**Module–1(Fundamental)**

\*What is SDLC

-SDLC is software development life cycle, it is a structure imposed on the process of developing a software.

\* What is software testing?

-software testing is a process of evaluating correctness, completeness & quality of the developed software.

\* What is agile methodology?

-it is a SDLC module that is widely used in software development. It is a SDLC module evolved with combination of iterative & incremental model, with focus on process adaptability & customer satisfaction.

\* What is SRS

-SRS is Software Requirement Specifications, which contains the description of requirements that must be fulfilled to developing a software.

\* What is oops

-OOPS is Object Oriented Programming System, its role is to identify the objects and assign them responsibilities.

\* Write Basic Concepts of oops

-there are 6 concepts of oops, which are as followed,

1.class

2.object.

3.encaptulation

4.inheritance

5.polymorphism

6.abstract

\* What is object

-object is an instance of a class

\* What is class

-class is a collection of data members & member function of its behaviour.

\* What is encapsulation

-it is wrapping up of data in to single unit.

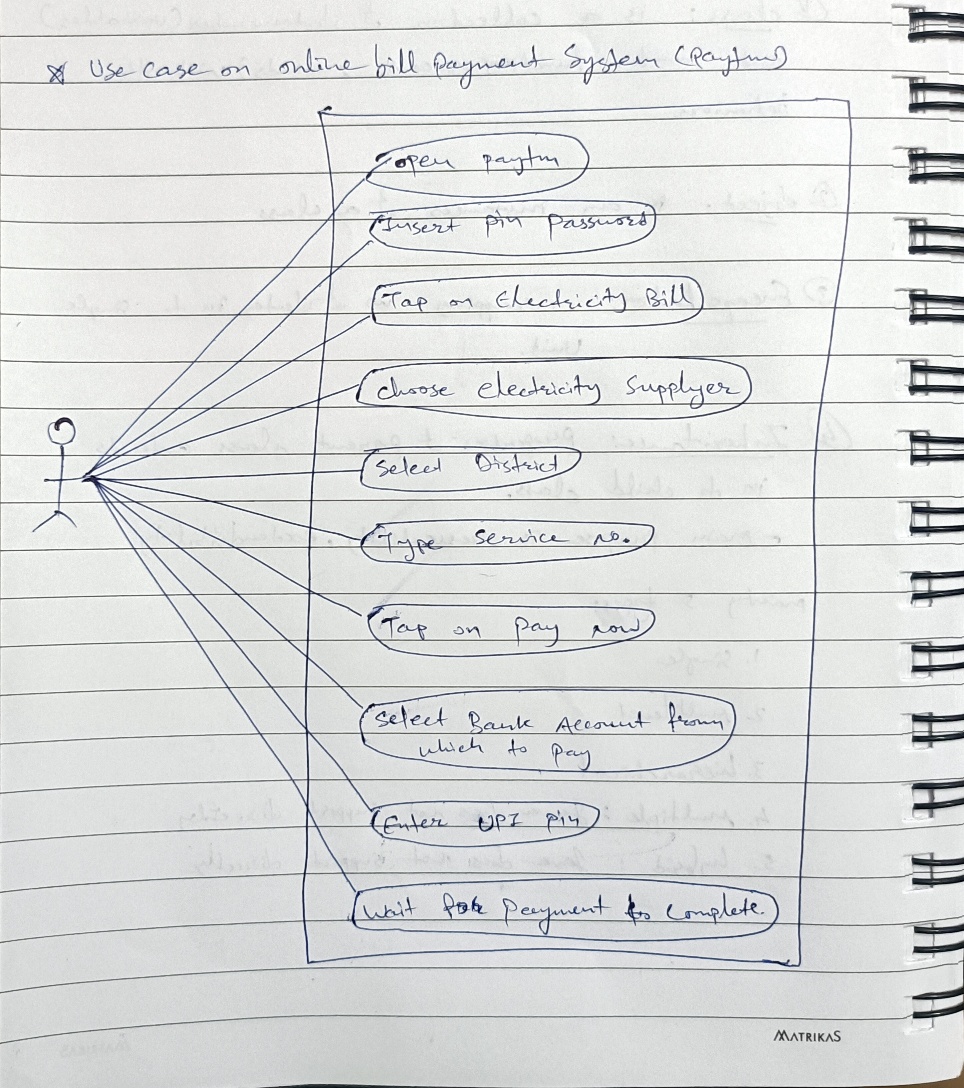
\* What is inheritance

-inheritance is when properties of parent class extend in to child class.

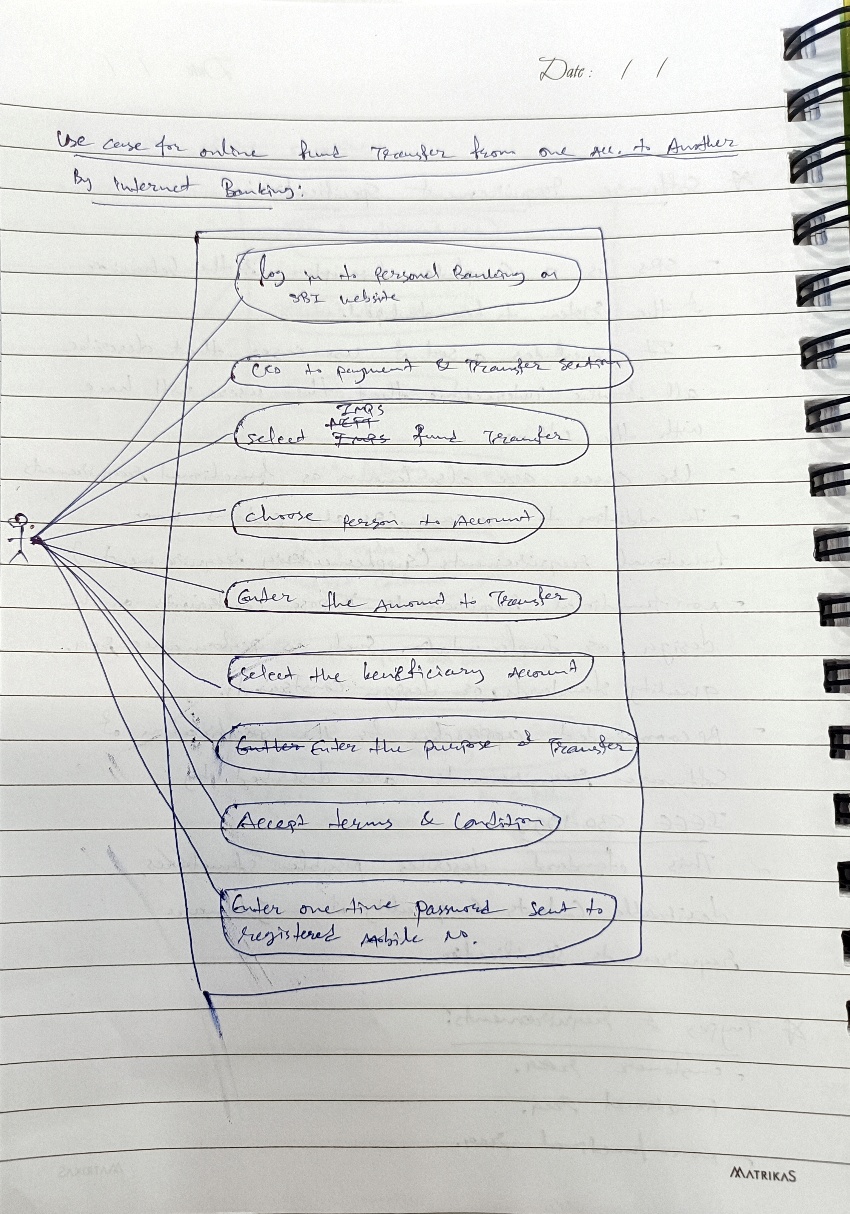
\* What is polymorphism

-it is an ability to take one name having many forms.

\* Draw Usecase on online bill payment system (Paytm)

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\* Draw Use case on banking system for customers.

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\* Write SDLC phases with basic introduction

-there are 6 phases in SDLC, described as Below,

1.Requirements gathering: means gathering customer requirements.

2.Analysis: means analysing customer requirements, defines what & how phase

3.Design: means designing architecture

4.Implementation: means coding and constructing the software

5.Testing: means testing the developed software

6.Maintenance: means any trouble shooting that will occur after launching the product

\* Explain Phases of the waterfall model

-there are 6 phases in waterfall model, described as Below,

1.Requirements gathering: means gathering customer requirements.

2.Analysis: means analysing customer requirements, defines what & how phase

3.Design: means designing architecture

4.Implementation: means coding and constructing the software

5.Testing: means testing the developed software

6.Maintenance: means any trouble shooting that will occur after launching the product

\* Write phases of spiral model

- Planning

-Risk analysis

-Engineering

-Customer evaluation

\* Write agile manifesto principles

-individual interaction

-working software

-customer collaboration

-responding to change

\* Explain working methodology of agile model and write pros and cons.

-agile model works on combination of iterative & incremental model, which means new functionalities are being deployed in an iterative manner, in which each iteration lasts for 1-3 weeks.

-in agile model tasks are break up in small time boxes to deliver specific features.

Pros.

- responds to steadily changing environments

-realistic approach for software development

-easy to manage & little or no planning required

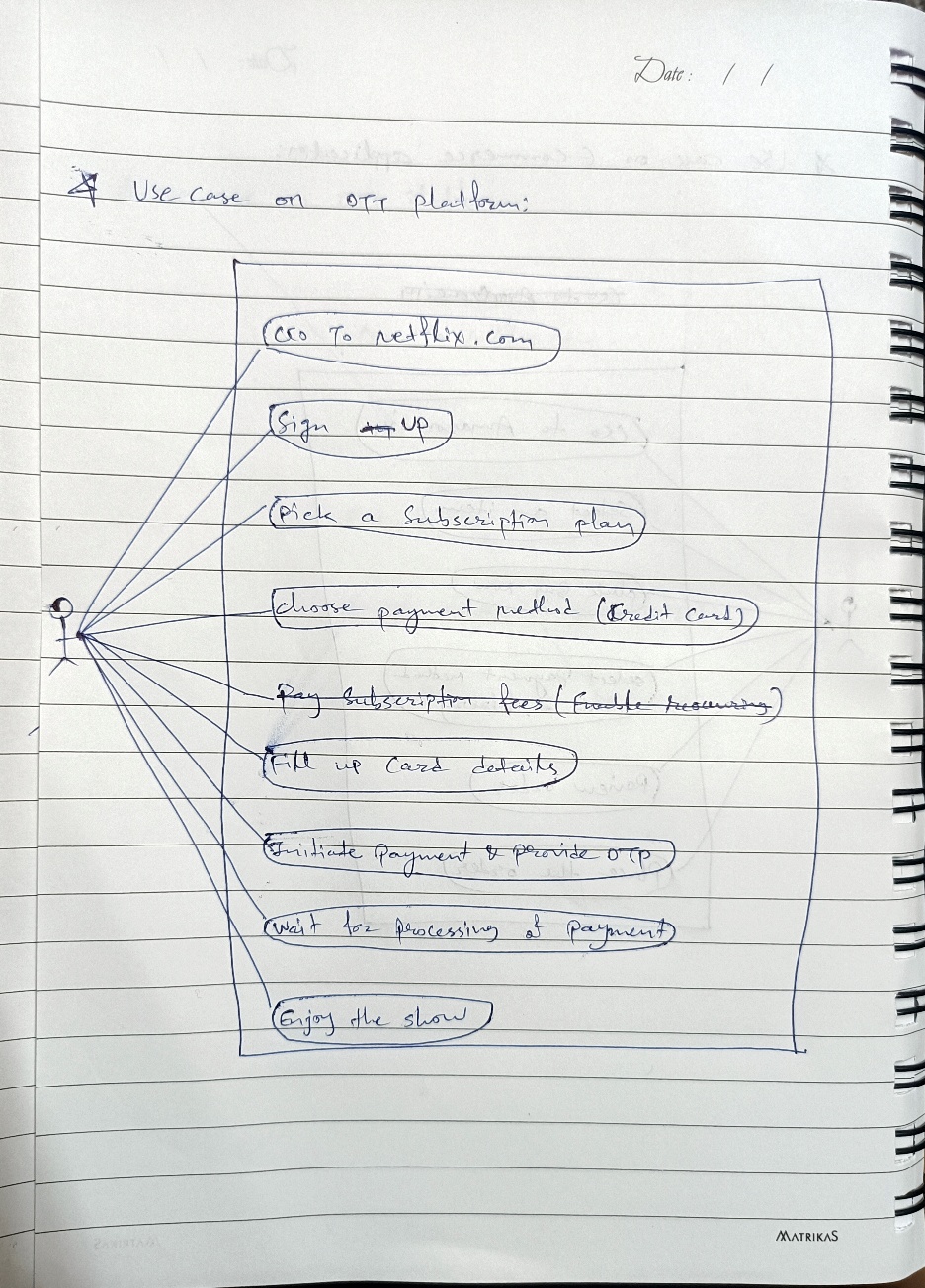
Cons.

-depends heavily on customer interaction, if customer is confused, then whole team can go in wrong direction

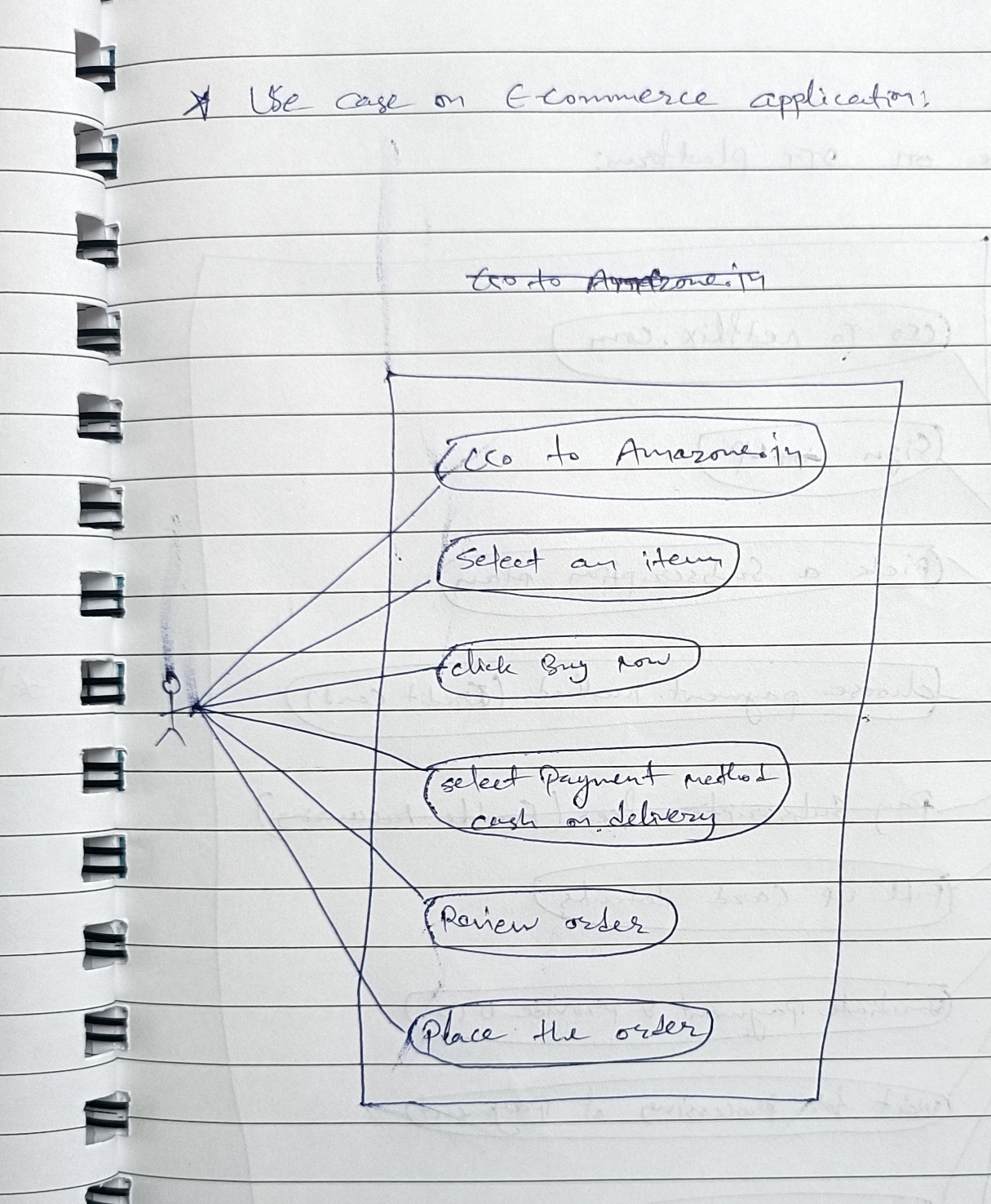
-very high individual dependencies

-transferring technology to new team is a challenging task

\* Draw use case on OTT Platform.

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\* Draw use case on E-commerce application

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\* Draw use case on Online shopping product using payment gateway.

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