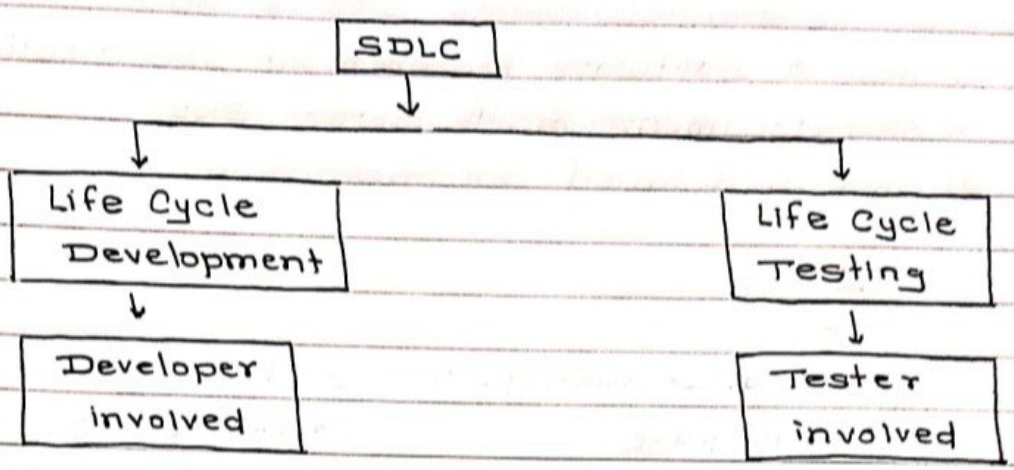
7) Software Development life Cycle. (SDLC)

→ SDLC has two types.



→ Stages in SDLC.

① Information Gathering
↓
② Analysis
↓
③ Design
↓
④ Coding (Development)
↓
⑤ Testing
↓
⑥ maintainance.

① Information Gathering

1) Business Analyst is responsible for Information Gathe
2) Info gathering is nothing but requirement gathering from customer.
3) Information gathering involve business requirem Specification. (BRS).
4) BRS is bridge between client → Developer, Tester.
5) Business Analyst prepare BRS documents.

② Analysis

1) Business Analyst involve in this process.
2) In the analysis phase SRS is made.
3) SRS → software requirement specification.
4) SRS document made after BRS.
5) SRS is detailed documentation.

BRS	SRS
1) Gather req. Ex. Banking proj. → Sign up page → Home page → Acc info. → contacts → links.	1) Same ex. → sign up page should have Name, num, email, password field.
↓ This is overall requirement gathering	↓ This is detailed specification which shows minor units of slw.

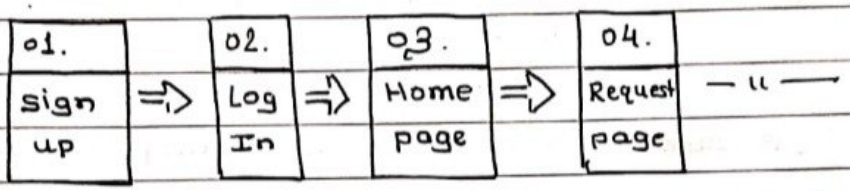
Lecture 2 25-6-19

6) SRS - Functional requirement specification.
7) From BRS documentation SRS document get generate
8) SRS ducumentation include:
   (i) Functional flow diagram
   ⇓
   (ii) Functional Requirement
   ⇓
   (iii) Use cases
   ⇓
   (iv) Snap Shots.

Page No.:
Date:

(i) Functional flow diagrams

→ Functional flow diagram means flow of our task.
→ This flow shows relationship between the tasks.
→ This give proper sequence of task.
→ Relationship of function means dependancy of each function.
→ Example facebook:



The functional flow diagram look like this.
→ Overall this functional flow diagram is actually a stepwise representation of software.

(ii) Functional Requirement

→ Functional Requirement means attributes which are required to complete a specific function.
→ Now we have SignUp function.
→ For sign up, its requirements are;

First Name;
Last Name;
Mobile Number;
Email ID;
Password;
submit button;

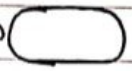
→ For first Name: ① Name should be in character
② Name do not have numbers.
③ It should not have spaces.
④ It should'nt have special symbols.

so like this, these all the requirements should get fullfil in this phase.

(iii) Use Case

1) It is the functionality in terms of i/p & o/p.
2) Now consider the example of online shopping
3) online shoping has users are customers & Bank.
4) Admin of s/w is company person.
5) Now use case for o/l shopping is:-

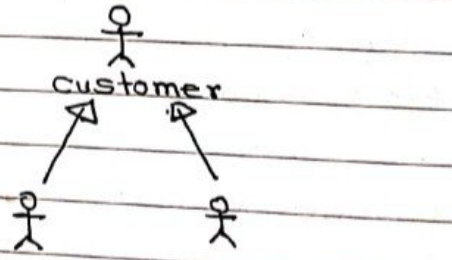
(i)  (actor) = the person/Group of people/system who interact with system.

(ii)  (use case) = It is the functionality or operation.

(iii) —— = Link.

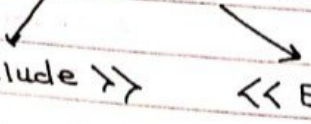
(iv) —▷ =1) Generalization.

2) Now generalization is the part.
3) Customer can be of two type
registered Not registered.
4) so generalization is shown as



(v) ------> = relationship.

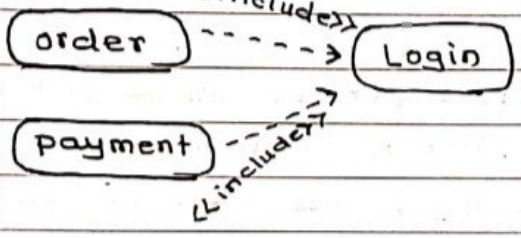
1) Relationship is of two types.



<<include>>

1) In online shopping process customer can not order & pay for things without loged in to the system.

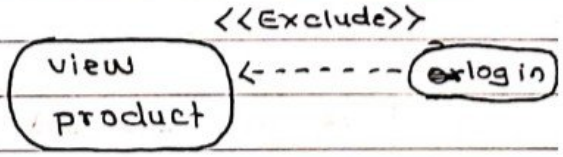
2) So include relt^n is



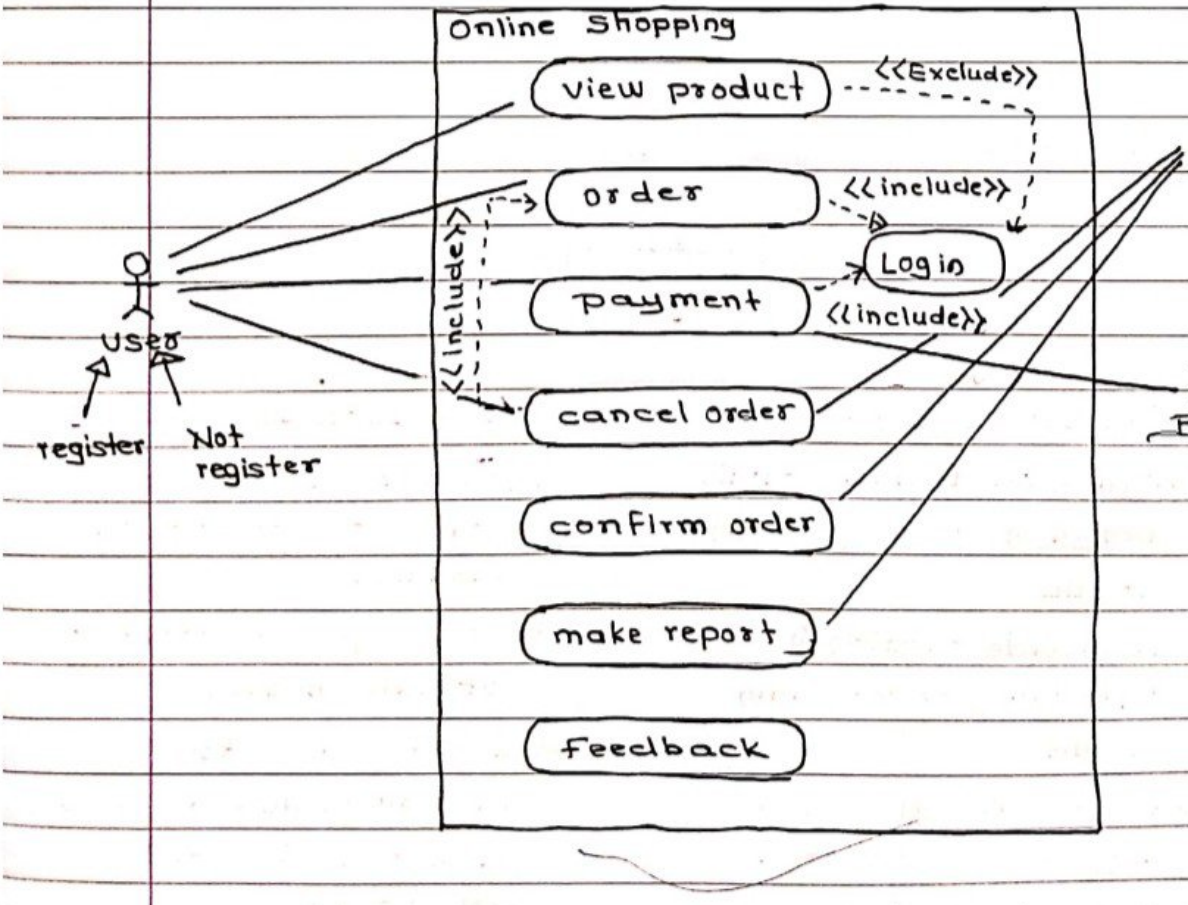
<<Exclude>>

1) In the online shopping customer can view the product it nd upon whet ge in or not.

2) So exclude relation is



→ use case for online shopping



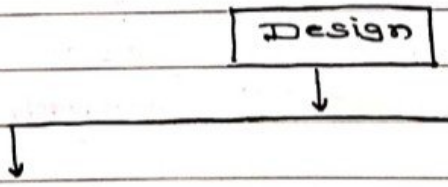
Date: YOUVA

(iv) Snap shot

1) Snapshots are visualization of functionalities before development of product.
2) Snapshots are created by the B... aly
3) Business Analyst create snapshot by using IRise software.
4) Snapshot give idea to developer that how slw suppose to look like.

/* SRS is send to the developer as well as coder */
/* When coder is developing the code slw tester do [Test case design] & [Test case execution Design]
↓
How to do Testing

(3) Design

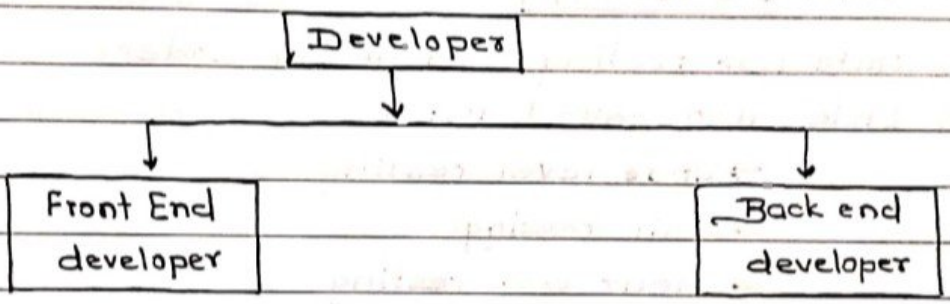


High Level Design	Low Level Design
1) High level design contain design of working of main module.	1) Low level design include static logic of every sub module.
2) It include relation & dependancy of the main modules.	2) It's design for working of sub modules.
3) It include what & how any module do work.	3) In sign up page, sign up is main module & Name, number, Email, are the sub module.
4) High level design is created by design Architecture	4) proper working means - number field should accept all number from indian companies

5) Low level design is created by the front end developer.

④ Coding

1) Coding means programming.
2) One line is code.
3) multiple lines of code is called progran
4) set of programs written by the develo, .es software
5) There are two types of developer.



1) U.I., functionalities, function flows, process are developed by the front end developer.

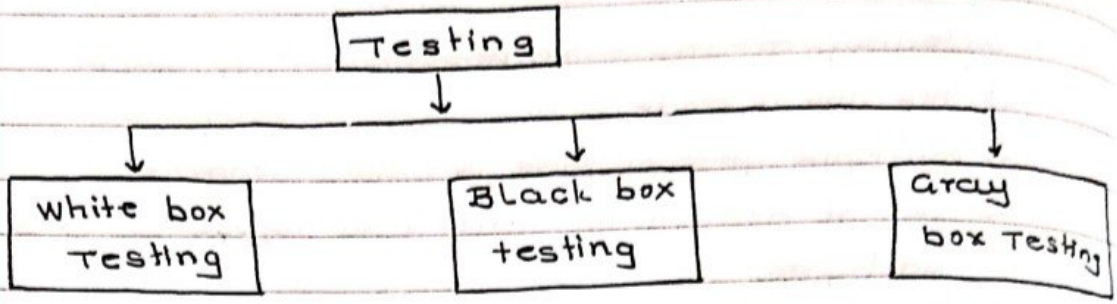
1) Data management
2) Data Gathering
3) Data security
4) Algorithm selection is done by back end developer

person / developer who can work as front end developer as well as back end developer is called full stack developer

Lecture -3
Date - 26-6-19

⑤ Testing

→ Testing is the process of checking [illegible]ness & correctness of the software.



(i) white box testing

1) White box testing is done by Coder.
2) It is also called as:
   - ↳ code level testing
   - ↳ Unit testing
   - ↳ clear box testing.
3) In the white box testing whenever coder complete his code writening, he checks 'or compile code, then if any bug found, coder have to solve it.
4) Coder can not send code to tested without doing white box testing.
5) Coder check or test only positive scenario.
6) White box testing has purpose to test correctness and completness of the program.

Page No.
Date
YOUVA

(ii) Black box testing

1) Black box testing is also known as system & function testing.
2) This testing is done by the Tester.
3) Overall functionality get checked in this type.
4) Tester check internal functionality depend upon external functionality.
5) Ex: Tester check whenever data in sign module got entered, & user press sign up button, this button is process to store entered data. Tester check whether the data is stored correctly or not. So here internal functionality is storing of data & external functionality is filling up data in fields & submit button's process.
6) Tester test the +ve as well as -ve scenario.

+ve scenario	-ve scenario
if there is mobile number field, in india mob. num. are of 10 digits, then tester check field functionality by entering 10 digit numbers whether it works or not.	Let us take same example the number field should not accept 9 digit or less & more than 10 digits, tester check system by entering less than 10 digit & more than 10 digits.

(iii) Gray box testing

1) Gray box testing is combination of white box testing and black box testing.
2) Tester is involve in this testing.
3) To do gray box testing, tester need programming knowledge
4) The role of Gray Box tester is, whenever final s/w is handed over to tester, tester chk its functionality & if any fault occure in the o/p of function then tester does not

revert system back to developer, instead of that tester himself solve or make changes in the code. So knowledge of coding is required.

(6) maintainance

1) maintainance means provide servi... of the project.
2) Company named as Tech mahindra provide support to customer of vodaphone, Jio.
3) maintainance involve Non technical support as well as technical support.
4) Non technical support is called BPO.
5) Technical support is called KPO.

SDLC.

1) Requirement Gathering (B.A. → BRS)
⇩
2) Analysis → SRS (B.A.)
- ↳ functional flow diagram
- ↳ functional Requirement
- ↳ Use cases
- ↳ snap shots.

⇩
3) Design → High level (main module) (design Arch.) | low level. (sub module) (front end dev)
⇩
4) coding → set of program to create s/w.
- front end dev. → UI, funct^n, design site map.
- Back end dev. → data manipulat^n security & algo.

5) Testing : white box, black box, Gray box.