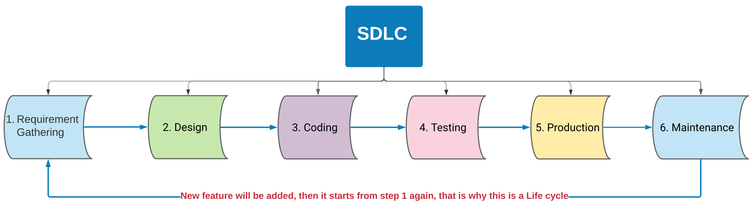
**What is SDLC?**

- SDLC stands for **Software Development Life Cycle**
- SDLC is a process for building software which includes 6 steps / phases
- SDLC offers steps to plan, design, develop and test high quality software

**Step 1:** Requirement Gathering & Analysis
**Step 2:** Design
**Step 3:** Coding / Development
**Step 4:** Testing
**Step 5:** Production / Deployment
**Step 6:** Maintenance




**Step 1: Requirement** Gathering & Analysis

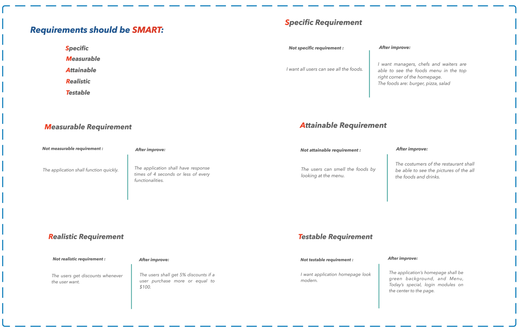
- Business team **collects** the detail **requirements**
- Requirements may from **different resources**
- The requirements are documented by the team
- Feasibility study:
  -The team analyze economic, law regulation, technology and schedule

**Requirement :** Description of features and functionalities of the target software. Expectation of the customer.

**Different sources of requirement:**
Customers / Stakeholders
Business partners
Domain experts
End-Users

**Business Team members** prepare many documents after analyzing all the necessary aspects to build a software. The documents are created by the business team with client/stakeholders input. Click here to see a sample SRS

- ***Business Requirements (BR)***
- ***System Requirement Specification (SRS)***
- ***Market Requirements (MR)***
- ***Functional Requirements (FR)***
- ***Non-Functional Requirements (NFR)***




**Step 2: Design**

- **Architectures** and **designers creates** Design Documents
- Click here for a sample software Design specification (SDS)

**Design documents may include:**

- Outline about the functionality of every module
- Relationship and dependencies between modules
- Database tables size and type
- Addresses all types of dependency issues
- Listing of error messages
- Complete input and outputs for every module

**NOTE:** There is zero interview question anything relates to design. Do not worry about this area at all.

**Step 3 : Coding / developing**

- **Developers** start **build the software** by writing code using the chosen programming language
- Tasks are divided into small units
- Various developers are involved to develop the software
- This is the longest phase of the SDLC process

**Step 4 : Testing**

- **Analyze** the requirement and **plan** how to test
- **Write** test case **documents** and prepare test data
- **Test** the software functionalities, security, performance and operations
- **Bugs** might be found
- Developers fix the bug and testers re-test
- **Test reports** are documented

**Step 5 : Deployment / Production / Release**

- Developers, testers, business team members are all together release the app
- Codes / new features are deployed to production
- The software will be practical used by end users


**Step 6 : Maintenance**

- **Bug fix** : There maybe some bugs occurs in production that missed in testing step
- **Project support** with the help of developers, Dev-ops engineers and business team
- **Update** and improve the software by **adding new features**

**Adding new features means:**
New Requirements gathered
Design
Code
Test
Deploy


## What is the role of QA in project development?

- QA team is responsible for **ensuring** the **quality** of the software product.
- QA **involved** in **planning**, **testing**, and **execution**.
- QA or QA team lead **prepares** an estimate and agrees on a **test plan** for the product.
- The test engineers ensure the traceability of **test cases** to requirements.