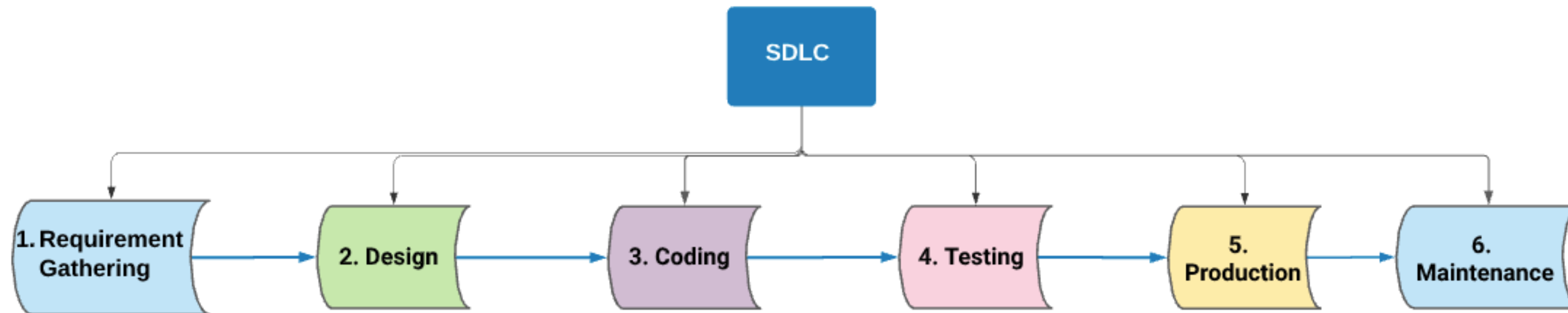


# Software Development Life Cycle (SDLC)

Interview Question:

**What is SDLC?**

- SDLC stands for **Software Development Life Cycle**
- SDLC refers global **standardized steps** to **develop/build** high-quality **softwares**
- SDLC **includes 6 steps** / phases
- SDLC offers steps to plan, design, develop and test high quality softwares



## Step 1: Requirement Gathering & Analysis

**Goal:** 1. Business team **collects** the detail **requirements**

- Requirements may from **different resources**

2. **Analyze** the requirements & **Plan** how to develop the app

- The team analyzes economic, law regulation, technology, and schedule; this is called a feasibility study.

3. **Document** all the **functional** and **non-functional** requirements

There are several types of documents are prepared :

- Software Requirement Specification (**SRS**)

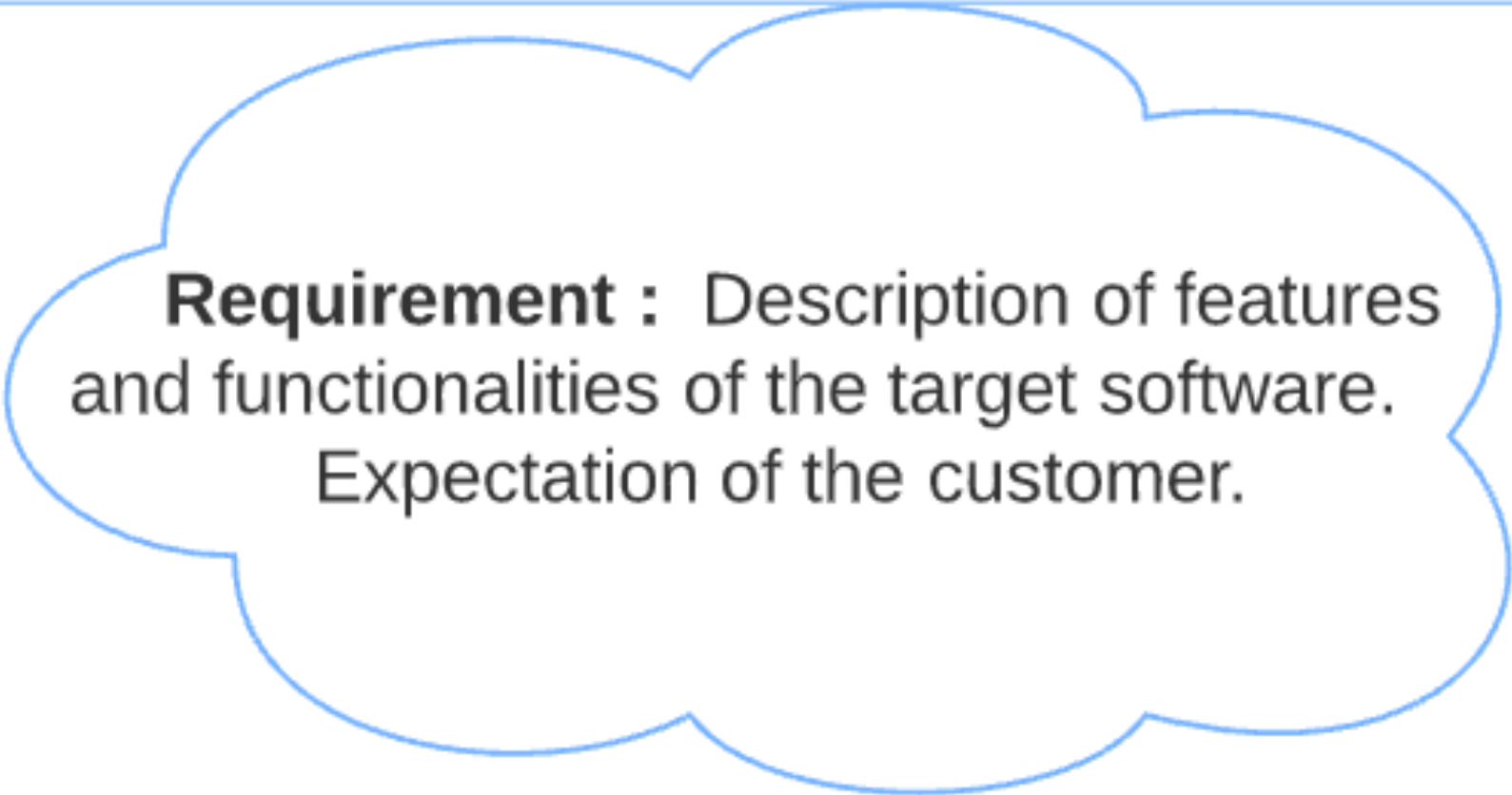
[Click here to view a sample SRS doc](#)

- Market requirement (MR), Functional requirement(FR), Non-functional requirements(NFR), etc

**Who:** Business team members - Project managers, Product Owner, Business Analyst  
the Client, stakeholders, End users, Domain experts, Subject Matter Expert (SME)

	<b>Different sources of requirement:</b>

	Customers / Stakeholders Business partners Domain experts End-Users SME
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**Requirement :** Description of features and functionalities of the target software.  
Expectation of the customer.

# *Requirements should be **SMART**:*

***S***pecific

***M***easurable

***A***ttainable

***R***ealistic

***T***estable

## **Specific Requirement**

### **Not specific requirement :**

*I want all users can see all the foods.*

### **After improve:**

*I want managers, chefs and waiters are able to see the foods menu in the top right corner of the homepage.*

*The foods are: burger, pizza, salad*



# **Measurable Requirement**

**Not measurable requirement :**

*The application shall function quickly.*

**After improve:**

*The application shall have response times of 4 seconds or less of every functionalities.*

# **Attainable Requirement**

## **Not attainable requirement :**

*The users can smell the foods by looking at the menu.*

## **After improve:**

*The costumers of the restaurant shall be able to see the pictures of the all the foods and drinks.*



# **Realistic Requirement**

## **Not realistic requirement :**

*The users get discounts whenever the user want.*

## **After improve:**

*The users shall get 5% discounts if a user purchase more or equal to \$100.*

# **Testable Requirement**

## **Not testable requirement :**

*I want application homepage look modern.*

## **After improve:**

*The application's homepage shall be green background, and Menu, Today's special, login modules on the center to the page.*

## Step 2: Designing

### **Goal:**

**Architectures and designers creates Design Documents**

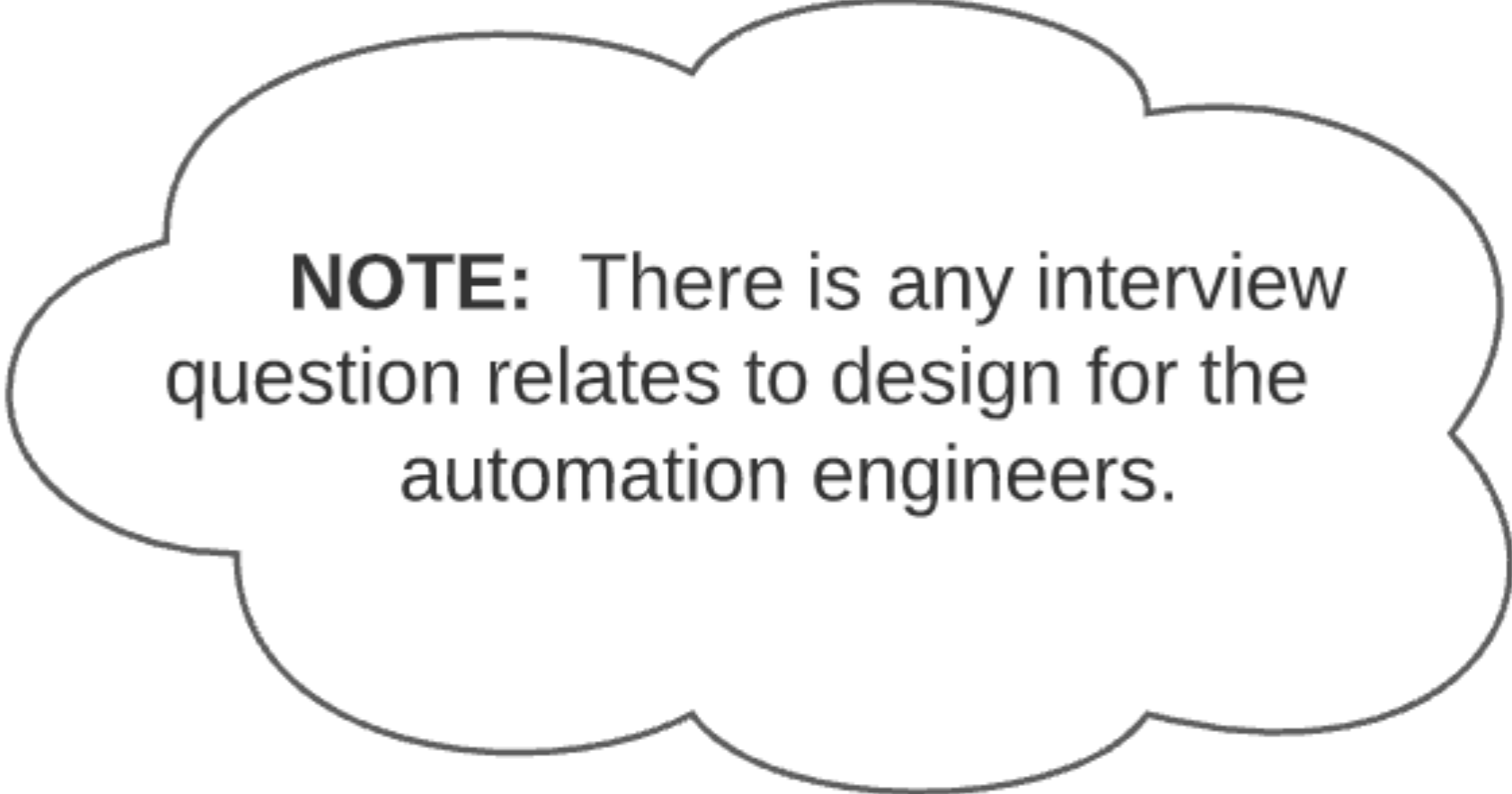
**Design the application' UI, Databse, API, etc.**

- [Click here for a sample software Design specification \(SDS\)](#)
- [SDS sample 2](#)

**Who:** *Business team (PM, PO, BA), The client/stakeholders, Architechtures/designers, develoeprs*

**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 any interview question relates to design for the automation engineers.

## Step 3 : Coding / developing / implementing

### *Goal:*

**Developers build the software** by writing code using the chosen programming language

- Codes are divided into small units

- Developers review each others' code

- Developer lead approves the codes

- This is the longest phase of the SDLC process

### *Who:*

Developers (FrontEnd dev, BackEnd Dev, Full-stack Dev)

## Step 4 : Testing

### Goal:

-> **Perform software testings** based on functional and non-functional requirements

**Analyze** the requirement and **plan** how to test

**Write** test case **documents** and prepare test data

**Identify bugs & write bug reprots**

**Test reports** are documented



### Who:

*QA engineers / SDET , performance testers, security engineers, the client, end-users*



## Step 5 : Deployment / Production / Release

### *Goal:*

**Moving** the developed **software to the production** environment so that the users can access to the software.

- 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



### *Who:*

Everyone who is involved to develop the app. Business team, Development team, DevOps team, The client sometimes.

## Step 6 : Maintenance

### *Goal:*

- **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

