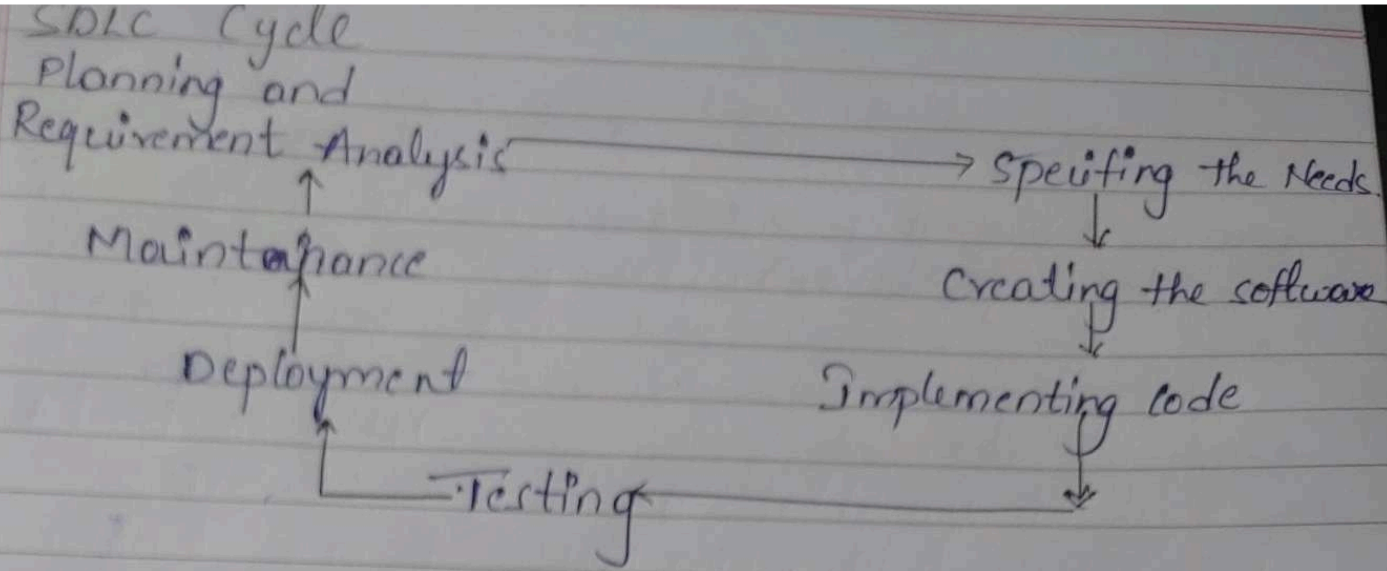
SDLC Cycle



Stage 1:- Planning and Requirement Analysis

This Level is most crucial and essential. With input from all the stakeholders, domain experts, and the senior team members carry it out. Planning is done for requirements for quality accurance and for the identification of project related risks

* Software requirement specification document is prepared once the requirement has been comprehended
* This document should be carefully followed by developers and client for future refrence.

Input from experts etc.. → planning and analysis → R.SD

Stoge 2 : Specifying the Needs

* The process of repsenting , documenting and getting the project stakeholders to approve the software requirements follows the complition of requirement Analysis.

* This is done by using the SRS document

Stage 3 :- Creating / Designing the Software

* The Knowledge of software projects needs, analysis and design will all be revealed in the upcoming phase

* This phase is result of the previous two

Stage 4 :- Project Development

* The actual development phase of SDLC starts here , and programming is created.

* Programming is created

* Programming tools including compilers interpreters, debuggers and similar tools are used.

Stage 5 :- Testing

The code is compared to the requirements to ensure that the solutions are satisfying the demands.

* Unit Testing , Integration testing , System Testing and acceptability testing are carried out at this level.

Stage 6:- Deployment

When the software has been certified and no defects (or) mistakes have been reported, it is put into use

Maintaince of software starts once it has Been deployed

Stage 7 :- Maintenance

When the customer begins utilising the technologies that have been designed, the true problems and ongoing needs become apparent.

Maintanance is process when the developed product is given attention.

SDLC Modules

Namely They are seven

1. Waterfall Model
2. V-shaped Model
3. Prototype Model
4. Spiral Model
5. Iterative Incremental Model
6. Bing Bang Model
7. Agile Model

Lets have a brief discussion about this modules.

1. Waterfall Model : It is a linear sequential model.

* The results of one phase in this module serve as input for the following phase only afty the preceding phase is finished.

Makes project simple to manage, prevents complexity

disadvantages

* Requries ld time
* cannot utilized for projects with a short life span

2. V-shaped Model - Verification and validation model

* development and testing go cocurrently.
* Verfication and validation go hand in hand.
* Disciplined approach that yeilds a high quality end product.

disad :-

for on-going projects are not recomended

3. Prototype Model

Prototypes are build with dummy functionalities this is useful tool for figuring out what the customer actully wants

* Development costs and time are reduced.
* clearsup any misunderstanding of customer's.

Disadvantages

* Extend time it takes to deliver the product due to alternations of Customer.

4. Spiral Model

Iterative and prototype approaches are part of spiral model. Loops in model represents phases of sdlc process

four phases → Planning
risk analysis
Engineering
Evalution

disaduantages:

* only huge projects are candidates
* Require numerous iterations
* Takes long time to produce desired result

5. Iterative incremental Model

The product is divided into manageble pieces

Phases :- Requirment analysis
design coding
testing are complited throughout each iteration.

* Risk is analyzed and identified in iterations.

Disadvantages:-

* To break down and develop progressively, a complete grasp of a product is necessary.

6. Bing Bang Model

* Has no Established process.
* Input and output consists of money and labour.
* Only applied to modest projects

disadvantages:-

- can't handle large ongoing and sophisticated projects
- Highly danger

7. Agile Model

The incremental and iterative models are combined to create agile. The number of features increases with each build

Note:- Sprint are the terms used for iterations

* Because of considering every comment and recommendations of customer at every level, customer satisfactions are very high.

Disadvantages:-

* Inadequate documentation
* Project ~~fa~~ould fail if customer not sure.
* Requries highly quality and experienced ~~p~~developers

Conclusion:-

Each model of the software development lifecycle has pros and cons of its own. spiral and agile models are the best to utilize.