Software Development Lifecycle

Software development lifecycle consists of 6 different stages.

1. Planning
2. Analysis
3. Design
4. Implementation
5. Testing & Integration
6. Maintenance

**Planning** : - This is the first phase in the systems development process. It identifies whether or not there is the need for a new system to achieve business’s strategic objectives. This is a preliminary plan for a company’s business initiative to acquire the resources to build on an infrastructure to modify or improve service. The purpose of this step is to find out the scope of the problem and determine solutions. Resources , costs, time , benefits and other items should be considered at this stage.

**Analysis** : - This is the phase where businesses will work on the source their problem or the need for change. In the event of a problem, possible solutions are submitted and analyzed to identify the best fit for the ultimate goal of the project. This is where teams consider the functional requirements of the project. It is also where system analysis takes place. System analysis is vital in determining what a business ‘s needs are , as well as how they can be met.

**Design** :- The third phase describes , in detail , the necessary specifications, features and operations that will satisfy the functional requirements of the proposed system which will be in place. This is the step for end users to discuss and determine their specific business information needs for the proposed system. It is the phase where essential components will be considered.

**Development :-** The fourth phase is when the real work begins-in particular, when a programmer , network engineer and brought on to do the major on the project. This work includes using flowchart to ensure that the process of the system is properly organized. The development stage also signifies the start of the production. It also characterized by installation and change.

**Testing :-** This involves system integration and system testing normally carried out by Quality assurance professional – to determine if the proposed design meets the initial set of business goals. Testing may be repeated , specifically to check for errors, bugs and interoperability . This testing will be performed until the end user find it acceptable. Another part of this phase is verification and validation.

**Implementation :-** The sixth phase is when the majority of the code for the program is written. This phase involves the actual installation of the newly developed system. This phase puts the project into production by moving the data and components from the old system and placing them in the new system via a direct cutover. This can be risky and , the cutover typically happens during off peak hours, thus minimizing the risk.

**System Development Lifecycle**

The system development lifecycle enables users to transform a newly developed project into an operational one. It is a multistep iterative process , structured in a methodical way. This process is used to provide a framework for technical and not technical activities to deliver a quality system which meets or exceeds businesses expectation or manage decision making progression.

There are seven phases of System development lifecycle.

1. Planning – the purpose of this step is to find out the scope of the problem and determine solutions. Resources, costs , time and benefits.
2. System analysis and Requirements – The second phase is where team consider the functional requirements or solution. It’s also where system analysis takes place or analyzing the needs of the end users to ensure the new system can meet their expectations.
3. System Design – The third phase describes the necessary specifications, features and operations that will satisfy the functional requirements of the proposed system which will be in place.
4. Development – The development phase marks the end of the initial section of the process. Additionally , this phase signifies the start of production . The development stage is also characterized by instillation and change.
5. Integration and testing - This involves systems integration and system testing normally carried out by QA professionals to determine if the proposed design meets the initial set of business goals.
6. Implementation – The sixth phase is when the majority of the code for the program is written and when the project is put into production by moving the data components from the old system and placing them in the new system via a direct cutover.
7. Operations and Maintenance - This phase is when end users can fine-tune the system , if they wish to boost performance , add new capabilities or meet additional user requirements.