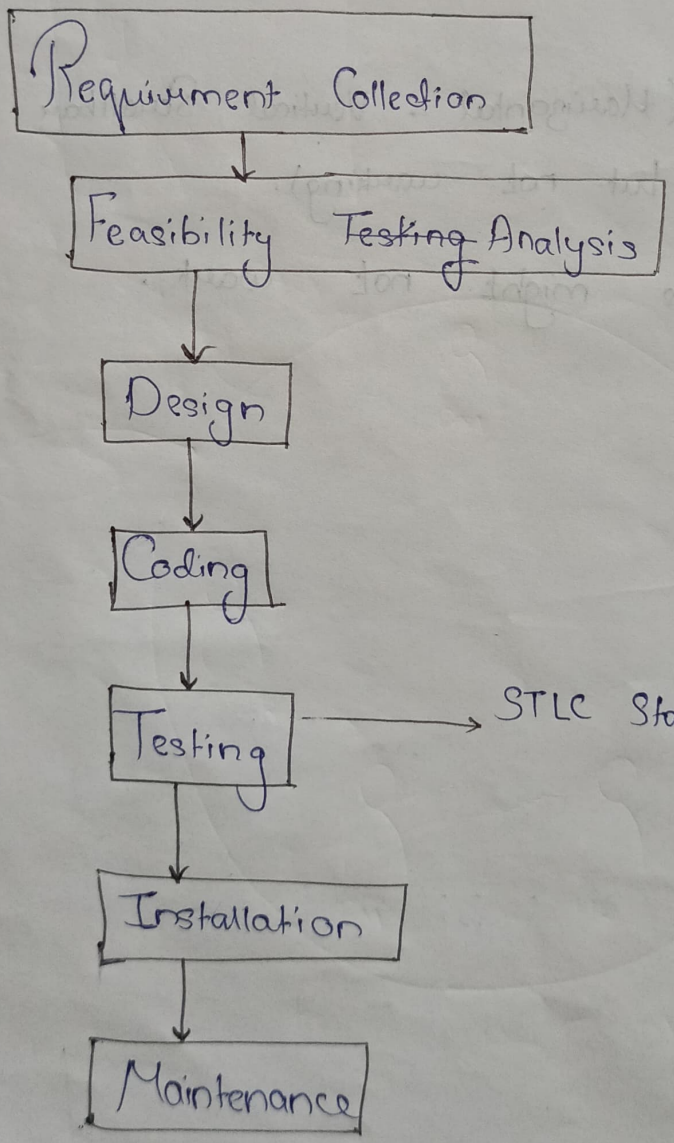
(23/02/2023)(Thursday)(01:30pm to 03:30pm).

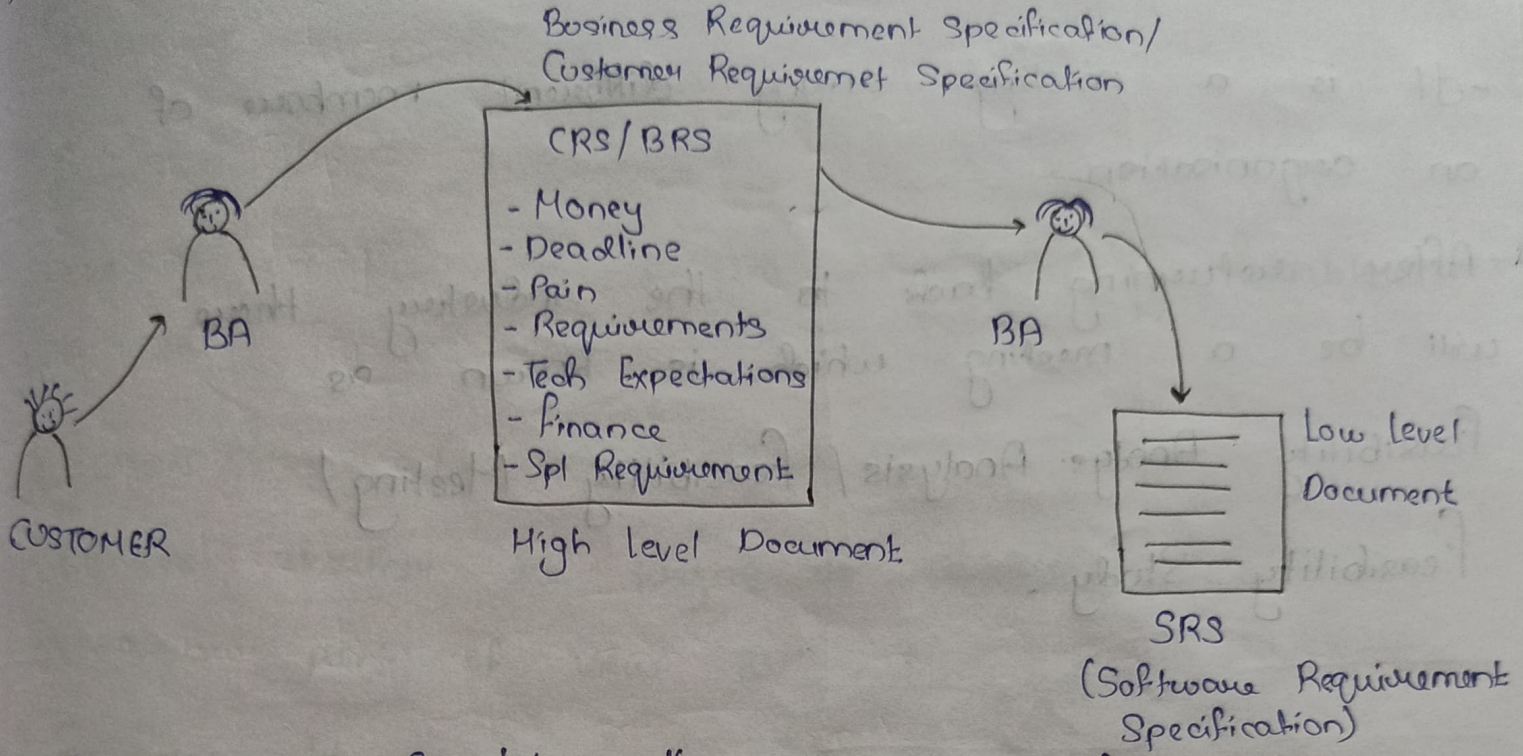
*SDLC [Software Development Life Cycle] :→

- It is a process or procedure to build a Software Application.

*Stages Of SDLC :→



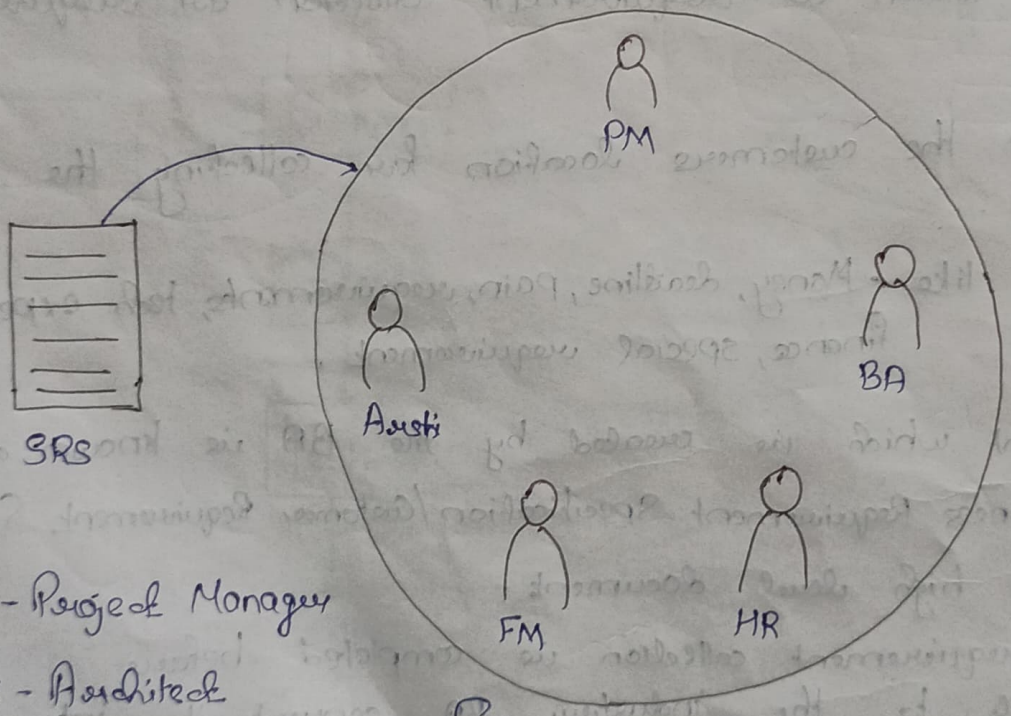
#1> REQUIREMENT COLLECTION :→



- This process of taking the requirement from the customer is known as requirement collection or requirement gathering.
- BA goes to the customers location for collecting the requirements.
- Requirements like - Money, deadline, pain, requirements, tech expectations, finance, special requirement.
- The document which is created by the BA is known as CRS/BRS (Business Requirement Specification / Customer Requirement Specification)
- CRS is an high level document.
- Once the requirement collection is completed before returning back to the industry BA converts it into SRS (low level Document).
- SRS is an Low Level Document.

*2) FEASIBILITY ANALYSIS →

- It is a meeting among different members of an organisation.
- After returning back to the industry there will be a meeting which is known as Feasibility ~~Analys~~ Analysis / feasibility Meeting / Feasibility Study.



FEASABILITY STUDY.

PM - Project Manager

Aarti - Architect

FM - Finance Manager.

HR - Human Resource.

* ~~ARCHI~~ ROLES OF TEAM MEMBERS IN FEASABILITY STUDY :→

1.) Architect :→

- Explains wheather the project is technicaly feasable or not.

2.) HUMAN RESOURCE / HIRING MANAGER :→

- Explains wheather the project is feasable 'from resource point of view or not.

3.) FINANCE MANAGER :→

- Explains wheather the project is feasiable from financial point of view or not. (return on investment)

4.) BUSINESS ANALYIST :→

- Explains all the requirements given by the customer.
- BA is representing customer in the meeting.

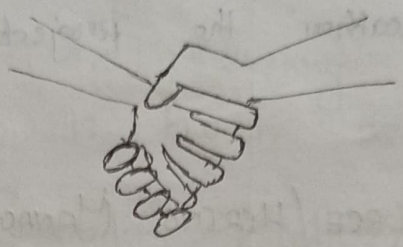
5.) PROJECT MANAGER :→

- After listening to each & every one project manger decides wheather to take the project or not.

* NOTE : If the project manger decides to take the project & also customer agrees to give the project, then they sign the document which is known as MOU. (Memorandum of Understanding).

MOU

1. Details of Parties.
2. Responsibilities of Parties involved.
3. Signatures
4. Risks Sharing
5. Disclaimers
6. Period of MOU



(24/02/2023)(Friday)(01:30pm to 03:30pm)

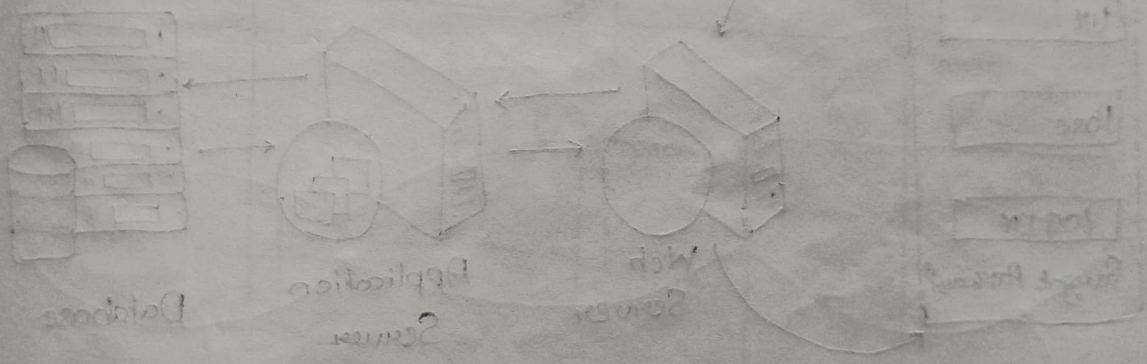
*3) DESIGN:→

- This stage is proceed only if the MOU is signed between 2 parties.

- Design stage is classified into 2 types,

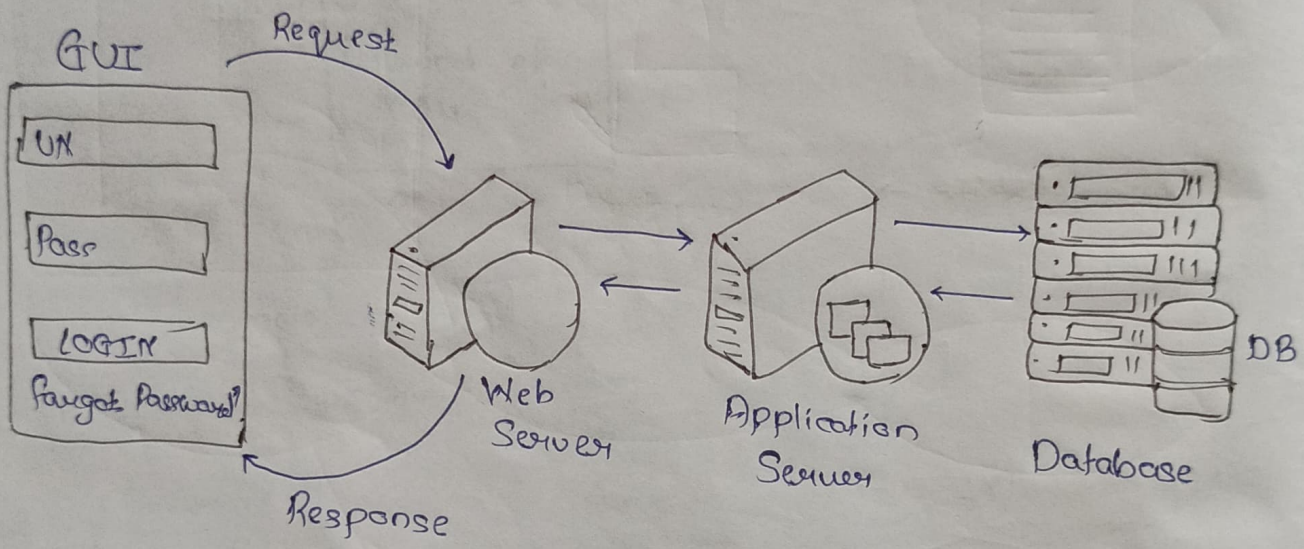
  i.) High Level Design.

  ii.) Low Level Design.



* i) High Level Design / Architectural Design:-

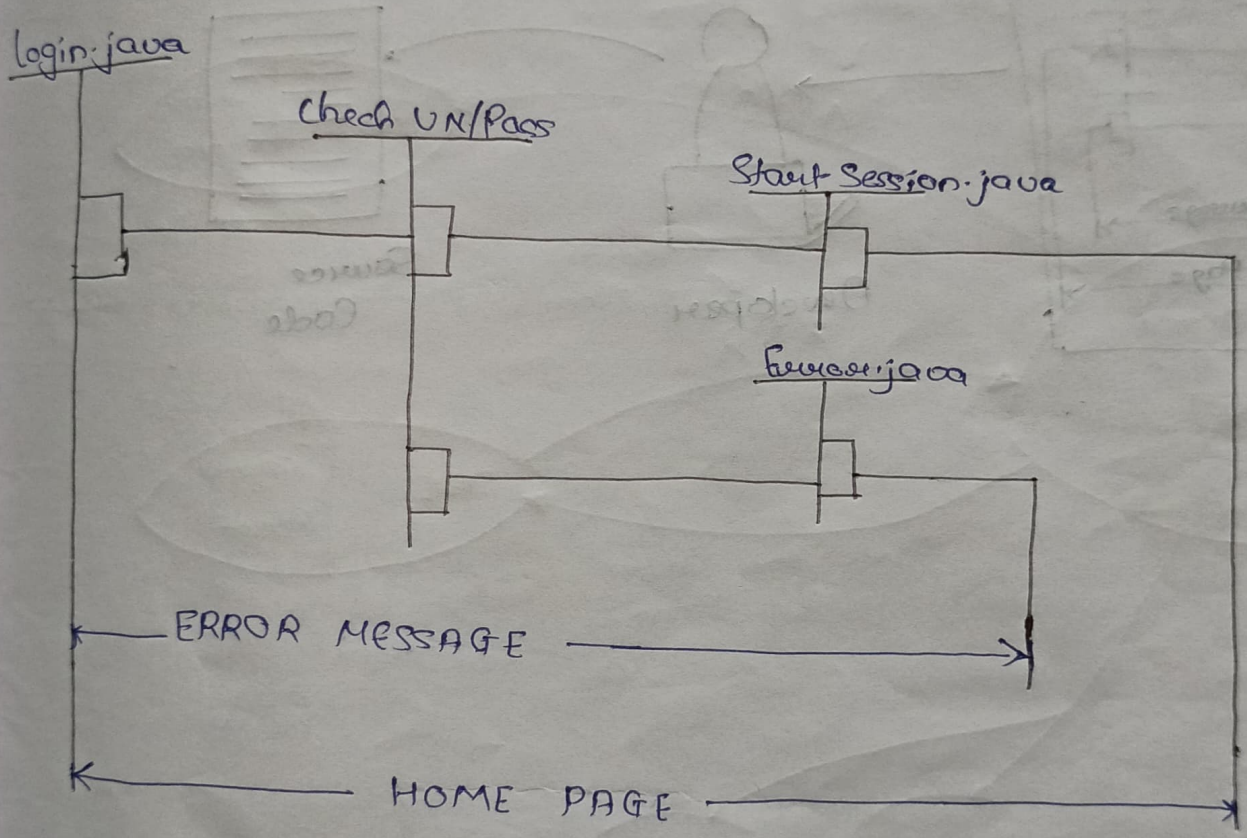
- High level design is created by the Architect of the organisation referring to SRS. (Software Requirement Specification)



- High Level Design is a system design which refers to the overall system design
- It describes the overall description or Architecture of the application.

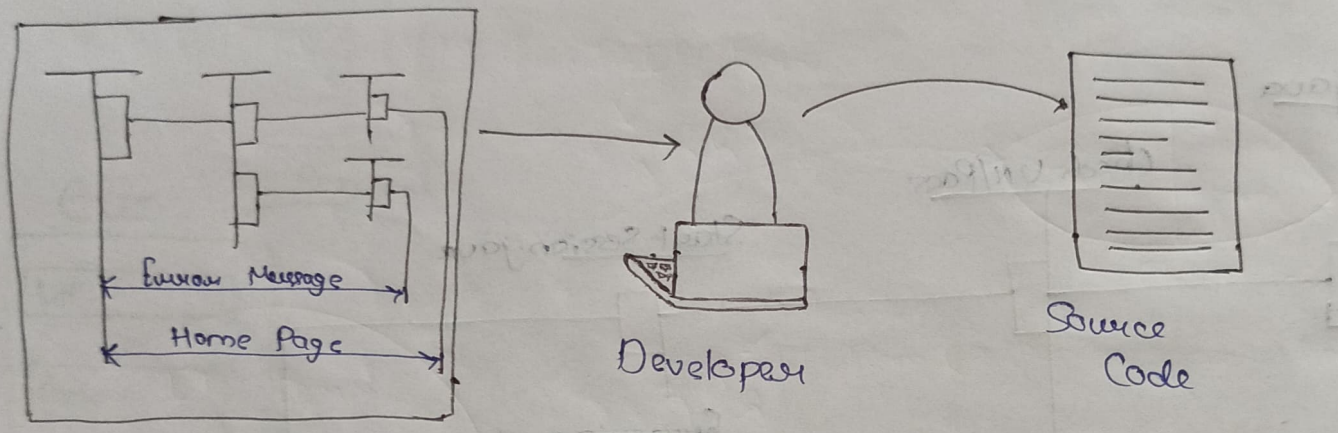
(ii) Low Level Design (LLD) :→

- Low Level Design is created by senior developers & designers of the organisation referring to the High Level Design.



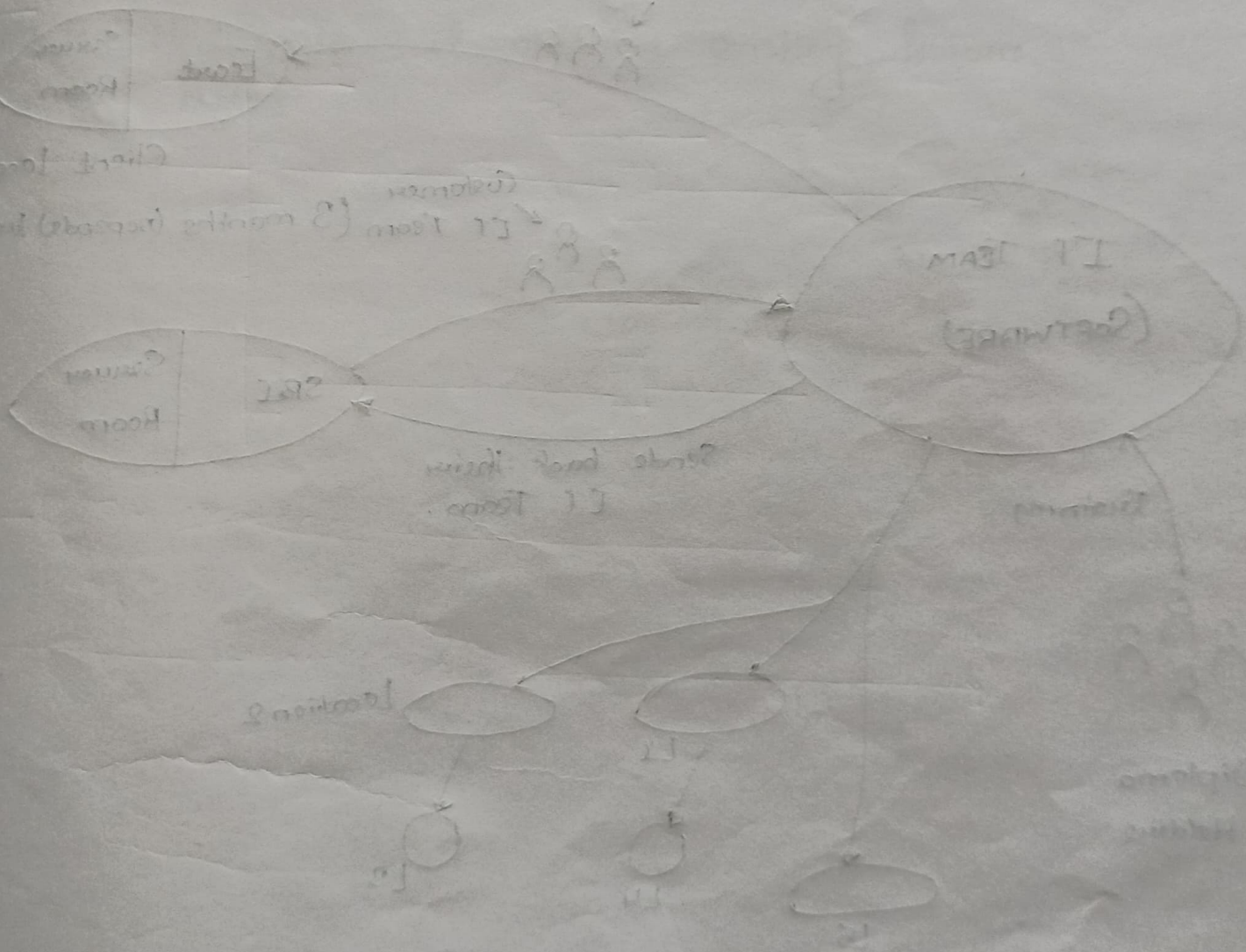
*4) CODING :→

- In this stage all our developer starts development of the application with the help of low level Design.



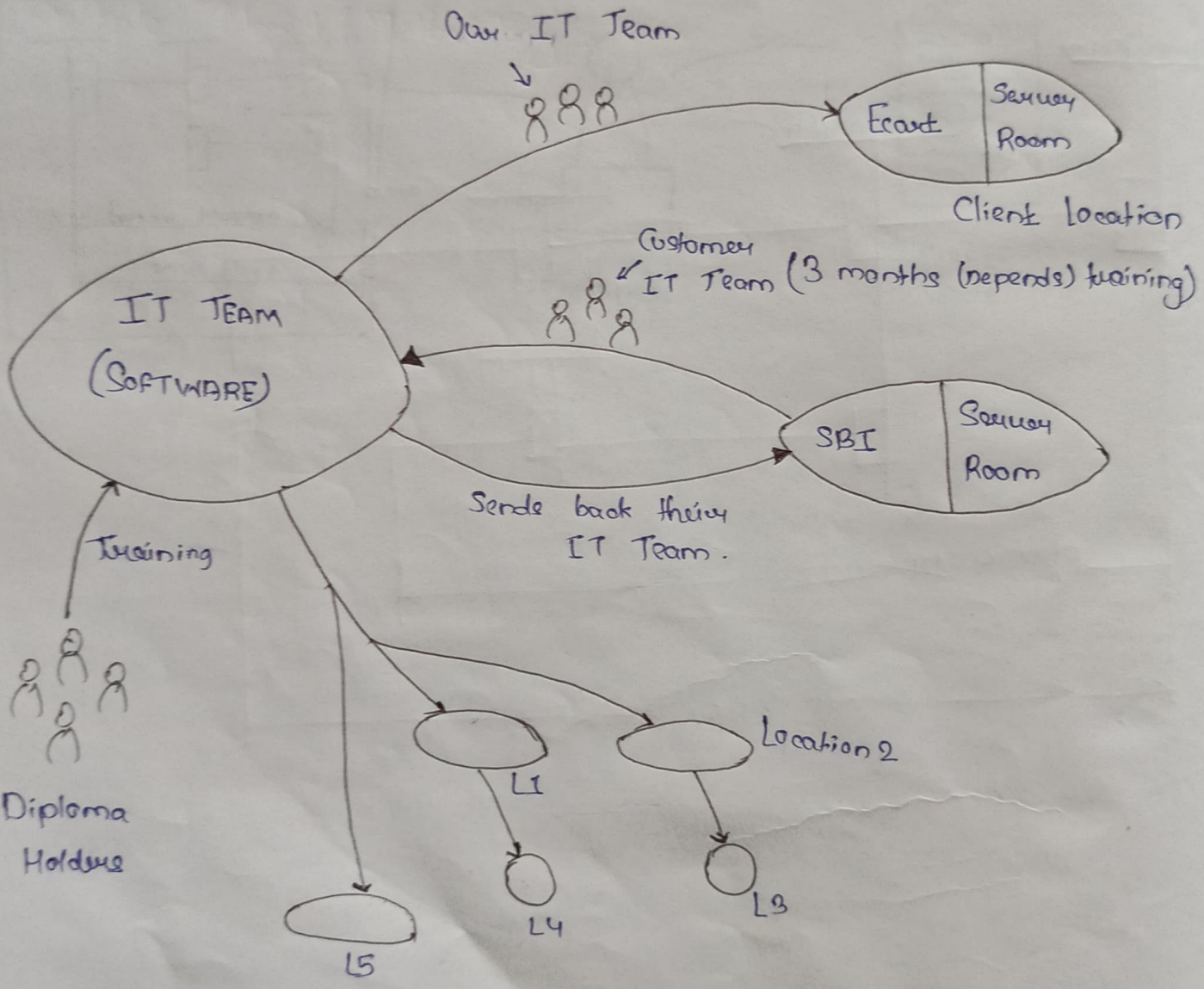
*5> TESTING:→

-It is the stage where we verify the software is developed or working according to the customers requirement.



*6) INSTALLATION:→

- In this stage representative of software companies goes to the client's location depending upon the situation & installs the application in the production server.



*7.) MAINTENANCE :→

- In this stage we (company) take care of changes requested by the customer.

- Changes can be,
  - i.) Addition of a new feature.
  - ii.) Removal of an old feature.
  - iii.) ~~Rem~~ Modification of old or existing feature.
  - iv.) Bug fixes.

* Different Types Of Modes Of SDLC :→

1.) Waterfall Model.

2.) Spiral Model.

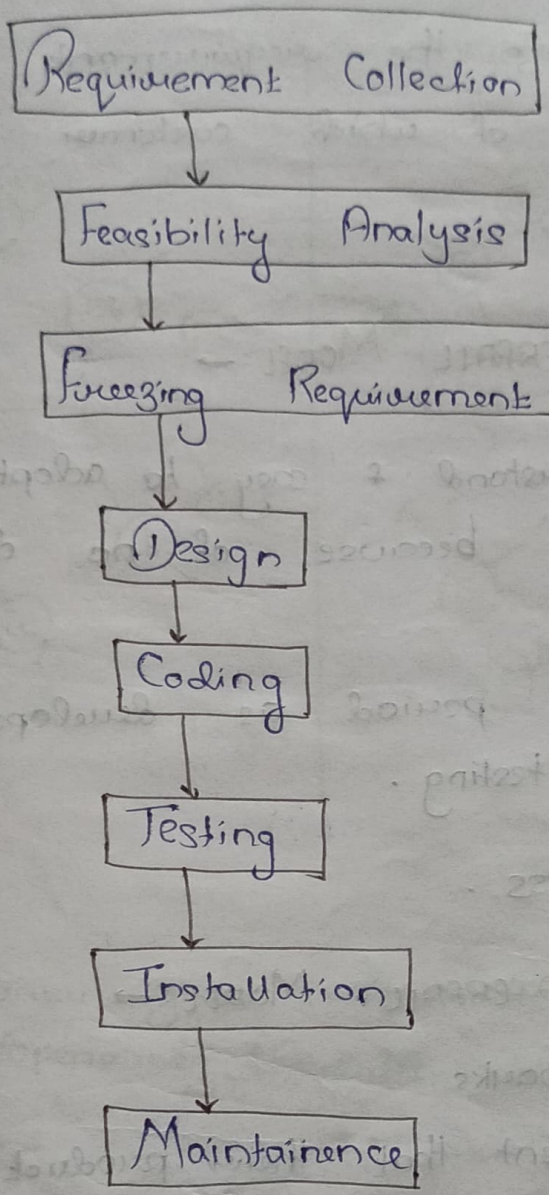
3.) Prototype Model.

4.) V Model.

5.) Agile Model / Methodology.

(25/02/2023) (Saturday) (01:30pm to 03:30pm)

*1) WATERFALL MODELS: →



*APPLICATIONS: →

- When we go for simple projects.
- When we are going for short term release.

* REQUIRMENT FREEZING :→

- In this model we freeze the requirement after feasibility Analysis because of which customer cannot ask for changes.

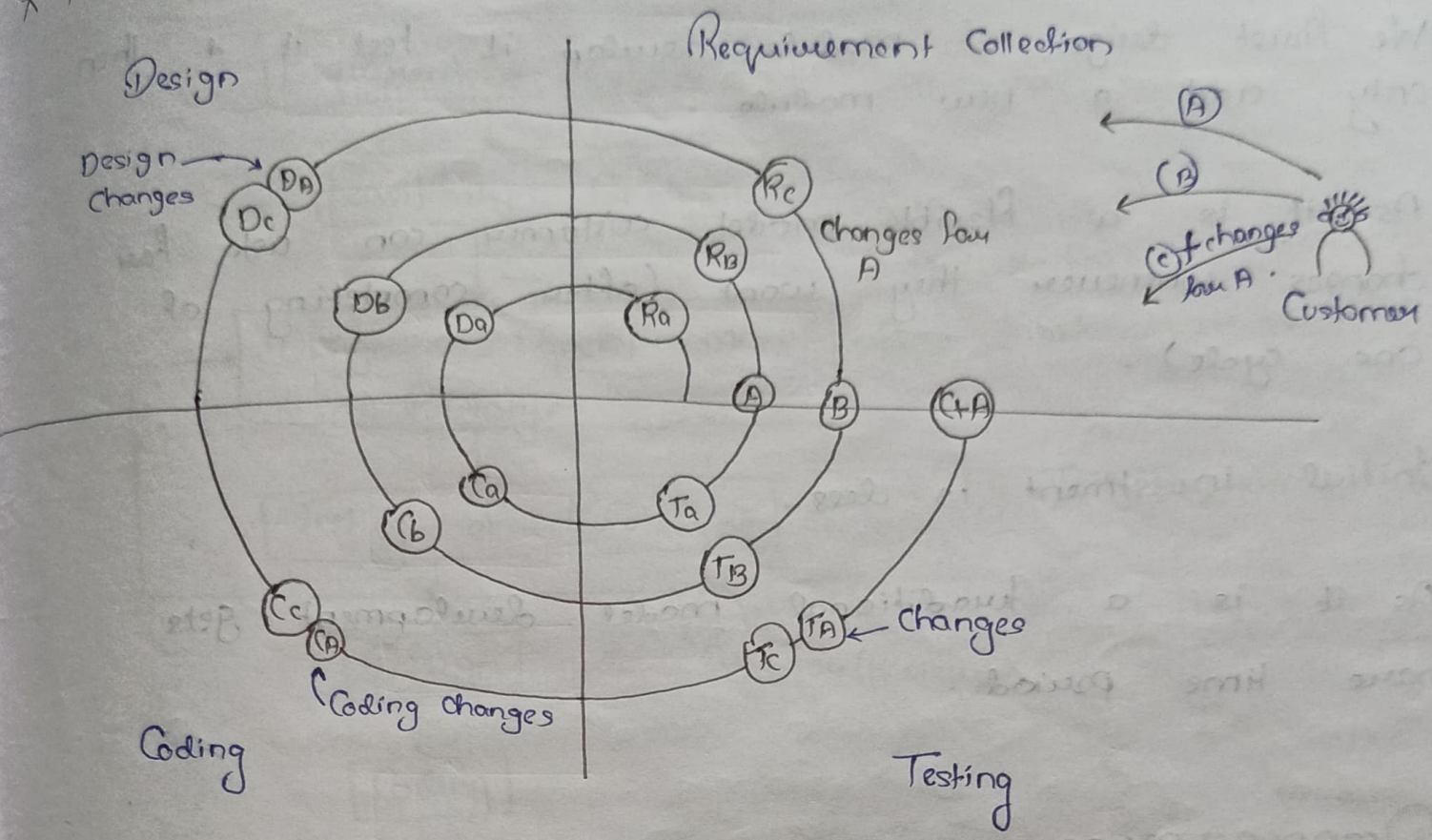
* ADVANTAGES OF WATERFALL MODEL :→

- It is simple to understand & easy to adopt.
- New bug will not arise because of no changes in requirements.
- Coding gets more time period as developers are involved in coding & testing.
- Initial Investment is less.

* DISADVANTAGES OF WATERFALL MODEL :→

- It involves lot of reworks.
- Developers are over confident that their product always works.
- Total investment is high.
- Testing done only after coding, i.e. requirements is not tested, design is not tested.
- As it is a rigid model customer cannot ask for changes.

*2) SPIRAL MODEL :→



- When customer gives requirement in phases & when there is dependancy (modules are dependant on each other). We go for Spiral Model.

*APPLICATION :→

- When customer is giving requirement in phases.
- When there is dependancies between features we go for spiral model.

* ADVANTAGES

- We first design of module, develop it, test it & then only add a new module.

- As it is a flexible model customer can ask for changes whenever they want (after completing of one cycle).

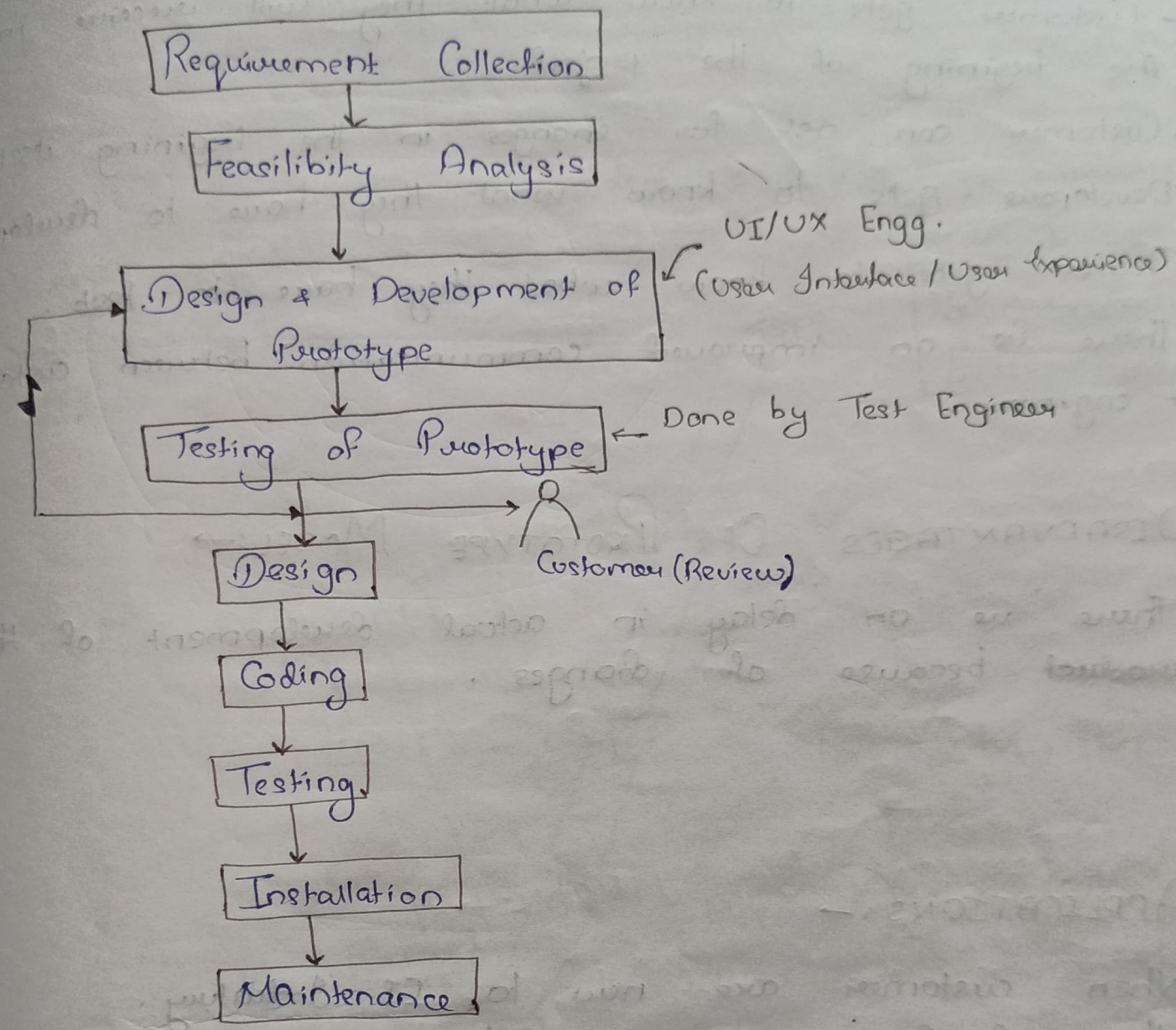
- Initial investment is less.

- As it is a traditional model development gets more time period.

* DISADVANTAGES

- Turnaround time is more for Spiral module (Total time required for the project or release).
- As it is a traditional model testing gets less time period because developers are involved in coding & testing.
- Even in this model requirements are not ~~testing~~ tested (verified or ~~review~~ review).

*3) PROTOTYPE MODEL :→



- In this we build mock ~~mock~~ screens (prototypes) which only represents the GUI of the software.
- Prototypes in this models are designed by the UI/UX Engineer (User Interface / User Experience).

* Advantages Of Prototype Model :→

- Customer gets to know what they will receive in the begining of the project.
- Customer can ask for changes in the begining itself.
- Developers gets to know what they have to develop.
- Tester gets to know what they have to test.
- There is an improved communication between customer & engineer.

* Disadvantages Of Prototype Model :→

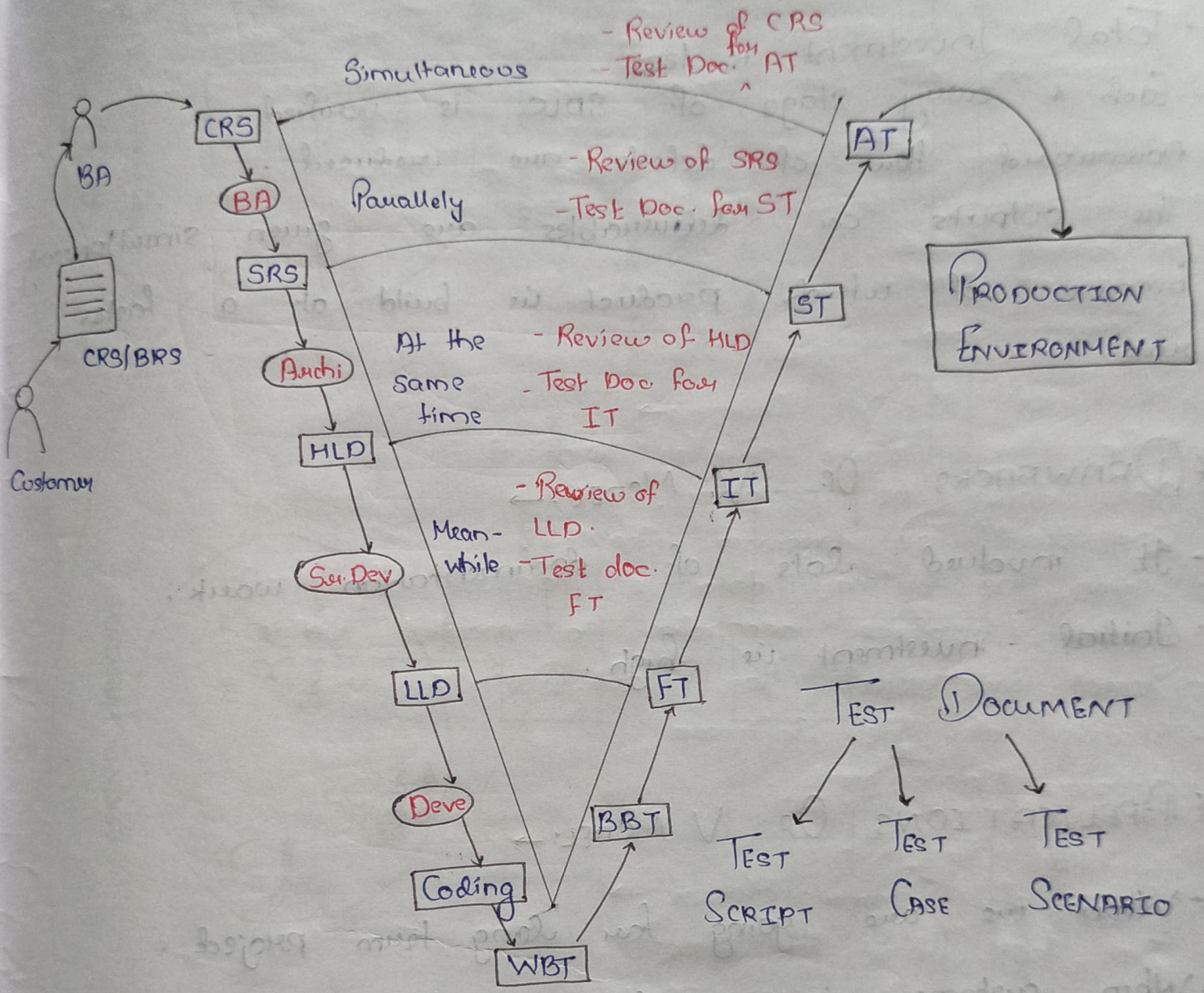
- There is an delay in actual development of the product because of changes.

* Applications :→

- When customer are new to IT Industry.
- When developers are new to Domain.
- When Testers are new to Domain.
- When Customer is not clear about his own requirement.

*4> V Model :→ (Verification & Validation Model)

(27/03/2023) (Monday) (01:30pm to 03:30pm)



Test Document

- Test Script
- Test Case
- Test Scenario

Review (Mistakes)

- Missing Requirments
- Wrong Requirments
- Conflict In Requirments.

* Advantages Of V Model: →

- Total Investment is less.
- Each & every stage of SDLC is verified.
- Downward flow of defects are reduced.
- The outputs or deliverables are given simultaneously because of which product is build at a faster rate.

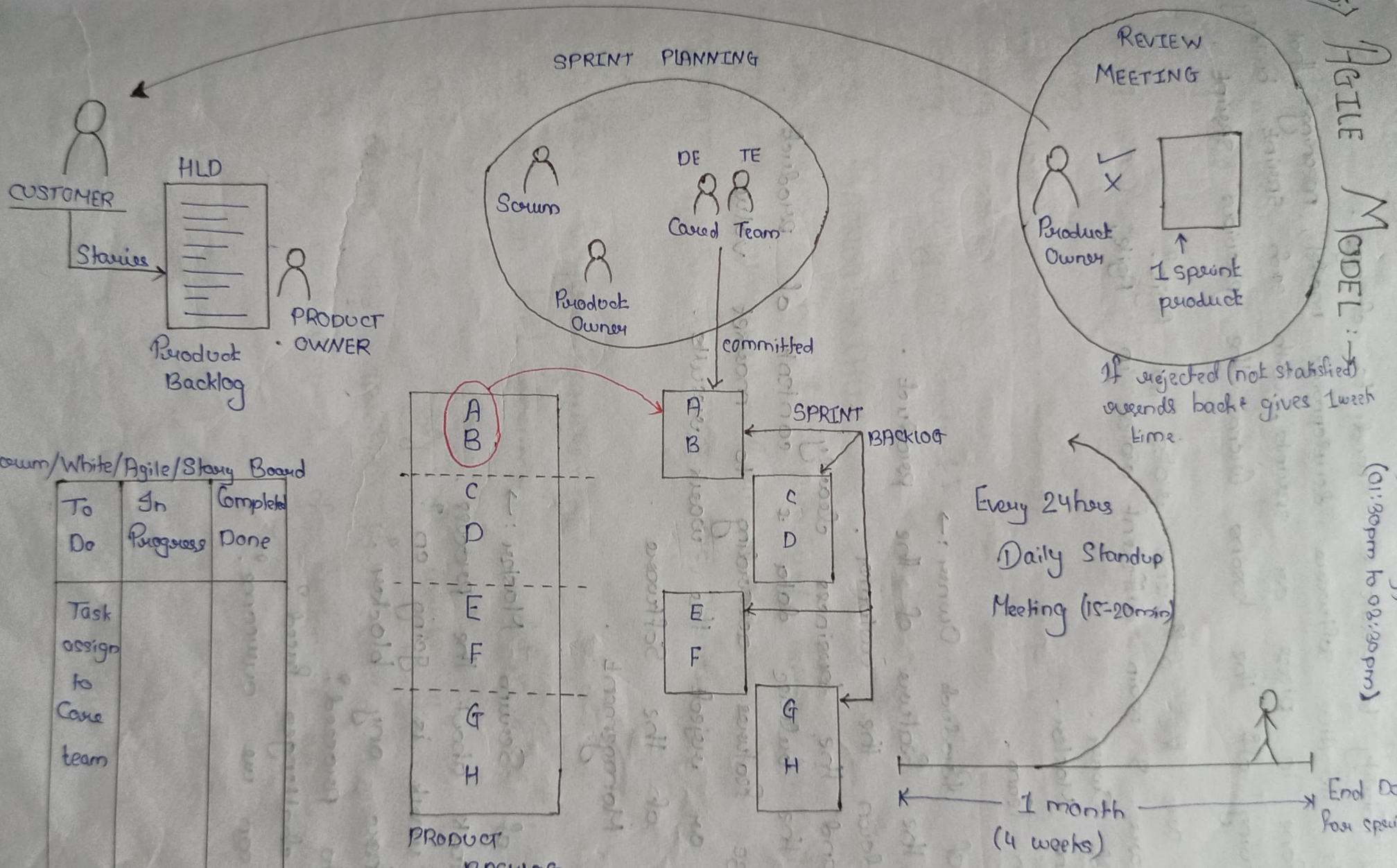
* (1) Drawbacks Of V Model: →

- It involved lots of documentation work.
- Initial investment is high.

* Applications Of V Model: →

- When we are going for long term project.
- When customer is expecting a high quality application at a restricted time period.
- When we are planning for a complex project.

*5) AGILE MODEL :-



Scrum/White/Agile/Story Board

To Do	In Progress	Completed Done
Task assign to Core team		

(28/02/2023) (Tuesday)
(01:30pm to 02:30pm)

Q. * What is Agile?

→ - Agile is ability to create & respond to change.
- Agile is iterative software development model, meaning that it is done in pieces or sprints, with each sprint building & improving off the lessons from the previous sprint.

Q. * What are the different roles in Agile?

→ There are 3 main different roles in Agile,

1.) Product Owner.
2.) Scrum Master.
3.) Scrum Team.

1.) Work of Product Owner :→

- Define the feature of the product.
- Note down the customer.
- Understand the business clearly.
- Decide the release data & content of product.
- Prioritize features according to market value.
- Accept or reject the work results.
- Status of the Software.
- Release Management.

2.) Roles of Scrum Master :→

- Just talk about the process.
- How work is going on?
- Is there any blocker?
- How to proceed?
- What challenges faced?
- How can we overcome?

Scrum Team :→

- Scrum team is most important aspect of any software development life cycle.
- Breakdown work into task & complete the task with given period.

- Scrum team deal with,
  i.) Planning
  ii.) Implementation
  iii.) Reviewing of Goal.
  iv.) Testing (Quality of Product).

*PRODUCT BACKLOG:→ (HLD)

- It is prepared by the product owner, which contains all requirement from customer.
- Requirement in the sense epic, stories.

*EPIC:→

- Epic is a larger requirement.
- It is a high level document & define the business need.
- An agile epic is a body of work that can be broken down into specific tasks. (called user stories) based on the needs/request of customers or end-users.

*TASK:→

- A task is a single unit of work broken down from a user story.
- Task is an action we need to perform on that particular story.

* STORY :→

- Stories also called as "User Stories".
- It is short requirements or request written from the perspective of an end user.

* SPRINT BACKLOG :→

- It contains the committed stories by the developer & testar.
- Whereas product backlog contains complete stories all the stories to which are given by customer.

* TASK OF DEVELOPER :→

1.) Review the Story.
2.) Estimate the Story.
3.) Design.
4.) Code.
5.) Unit Testing.
6.) Integration

* TASK OF TESTOR :→

1.) Review the Story.
2.) Prepare test data.
3.) Test Environment.
4.) Test Scenarios.
5.) Test Cases.
6.) Reviews.
7.) Execute Test Case.
8.) Report Bugs.