SUMMARY

**SEVEN PHASE SDLC PROCESS**

1. Requirement collection and analysis
2. Feasibility study
3. Design
4. Implementation/ Coding
5. Testing
6. Installation/Display
7. Maintenance

**PHASE 2 FEASIBILITIES STUDY** there are five types of feasibilities check

* Economic
* Legal
* Operation feasibilities
* Technical
* Schedule

**Phase 3 DESIGN**

Main components identified in these phase are

* Input : SRS
* Overall system Architecture
* Technology to be implement
* Database Design
* Functionality Design
* Output: system design

There are two kinds of documents developed in this phase,

1. LOW-LEVEL DESIGN(LLD)- design of individuals components

* Functions logic of the models
* Database table, which include type and size
* Complete details of the interface
* Addresses all types of dependency issues
* Listing of error message
* Complete input and output for every module

1. HIGH-LEVEL DESIGN(HLD)- It defines the functionality of two modules,

* Brief description and name of each module
* An outline of functionality of every module
* Interface relationship and dependency between two module
* Complete architecture diagram alone with technology details

**PHASE 4 IMPLEMENTATION / CODING**

The developers start build the entire system by writing code by using the chosen programing language.

**PHASE 5 TESTING**

There are four different types of testing

1. UNIT TESTING- is performed using the unit test case that are designed and that is done in the low-level design phase. Is done by the developer itself.
2. INTEGRATION TESTING-it performed using integration test case in high- level design phase. It’s used by the testers
3. SYSTEM TESTING -is performed in the system design phase.
4. ACCEPTANCE TESTING-is associated with the requirement analysis phase and is done in the customers’ environment.

**PHASE 6 INSTALLATION/ DEPLOYMENT**

**PHASE 7 MAINTENANCE**

* BUG FIXING - bugs are reported because of some scenarios which are not tested at all.
* UPGRADE – upgrading the application to the newer vision of the software.
* ENHANCEMENT – adding some new features into the existing software

**SOFTWARE DEVELOPMENT LIFE CYCLE MODULE**

* WATERFALL MODULE
* INCREMENTAL APPROACH
* AGILE MODULE
* BIG BANG MODULE

A descriptive representative of the software development cycle.  
***SDLC MODULE***

1. WATERFALL MODULES

Is the very first module used in the SDLC. It is also known as the linear sequential module.

* Linear sequential module
* Outcome of one phase acts as the input of the next phase.
* Documentation – intensive, with earlier phase documenting what need to be performed in the subsequent phase

**PHASE IN THE WATERFALL MODULES**  
REQUIREMENT ANALYSIS 🡺 SYSTEM DESIGN 🡺 IMPLEMENTATION🡺 TESTING🡺 DEPLOYMENT 🡺 MAINTENANCE

ADVANTAGES OF THE WATERFALL MODULES

* Waterfall modules is the simple model which could be easily understood and is the one in which all the phase are done step by step.

DISADVENTAGES OF THE WATERFALL MODEL

* Waterfall model is time consuming and cannot be used in the short duration project.
* Waterfall model cannot be used for the project which have uncertain requirement
* Any changes in the later stages would lead to cost higher as the changes would be required in the all phase

1. INCREMENTAL MODELS

* It is essentially a series of waterfall cycle
* The requirements are divided into groups at the start of the project
* For each group , SDLC is followed to developed software
* The SDLC process is repeated ,with each release adding more functionality until all requirement is met

1. BIG BANG MODEL

* Forcing all types of resources into software development
* No or very little planning
* Useful for academic software development project

DISADVENTAGES OF BIG BANG MODELS

* Big bang models cannot be used for large, ongoing and complex projects
* High risks and uncertainty
* No formal testing is done

ADVENTAGES OF BIG BANG MODEL

* It’s very simple models
* Less planning and schedule is required

1. PROROTYPE MODEL

The prototype model is model in which the prototype is developed prior to the actual software.

GATHERING🡺DESIGN🡺PROTOTYPE🡺CUSTOMER EVALUATIONS🡺REFINED PROTOTYPE🡺FINAL PRODUCT

1. SPIRAL NUMBER- Is a system development life cycle method used for risk management that combines the iterative development process model with elements of the waterfall models.

Spiral model has for phases

* Planning(Requirement gathering )
* Risk analysis
* Engineering ( Coding and testing)
* Evaluation

1. ITERATIVE INCREMEMTAL MODEL- method is to develop a system through repeated cycles (iterative) and in a smaller portions at a time (incremental).

Phase of iterative and incremental development model;

* Inception phase( Requirement and scope of the project)
* Elaboration phase (
* Construction phase
* Transition phase