SOFTWARE TESTING ASSIGNMENT

MODULE – 1 (FUNDAMENTAL)

1) What is SDLC?

Ans :

→ SDLC is the process for the development of software or application.

→For Planning, Implementation, testing, documentation, deployment and maintenance.

→Software Development Life Cycle process used by software industry to design, develop and test software's

2) What is software testing?

Ans :

→Software testing is the process used to identify the correctness, completeness and quality of software .

→Software testing is the part of software development process.

→Software testing is an activity to detect and identify the defects in the software.

→The objective of testing is to release quality product to the client.

3) What is Agile Methodology?

Ans :

→Agile SDLC model is a combination of iterative and incremental process models with focus on process adaptability and customer satisfaction by rapid delivery of working software product.

→Agile method break the product into small incremental builds.

→Agile model believes that every project needs to be handled differently and the existing methods used to be tailored to best suit the project requirements. In agile the tasks are divided to time boxes to deliver specific features for a release.

4) What is SRS?

Ans :

→SRS (software requirements specification document) is nothing but one kind of document in which there is complete description of the behavior of the system to be developed.

→SRS includes a set of use cases that describe all of the interactions that the user will have with the software.

→Use cases are also known as functional requirements. In addition cases, the SRS also contains nonfunctional requirements.

→Non-functional requirements are requirements which impose constraints on the design or implementation (such as performance requirements, quality standards, or design constraints)

5) What is OOP?

Ans :

→Identifying objects and assigning responsibilities to these objects.

→Objects communicate to other objects by sending messages.

→Messages are received by the methods of an object.

→An object is like a black box

→The internal details are hidden

→Object is derived from abstract data type.

→Object oriented programming has a web of interacting objects, each house keeping its own state

→Object of a program interact by sending messages to each other

6) Write Basic Concepts of oops

Ans :

→Object

→Class

→Encapsulation

→Inheritance

→Polymorphism

@ Overriding

@ Overloading

→Abstraction

7) What is Object?

Ans :

→Any entity which has own state and behavior that is called an object. (Ex : Any living thing)

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

→An object is anything to which concept applies

→That is both data and fuction that operate on data are bundled as a unit called as object.

8) What is class?

Ans :

→Collection of objects (Ex : Human body **)**

→When you define a class you define a blueprint for an object.

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

→Class can be considered as the blueprint or definition or a template for an object and describes the properties and behavior of that object, but without any actual existence.

9) What is Encapsulation?

Ans :

→Binding of data/ wrapping up of data (Ex : capsule)

→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 in java is the process of wrapping up of data (properities) and behavior (method) of an object into a single unit: and the unit here is a class (or interface)

→Enca[sulation in plain English means to enclose or be enclosed in or as if in a capsule. In java, a class is the capsule (or unit).

10)What is Inheritance?

Ans :

→When one object acquire all the properties and behavior of parent class.

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

→One of the most useful aspects of object oriented programming is code reusability. As the name suggests inheritance is the process of forming a new class from an existing class that is from the existing class called as base class, new class is formed called as derived class.

→This is very important concept of object oriented programming since. This feature to reduce the code size.

→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.

11)What is polymorphism?

Ans :

→Many ways to perform anything (Ex: Roadways)

→Polymorphism means having many forms

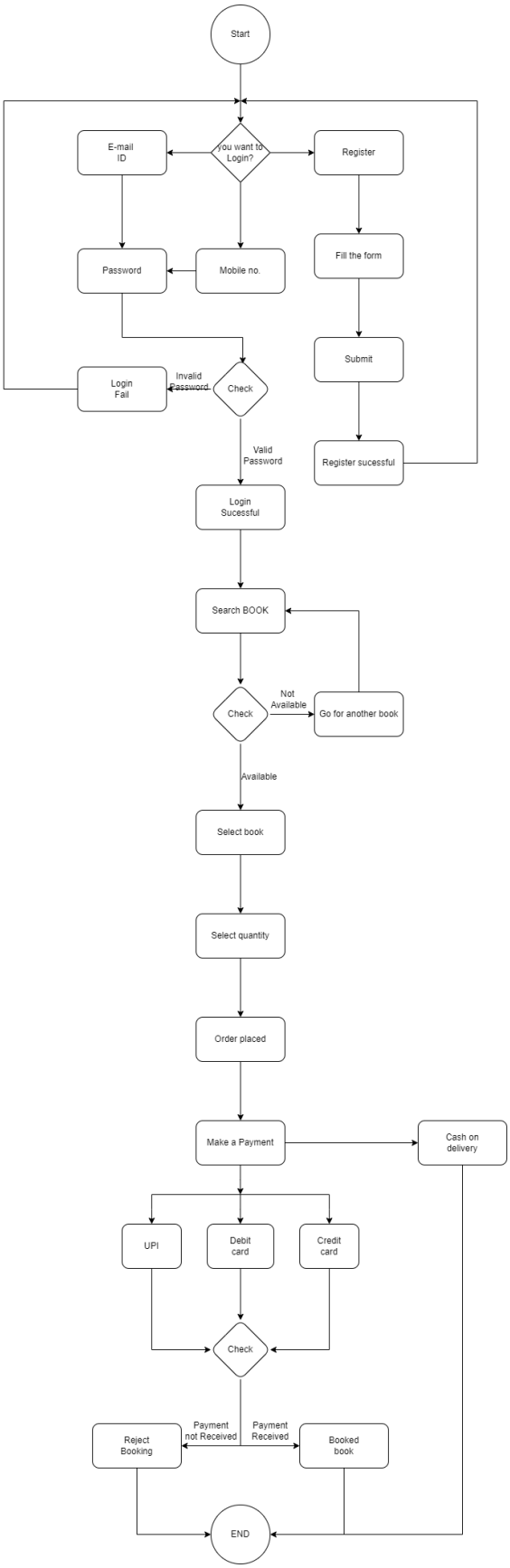
→it allows different objects to respond to the same message in different ways, the response specific to the type of the object.

→The most important aspect of an object is its behavior. A behavior 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.

12)Draw usecase on Online book shopping.

Ans :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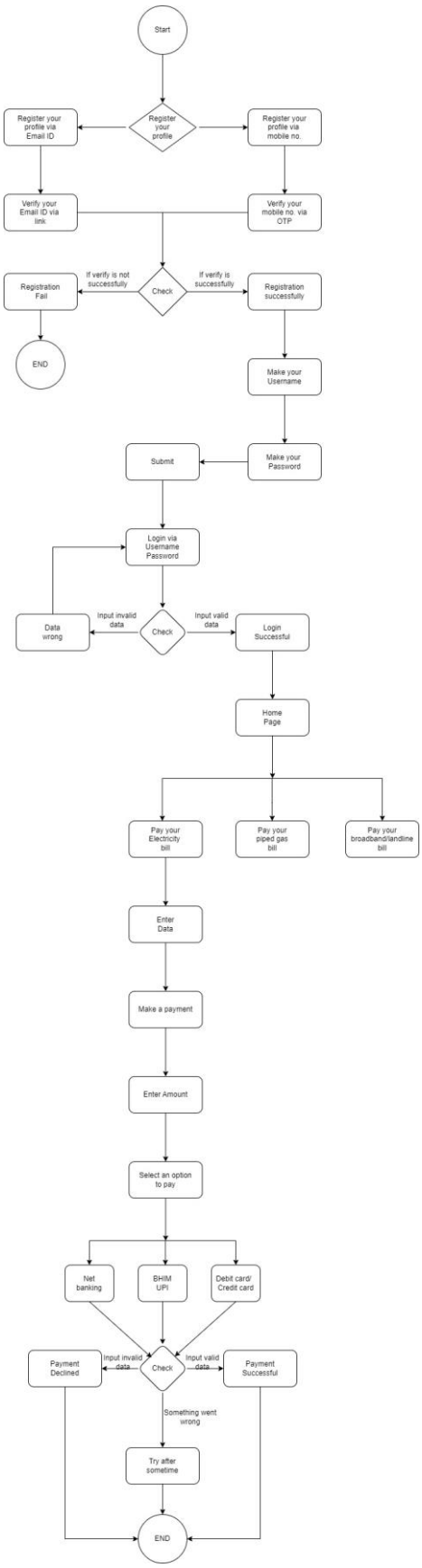
E-mail ID
Register
Password
Mobile no.
Fill the form
Submit
Login Fail
Invalid Password
Check
Valid Password
Register sucessful
Login Sucessful
Search BOOK
Check
Not Available
Go for another book
Available
Select book
Select quantity
Order placed
Make a Payment
Cash on delivery
UPI
Debit card
Credit card
Check
Payment not Received
Payment Received
Reject Booking
Booked book
END

13)Draw usecase on online bill payment system (paytm)

Ans :



14)Write SDLC phases with basic introduction?

→**Requirement Gathering:** The first phase of SDLC is requirement gathering from customer. Here we gathered requirement of functional and non-functional requirements by cutomer

→**Analysis :** The second phase of SDLC is analysis of gathered requirements from customer. And analyze how these requirements will be accomplished.

→**Design :** The third phase of SDLC is design phase, on the basis of analysis of gathered requirement. In this phase the software design documents are prepared. There are two kind of design document HLD & LLD

→**Implementation :** The forth phase of SDLC is implementation In this phase developer start the develop build by writing the code.

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

→**Maintenance :** The sixth phase of SDLC is maintenance,the maintenance phase comes after deployment of software. The maintenance can do by 3 technique

Corrective maintenance

Adaptive maintenance

Perfective maintenance

15)Explain phases of waterfall model

Ans :

The waterfall model is classical lifecycle model. There is some phases as below.

- Requirement collection
- Analysis
- Design
- Implementation
- Testing
- Maintenance

→**Requirement collection :** The aim of this phase is to understand the need of the customer. The team will collect the requirement from customer and also convince the customer if any requirement not suit.

→**Analysis :** The aim of this phase is to understand the exact requirement of customer and document them properly.Both the customer and developer work together so as to document all fuctions, performance and interfacing requirement of the software.

→**Design :** This phase aim to transform requirement gathered into a suitable form. It defines overall software architecture with high level and detail design.

→**Implementation :** During this phase design is implemented . if design document is ready than coding phase proceed smoothly.

→**Testing :** This phase is highly crucial as the quality of the end product determined by the testing phase. The better ouput will give the quality product to the customer and low maintenance after deployment.

→**Maintenance :** Maintenance is the task performed by every user once the software has been delivered to the customer.

16)Write the phases of spiral model

Ans :

1) Planning
2) Risk analysis
3) Engineering/construct
4) Customer evaluation

17)Explain working methodology of agile model and also write pros and cons.

Ans :

Agile SDLC model is a combination of iterative and incremental process models with focus on process adaptability and customer satisfaction by rapid delivery of working software product.

→ The agile methodology is a way to manage a project by breaking it up into several phases. It involves constant collaboration with stakeholders and continues improvement at every stage.

→Pros :

- It is a very realistic approach to software development.
- Promotes team work and cross training.
- Functionality can be developed rapidly and demonstrated.
- Resource requirement are minimum.
- Suitable for fix and changing requirements.
- Delivers early partial working solution
- Good model for environments that change steadily.
- Minimal rules, documentation easily employed.

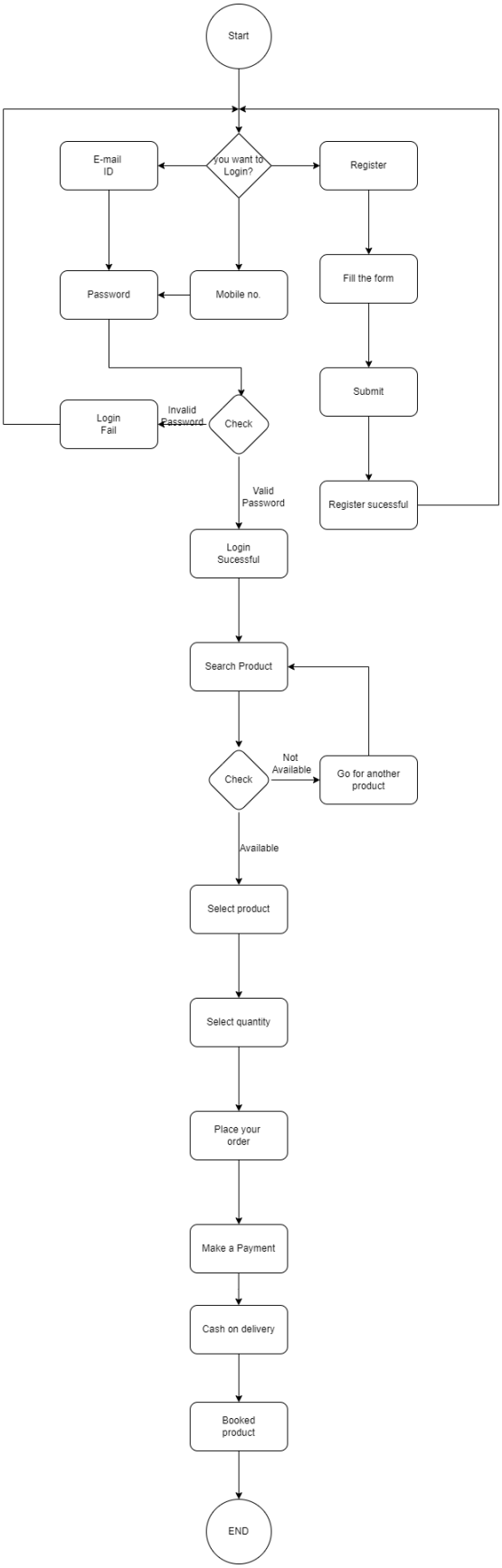
→Cons :

- Not suitable for complex dependencies.

- More risk for sustainability, maintainability and extensibility.
- Strict delivery management dictates the scope, functionality to be delivered and adjustments to meet the deadlines.
- Depends heavily on customer interaction, so if customer is not clear , team can be driven in the wrong direction.
- There is very high individual dependency, since there is minimum documentation generated.
- Transfer of technology to new team members may be quite challenging due to lack of documentation.

18) Draw usecase on Online shopping product using COD

Ans :


Start
you want to Login?
E-mail ID
Register
Password
Mobile no.
Fill the form
Submit
Login Fail
Invalid Password
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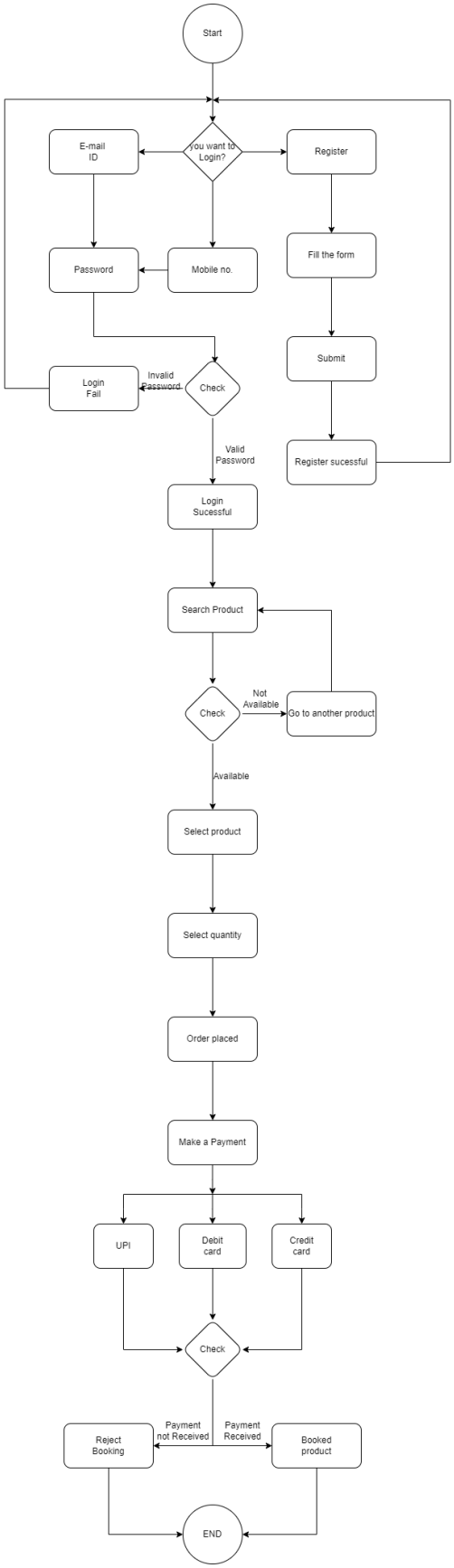
Register sucessful
Valid Password
Login Sucessful
Search Product
Check
Not Available
Go for another product
Available
Select product
Select quantity
Place your order
Make a Payment
Cash on delivery
Booked product
END

19)Draw usecase on Online shopping product using payment gateway.

Ans :


Start
you want to Login?
E-mail ID
Register
Password
Mobile no.
Fill the form
Submit
Login Fail
Invalid Password
Check
Valid Password
Register sucessful
Login Sucessful
Search Product
Check
Not Available
Go to another product
Available
Select product
Select quantity
Order placed
Make a Payment
UPI
Debit card
Credit card
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Payment not Received
Payment Received
Booked product
END