SOFTWARE TESTING ASSIGNMENT

MODULE-1 (FUNDAMENTAL)

WHAT IS SDLC

ANS:- SDLC is a structure imposed on the development of a software product that defines the process for planning, implementation, testing, documentation, deployment, and ongoing maintenance and support. There are a number of different development models.

SDLC- software development life cycle.

- Requirements Collection/Gathering
- Analysis
- Design
- Implementation
- Testing
- Maintenance

WHAT IS SOFTWARE TESTING ?

ANS:- Software Testing is a process used to identify the correctness, completeness, and quality of developed computer software.

Software Testing is a method to check whether the actual software product matches expected requirements and to ensure that software product is Defect free.

WHAT IS AGILE METHODOLOGY ?

ANS:- The Agile methodology is a way to manage a project by breaking it up into several phases. It involves constant collaboration with stakeholders and continuous improvement at every stage. Once the work begins, teams cycle through a process of planning, executing, and evaluating. Continuous collaboration is vital, both with team members and project stakeholders.

WHAT IS SRS

ANS:- A software requirements specification (SRS) is a document that captures complete description about how the system is expected to perform. It is usually signed off at the end of requirements engineering phase.

Qualities of SRS:

- Correct
- Unambiguous
- Complete
- Consistent
- Ranked for importance and/or stability
- Verifiable
- Modifiable
- Traceable

Types of Requirements:

- Customer requirements
- Functional requirements
- Non functional requirements

WHAT IS OOPS

ANS:- Object-oriented programming (OOP) is a computer programming model that organizes software design around data, or objects, rather than functions and logic. An object can be defined as a data field that has unique attributes and behavior.

OOP focuses on the objects that developers want to manipulate rather than the logic required to manipulate them. This approach to programming is well-suited for programs that are large, complex and actively updated or maintained. This includes programs for manufacturing and design, as well as mobile applications; for example, OOP can be used for manufacturing system simulation software.

WHAT IS BASIC OF OOPS

ANS:-

1. **OBJECT:-** any entity which has own state and behaviour that is called an object .

EX- any living things…

2. **CLASS:-** collection of objects.

EX- human body

3. **ABSTRACTION:-** hiding internal details and showing functionalities.

EX- login page

4. **ENCAPSULATION:-** binding of data / wrapping of data.

Ex- capsule

5. **INHERITANCE:-** when one object acquire all the properties and behaviour or parent class.

EX- father-son

6. **POLYMORPHISM:-** many ways to perform anything.

EX- road ways

WHAT IS OBJECT

ANS:- Objects are key to understanding *object-oriented* technology. Look around right now and you'll find many examples of real-world objects: your dog, your desk, your television set, your bicycle.

An object represents an individual, identifiable item, unit, or entity, either real or abstract, with a well-defined role in the problem domain.

WHAT IS CLASS

ANS:- class is a template definition of the method s and variable s in a particular kind of object . Thus, an object is a specific instance of a class; it contains real values instead of variables.

A class represents an abstraction of the object and abstracts the properties and behavior of that object.

WHAT IS ENCAPSULATION

ANS:- Encapsulation is the practice of including in an object everything it needs hidden from other objects. The internal state is usually not accessible by other objects.

Encapsulation is placing the data and the functions that work on that data in the same place. While working with procedural languages, it is not always clear which functions work on which variables but object oriented programming provides you framework to place the data and the relevant functions together in the same object.

WHAT IS INHERITANCE

ANS:- Inheritance means that one class inherits the characteristics of another class. This is also called a “is a” relationship.

Inheritance describes the relationship between two classes. A class can get some of its characteristics from a parent class and then add unique features of its own.

WHAT IS POLYMORPHISM

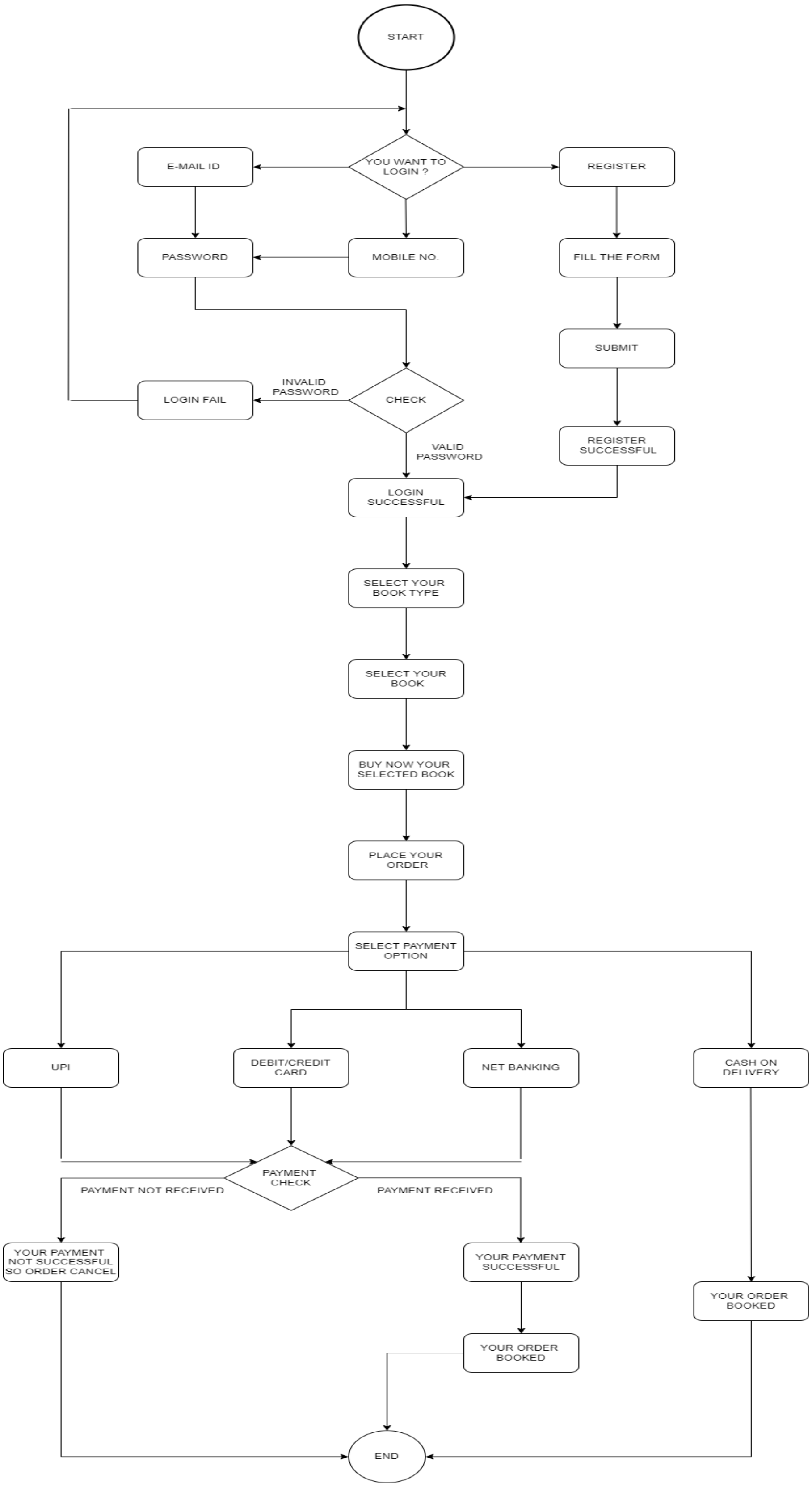
ANS:- Poly refers to many. That is a single function or an operator functioning in many ways different upon the usage is called polymorphism.

The most important aspect of an object is its behaviour (the things it can do). A behaviour is initiated by sending a message to the object (usually by calling a method).

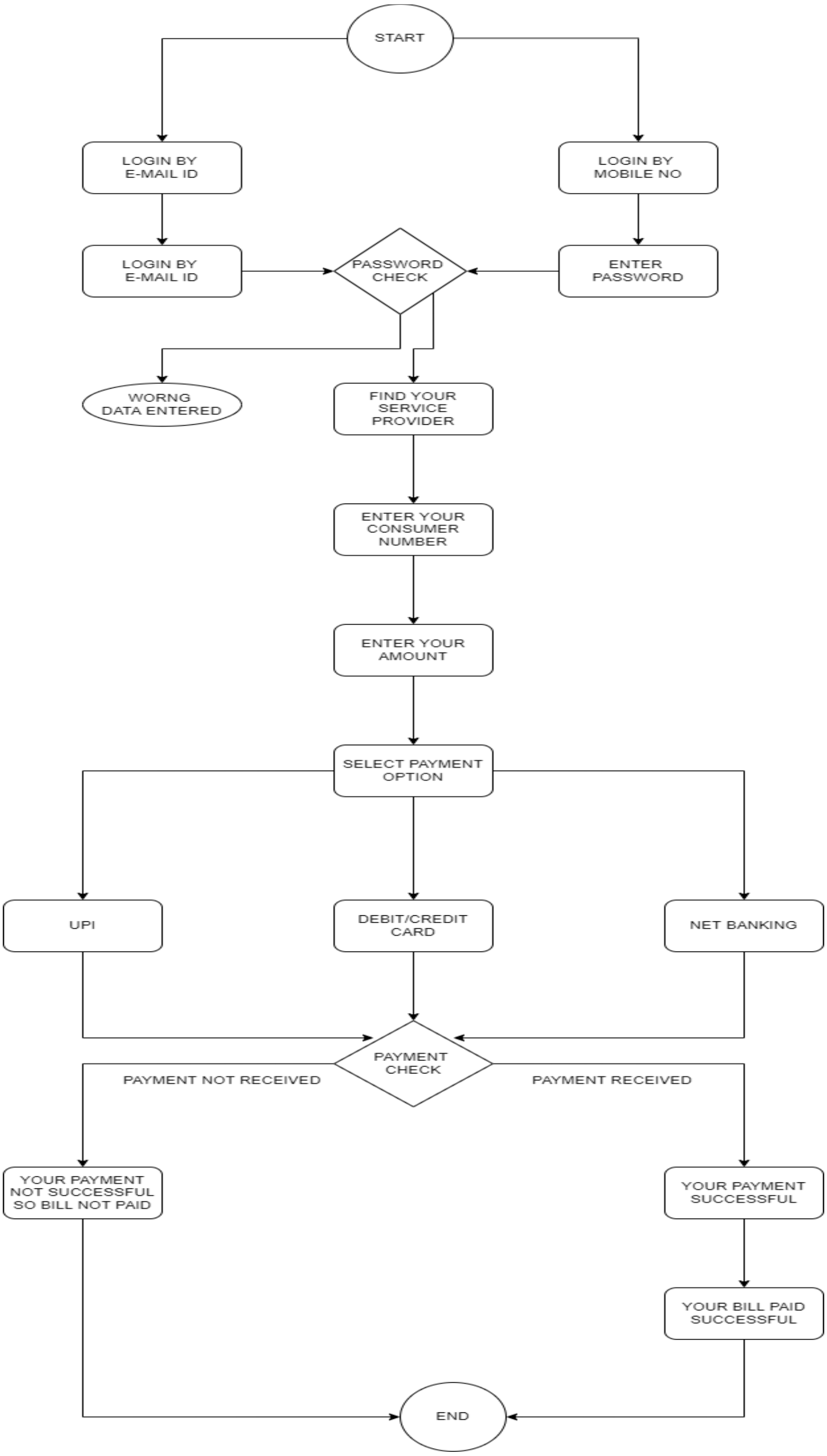
The ability to use an operator or function in different ways, in other words giving different meaning or functions to the operators or functions is called polymorphism.

There is two types of polymorphism in Java:-
1. Compile time polymorphism(<u>Overloading</u>)
2. Runtime polymorphism(<u>Overriding</u>)

DRAW USECASE ON ONLINE BOOK SHOPPING



DRAW USECASE ON ONLINE BILL PAYMENT SYYSTEM (PAYTM)



WRITE SDLC PHASES WITH BASIC INTRODUCTION

ANS:- There are 6 types of phases:-

1) Requirement Gathering:- The first phase of SDLC is requirement gathering from customers. Here we gathered requirements of functional and nonfunctional requirements by customer.

2) Analysis:- The second phase of SDLC is analysis of gathered requirements from customers. And analyse how these requirements will be accomplished.

3) Design:- The third phase of SDLC is the design phase, on the basis of analysis of gathered requirements. In this phase the software design documents are prepared. There are two kinds of design documents: HLD & LLD.

4) Implementation:- The fourth phase of SDLC is implementation In this phase developers start the develop build by writing the code.

5) Testing:- The fifth phase of SDLC is testing, testing for giving bug free and quality products to the customer. In testing phase tester will check the application by the help of comparing expected result and actual result.

6) Maintenance:- Maintenance is the process of changing a system after it has been deployed.

- Corrective maintenance: identifying and repairing defects.
- Adaptive maintenance: adapting the existing solution to the new platforms.
- Perfective Maintenance: implementing the new requirements In a spiral lifecycle, everything after the delivery and deployment of the first prototype can be considered “maintenance”!

EXPLAIN PHASES OF THE WATERFALL MODEL

ANS:- The waterfall is unrealistic for many reasons, especially:

1. Requirements must be “frozen” to early in the life cycle.
2. Requirements are validated too late.

The Classical software lifecycle models the software development as a step by step waterfall between the various development phases.

WRITE PHASES OF SPIRAL MODEL

ANS:- There are four phases as below:-

1.Planning
2.Risk Analysis
3.Engineering
4.Customer Evaluation

WRITE AGILE MANIFESTO PRINCIPLES

ANS:-

EXPLAIN WORKING METHODOLOGY OF AGILE MODEL ANS ALSO WRITE PROS AND CONS.

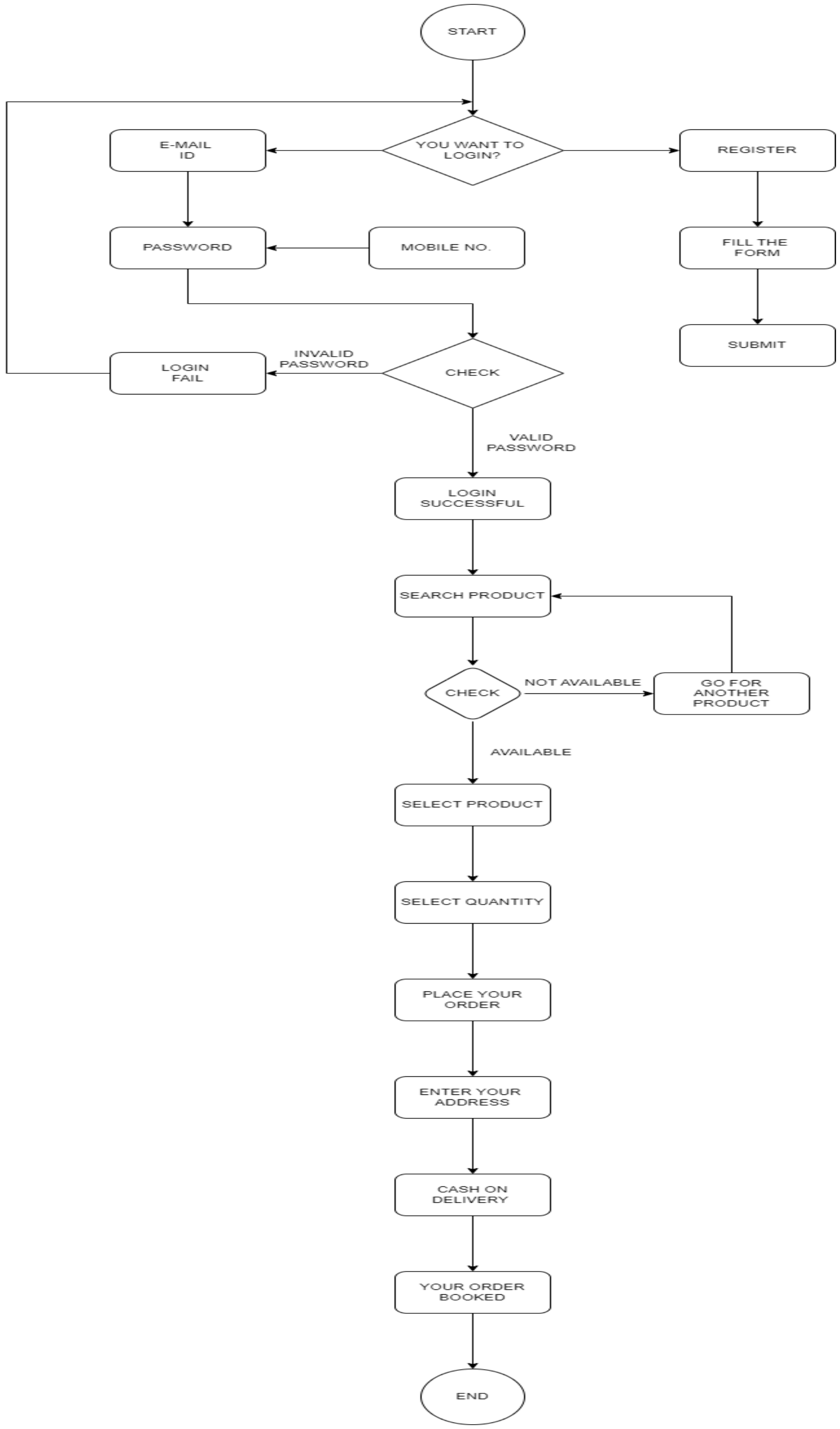
ANS:- The Agile model believes that every project needs to be handled differently and the existing methods need to be tailored to best suit the project requirements. In agile the tasks are divided to time boxes (small time frames) to deliver specific features for a release.

Agile thought process had started early in the software development and started becoming popular with time due to its flexibility and adaptability.

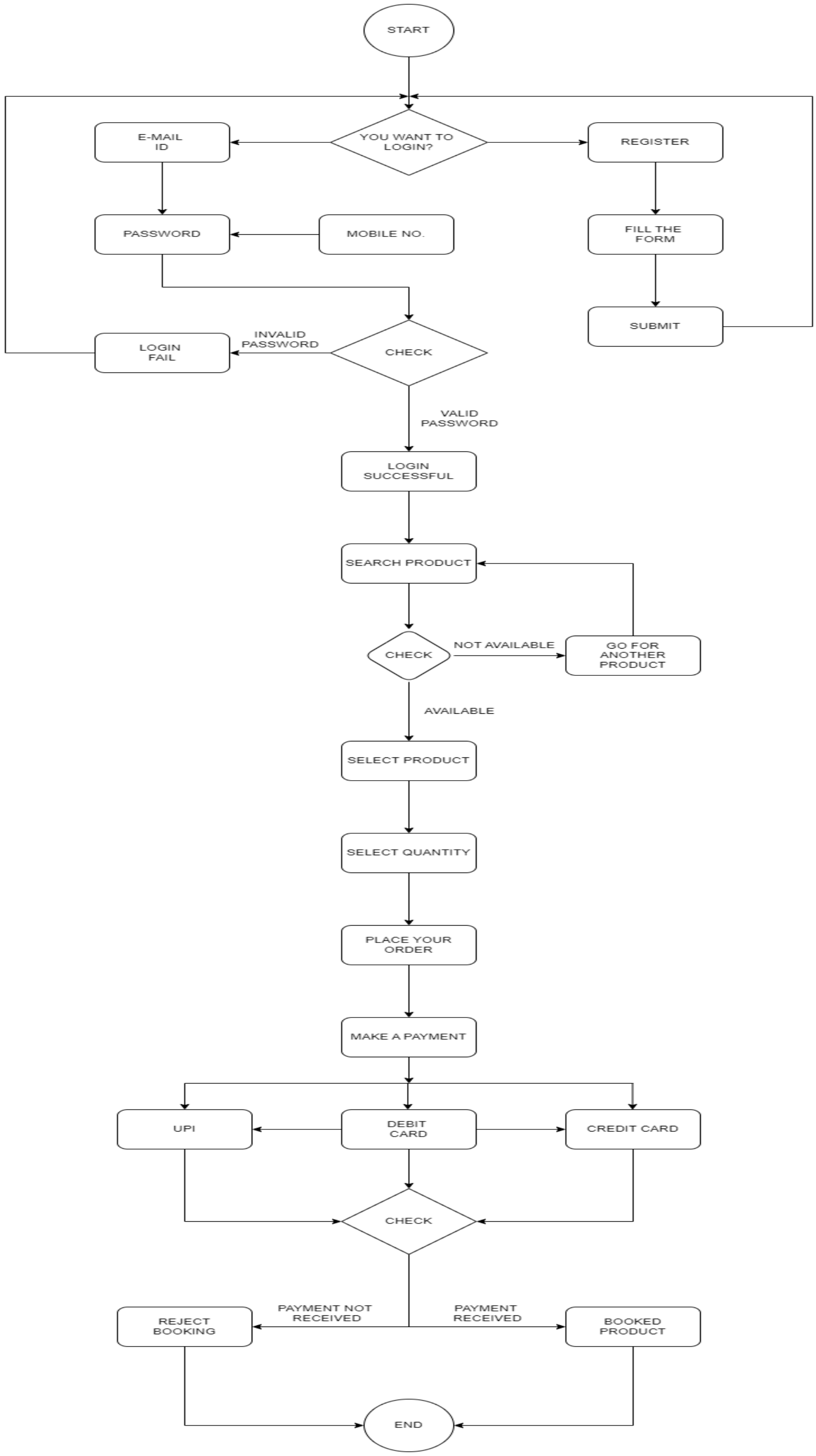
- Pros (Why It works):-
  1. Good model for environments that change steadily.
  2. Minimal rules, documentation easily employed.
  3. Enables concurrent development and delivery within an overall planned context.
  4. Little or no planning required
  5. Easy to manage
  6. Gives flexibility to developers

- Cons (Why It doesn't work):-
  1. Not suitable for handling complex dependencies.
  2. More risk of sustainability, maintainability and extensibility.

DRAW USECASE ON ONLINE SHOPPING PRODUCT USING COD.



DRAW USECASE ON ONLINE SHOPPING PRODUCT USING PAYMENT GATEWAY.


START
YOU WANT TO LOGIN?
E-MAIL ID
REGISTER
PASSWORD
MOBILE NO.
FILL THE FORM
SUBMIT
INVALID PASSWORD
LOGIN FAIL
CHECK
VALID PASSWORD
LOGIN SUCCESSFUL
SEARCH PRODUCT
CHECK
NOT AVAILABLE
GO FOR ANOTHER PRODUCT
AVAILABLE
SELECT PRODUCT
SELECT QUANTITY
PLACE YOUR ORDER
MAKE A PAYMENT
UPI
DEBIT CARD
CREDIT CARD
CHECK
PAYMENT NOT RECEIVED
PAYMENT RECEIVED
REJECT BOOKING
BOOKED PRODUCT
END