life cycle model is to deliver high-quality, maintainable software that meets the user's requirements. SDLC in software engineering models outlines the plan for each stage so that each stage of the software development model can perform its task efficiently to deliver the software at a low cost within a given time frame that meets users' requirements.

→ The SDLC model involves six phases or stages while developing any software. SDLC is a collection of these six stages, and the stages of SDLC are as follows:

(i). Requirements :

- **Importance:** Understanding client needs, business objectives, and user expectations.
- **Activities:** Gather, analyze, and document requirements.
- **Interconnect:** Foundation for subsequent phases, ensuring alignment with client goals.

(ii). Design :

- **Importance:** Translating requirements into a detailed blueprint for development.
- **Activities:** Architectural design, database design, UI/UX design.
- **Interconnect:** Guides development and ensures alignment with project goals and user needs.

(iii). Implementation :

- **Importance:** Transforming design specifications into working software.
- **Activities:** Writing code, building databases, creating user interfaces.
- **Interconnect:** Execution of design plans, turning concepts into functional software components.

(iv). Testing :

- **Importance:** Ensuring software quality, reliability, and compliance with requirements.
- **Activities:** Unit testing, integration testing, system testing, user acceptance testing.
- **Interconnect:** Validates functionality, identifies defects, and ensures alignment with client expectations.

(v). Deployment :

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- Importance: Releasing the software into production for end-user access.
- Activities: Installation, configuration, rollout, user training, support setup.
- Interconnect: Transition from development to operational phase, delivering value to end-users.

Overview of SDLC phases :



Reference : GeeksForGeeks

Note :

- Each SDLC phase is interconnected, building upon the outputs of the previous phase.
- Effective collaboration and communication are essential for successful SDLC execution.
- Iterative approaches like Agile or DevOps may incorporate feedback loops, enabling continuous improvement throughout the SDLC.

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