TECHPROED

PROFESSIONAL TECHNOLOGY EDUCATION

CONTENTS

- SDLC
- SDLC PROCESS
- MATCHING GAME
- GENERAL TEST

SOFTWARE DEVELOPMENT LIFE CYCLE

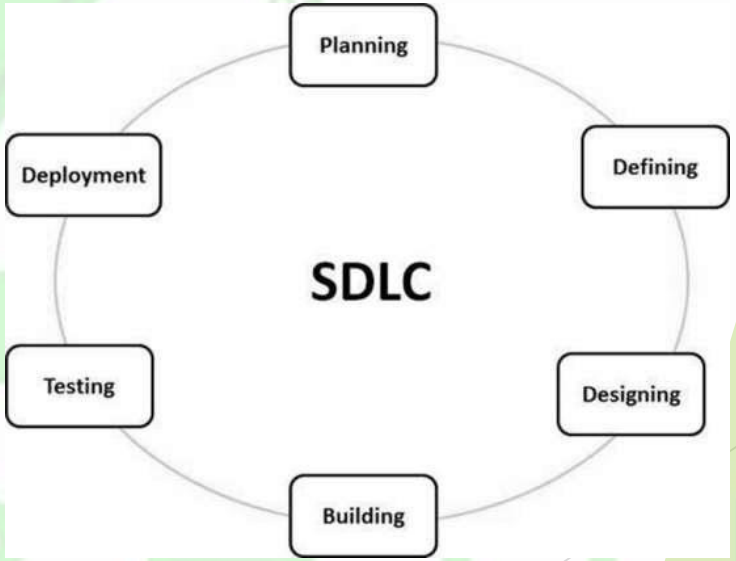
SDLC PROCESS

SDLC Overview:

- • SDLC, Software Development Life Cycle is a process used by software industry to design, develop and test high quality software. The SDLC aims to produce a high quality software that meets or exceeds customer expectations, reaches completion within times and cost estimates.

A typical Software Development life cycle consists of the following stages:

- Stage 1: Planning and Requirement Analysis
- Stage 2: Defining Requirements
- Stage 3: Designing the product architecture
- Stage 4: Building or Developing the Product
- Stage 5: Testing the Product
- Stage 6: Deployment in the Market and Maintenance



Plan: Create an application that serves millions of people for transportation (moving from a place to another place) like => Uber

Just write down 4 high level steps.

SDLC PROCESS

Stage 1: Planning and Requirement Analysis:

- Requirement analysis is the most important and fundamental stage in SDLC.
- It is performed by the senior members of the team with inputs from the customer.
- This information is then used to plan the basic project approach .
- Planning for the quality assurance requirements and identification of the risks associated with the project is also done in the planning stage.
- Plan technical approaches that can be followed to implement the project successfully with minimum risks.

Please use what you planned and give them some detailed steps as documents

SDLC PROCESS

Stage 2: Defining Requirements(feasibility study):

- Once the requirement analysis is done the next step is to clearly define and document the product requirements
- Get them approved from the customer /business.
- This is done through 'BRD' – Business Requirement Document which consists of all the product requirements to be designed and developed during the project life cycle.

SDLC PROCESS

Stage 3: Designing the product architecture:

- BRD is the reference for product architects to come out with the best architecture for the product to be developed.
- Based on the requirements specified in BRD usually more than one design approach for the product architecture is proposed and documented in a DDS - Design Document Specification.

SDLC PROCESS

Stage 4: Building or Developing the Product:

- In this stage of SDLC the actual development starts and the product is built.
- Developers have to follow the coding guidelines defined by their organization.
- Different high level programming languages such as C++,Java, dot Net etc. are used for coding.

```
public static void main(String[] args) {
    System.out.println("Hello world");
}
```

SDLC PROCESS

Stage 5: Testing the Product:

- This stage refers to the testing only stage of the product where product defects are reported, tracked, fixed and retested, until the product reaches the quality standards defined in the BRD.
- The product should meet the business expectations (requirement specifications)

SDLC PROCESS

Stage 6: Deployment in the Market and Maintenance:

- • Once the product is tested and ready to be deployed it is released formally in the appropriate market.
- • After the product is released in the market, its maintenance is done for the existing customer base.

There are 2 important methodologies that are used by companies;

Waterfall methodology
Agile methodology

SDLC METHODOLOGY

Waterfall Method

- Waterfall model is the earliest SDLC approach that was used for software development .
- Any phase in the development process begins only if the previous phase is complete.
- In waterfall model phases do not overlap.
- All these phases are cascaded to each other in which progress is seen as flowing steadily downwards (like a waterfall) through the phases

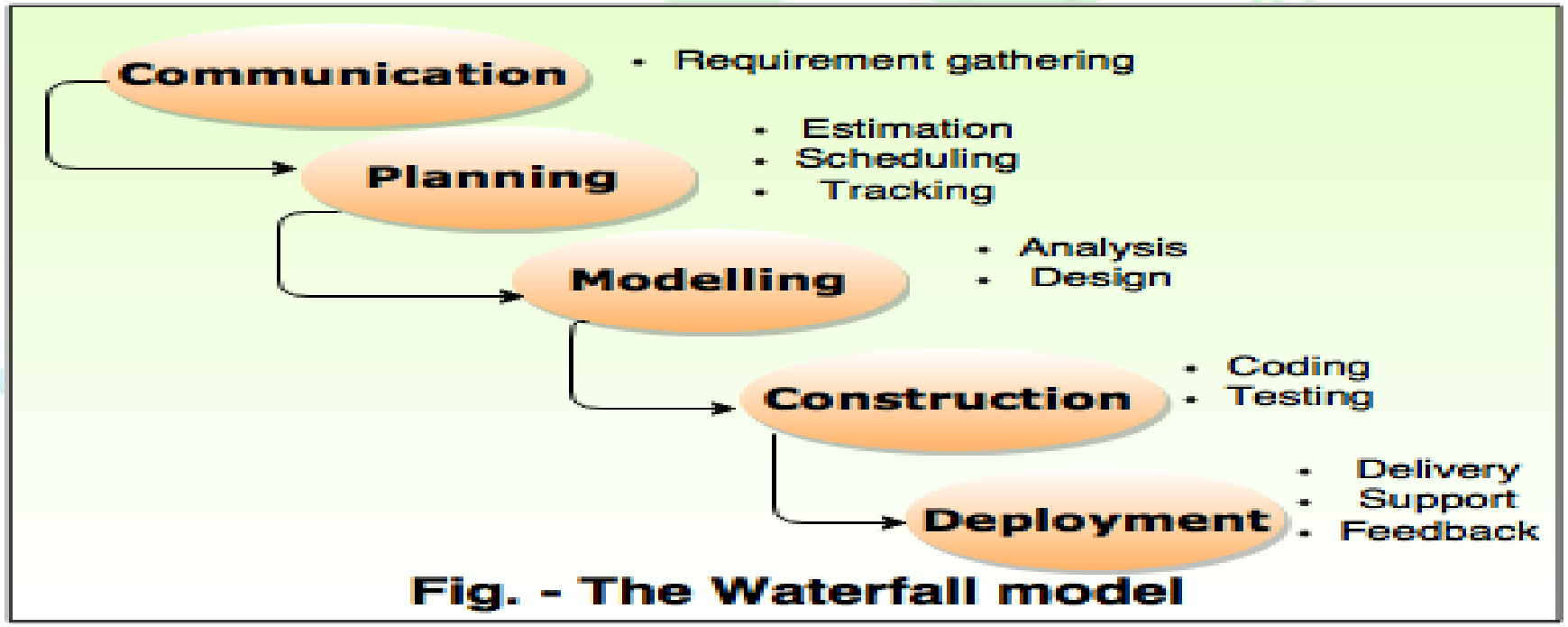


Fig. - The Waterfall model

PROS	CONS
Transferring project knowledge is easier	Difficult to make changes
Makes the project easy to manage	Ignores Mid-Process User/Client Feedback
Works well for smaller projects	Poor model for long and ongoing projects
The tasks remain as stable as possible	Delays testing until after completion

GLOSSARY

- SDLC => Software Development Life Cycle
- PM => Project Manager
- BA => Business Analyst
- Dev => Developer
- QA => Quality Analyst
- BRD => Business Requirement Document
- FRD => Functional Requirement Document
- DDS => Design Document Specification
- Requirement => task
- Waterfall method => a process of SDLC
- Agile process => a common process of SDLC
- Defect => bug
- Release => deployment