Risk analysis for
Modern Is strategy
~~sy~~ cybersecurity & threats
operation-risk
cost
D. quality
stackholder communication
agility
Legacy integration
over-raliance

Sw

1980 → IS

Modern AI (gen-AI)

Foundation

auto-

SDLC + Is impact
- Feasibt RA
- Design (GUI, archi)
- Imp & test
- deploy & Maintenance

agentic-AI
LLM agent

Large Language
- chatbot
chatgpt

2022
Massive Language Model

stack

view team member / AI-teammate

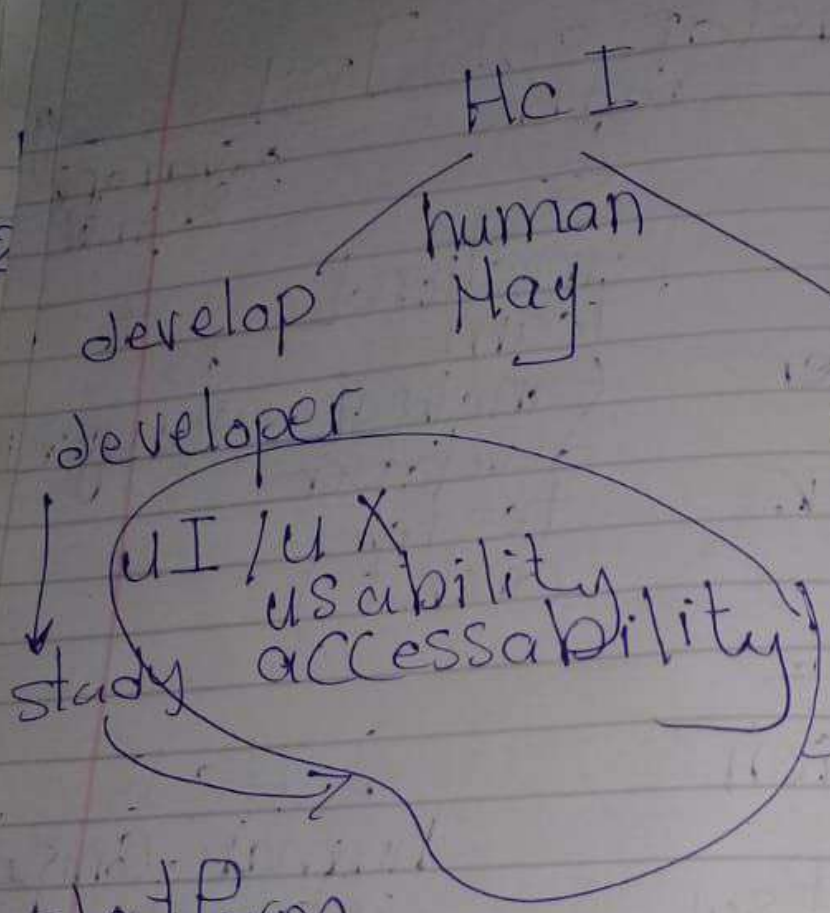
H-AI interaction

human-Centric-process

~~data~~ ~~Centric~~ capabilities

↓

governance


HcI
human
Hay
develop
developer
user
enduser
study
UI/UX
usability
accessability
for
platform
tool
ide

[develop sw] PM

direct → sponser, stakholder, enduser.

work → Functional team (analyst, developer, tester, archit).

governing & control → Manager

at attire:

organization

Language of sw

HCI human-Computer interaction

Is / sw impact

technology	Hw, sw, tool, Net
process	Bus. Logic
human	HCI
economy/fin	budgest (cost)
ethics	rule, regulations
socity	privacy →

strategy pattern

organization culture

hierachy - aim - plan / work approach - customer attitude behaviour

in society rules, regulation

people

human

society

direct work governaing

control

client employee Manager

ch1 → ch5

social → socio-technology

human impact factor in technology side when use technology

technology impact

developer (team sw)

use (enduser...)

Hw, sw, network, tools

1. education/training
2. team communication
   - AI-teammember
   - visual teamwork
3. control & governance
4. trust
5. cognitive work

For availability achieve by 19

SDLC

1- platform (Language)

2-deploy/operation: ① Load-balance
fault_tolerance
② Multi_tier_server
3-regional cloud

3- Backup

4- scope (services common & multi used-frequently used

5- eliminate single point of failure

6- Data redundancy (replica)

Static

Analysis

design

implem

test + maint

nts

Crateria (*) performance C1

F1 = Factor

1- speed = response time
2.2 delay time (Latency) → network

throughput → validation

2- computation = (resources) (RAM - processer)

3- D. transfer

nonfunctional requirements

1- avaliablity
2- security
3- relability
4- usabilitye
5- scalability
6- maintenability
7- capacity (Load)
8- portability
9- accesability

endurer

task

Matrix measurements

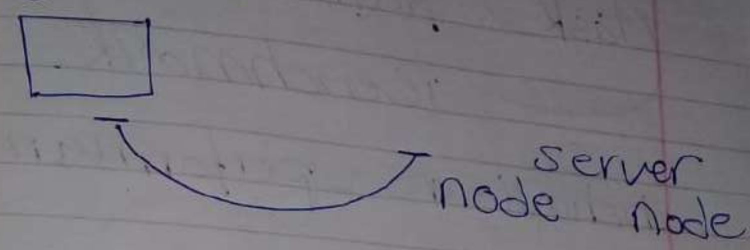
Benchmark.

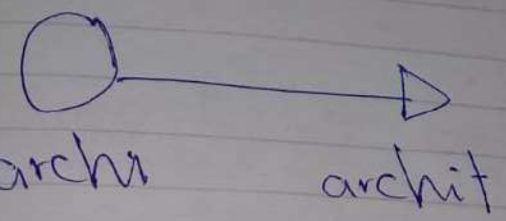
-behaviour -performance

28/10

16

Migration





system requirements

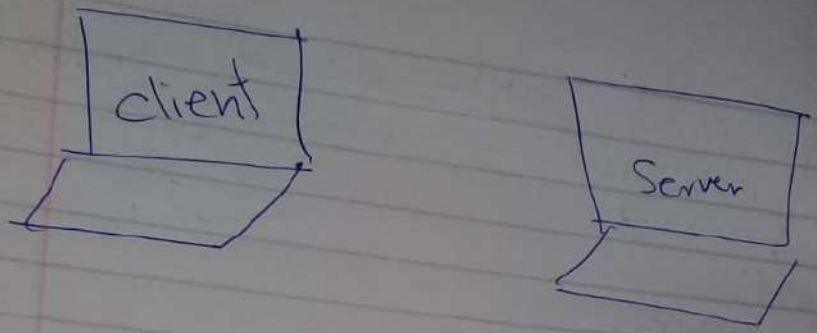
Function

non-f

= quality

1. speed

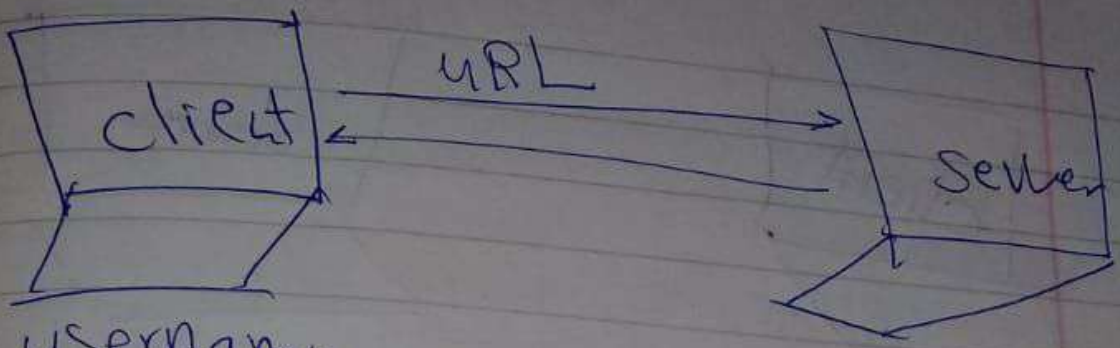
[illegible]



Cookies

cloud - architecture

(*) software architecture
what is
→ which system's
requirement ~~with~~
~~chiefe~~ do handle by
software architure?
How?



username
password

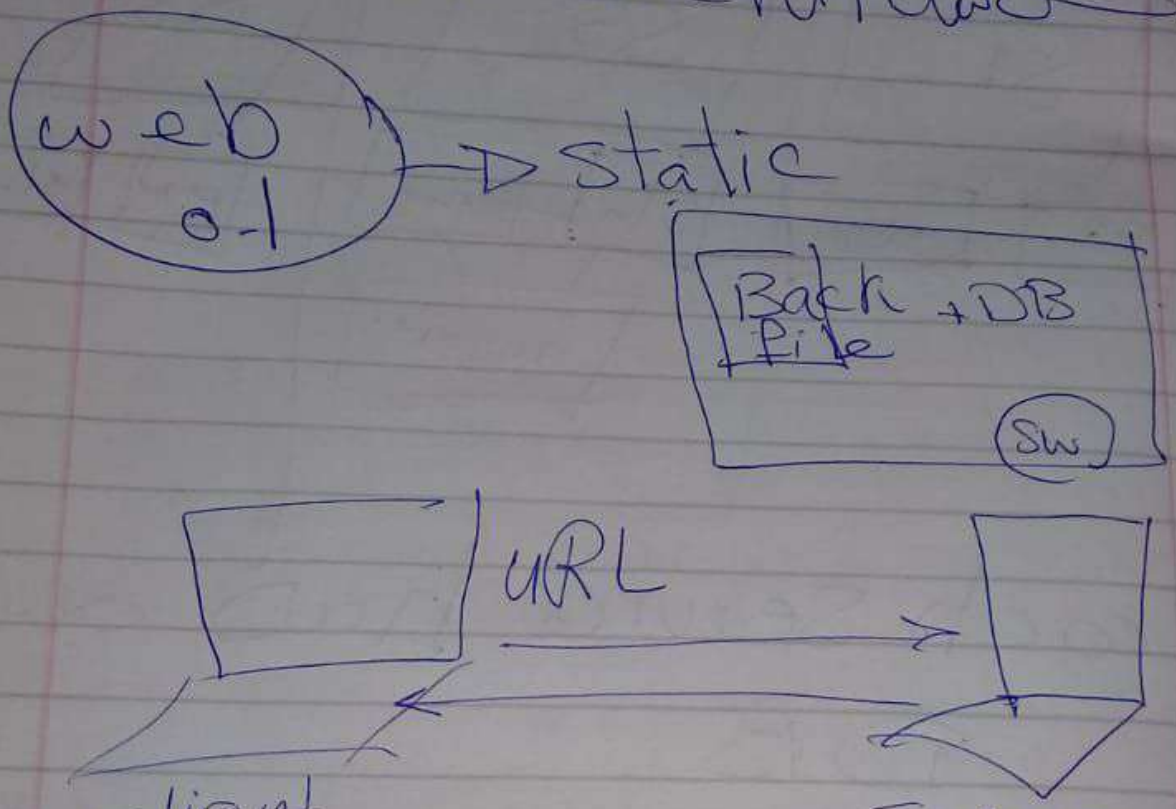
1- validation Rule input
2- validation existance Data

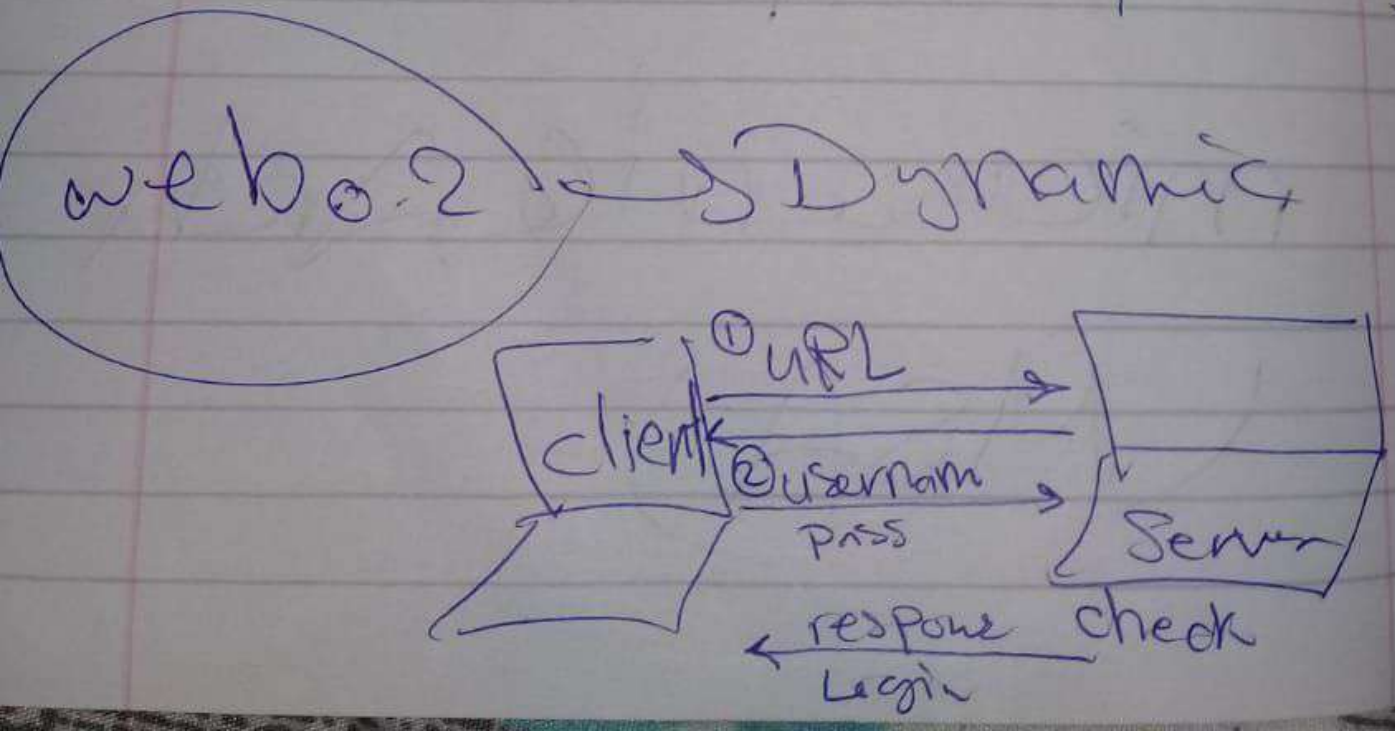
done by client

by server

web application

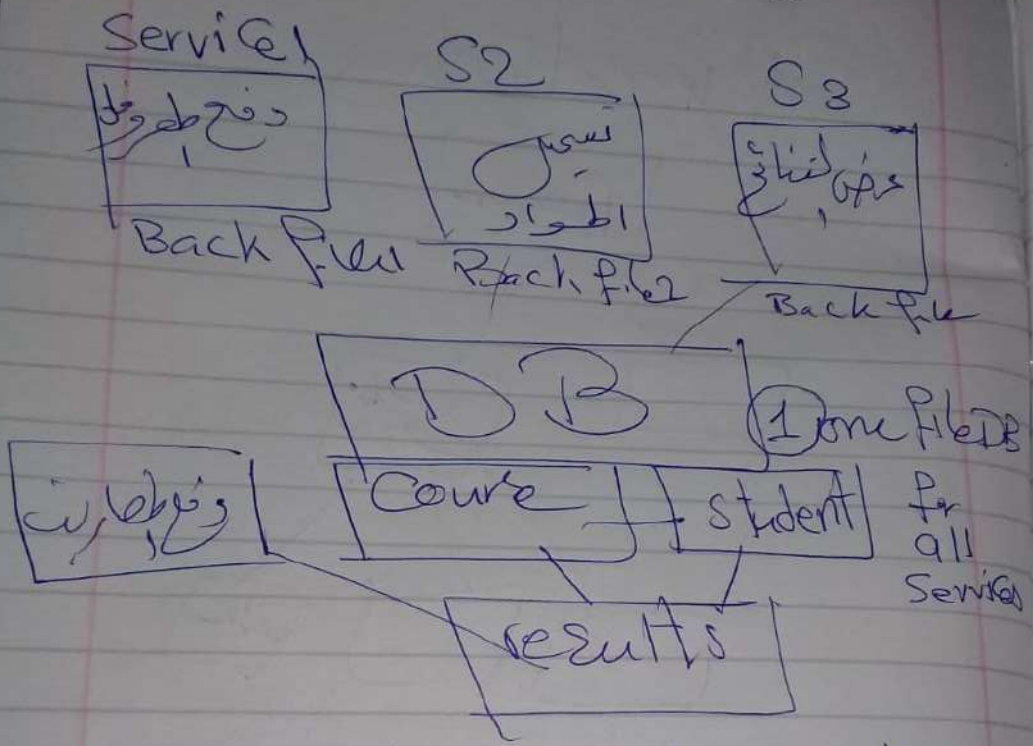
client-server architecture





each service has own DB

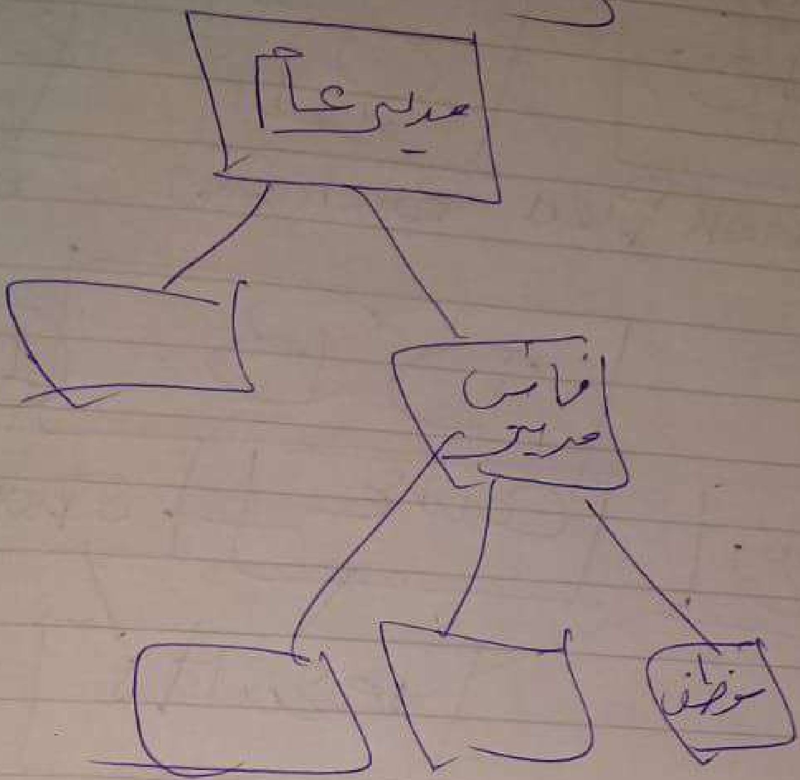
independent microservice Arch. (MSA)



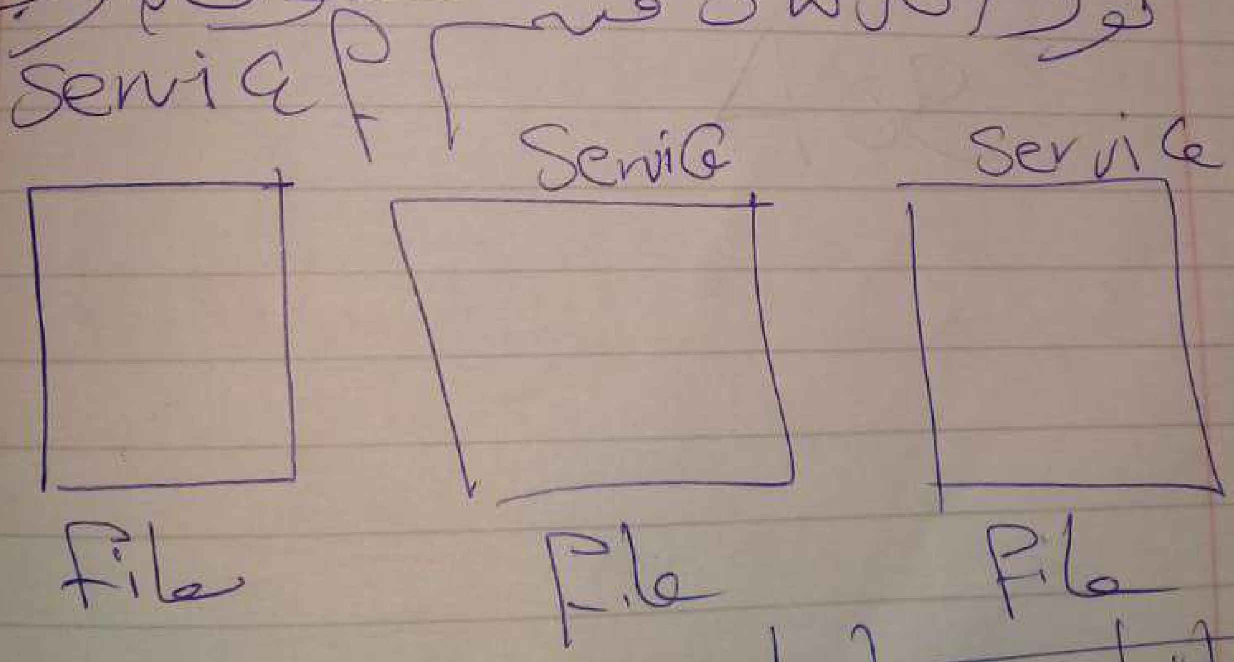
Service-oriented Arch.

SOA

hierarchy



كود انالاكس قسم [illegible]



service-~~oriented~~ architecture

(~~SOA~~)

One File for Solution (Business Logic B-Rule)

Legacy sys.

Monolith architecture

Σ departments

$= \Sigma$ domains

دومين

وسم واحد

$= \Sigma$ services // Functions

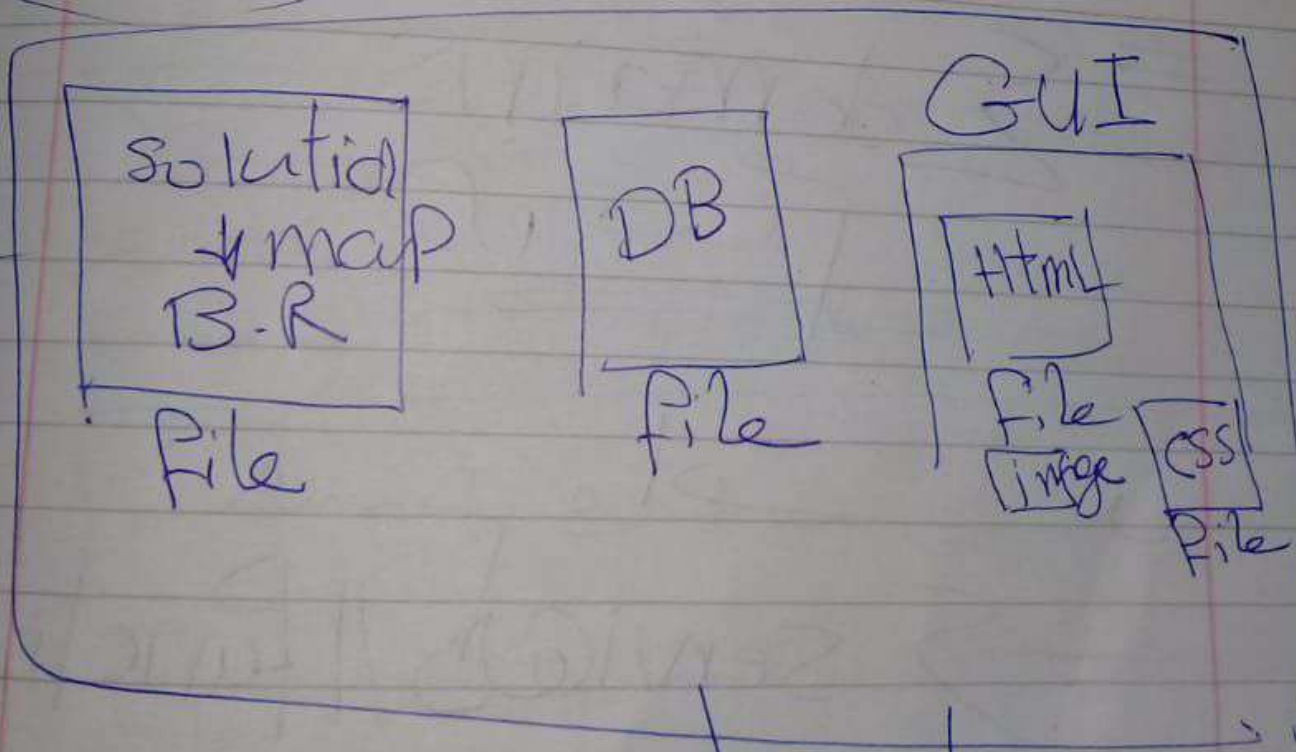
requirements

non funct R.

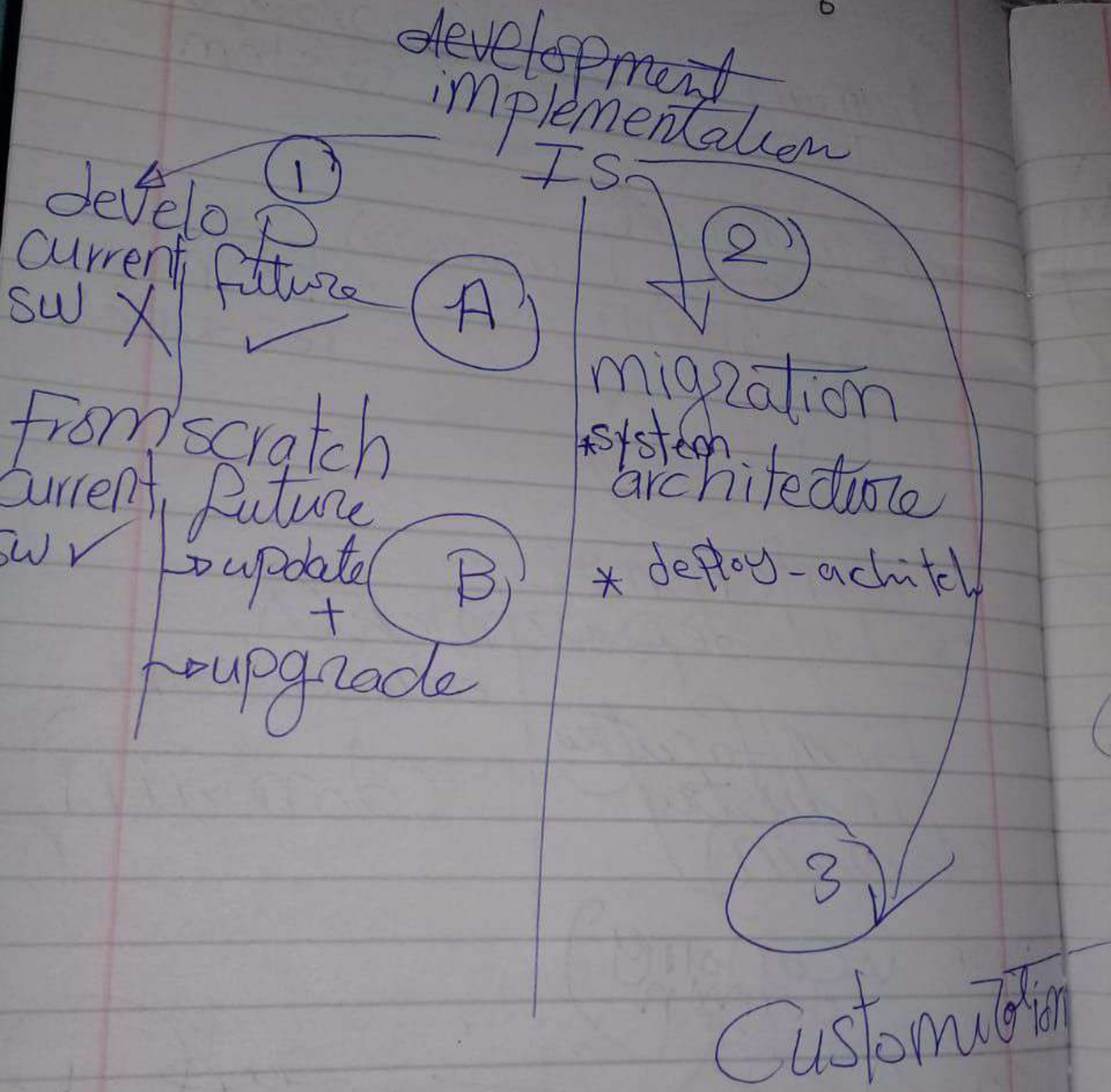
functional R.

availabl? 2 3
Relab? 1 2
Secu? 3 1
(Faculty)

(Bank)

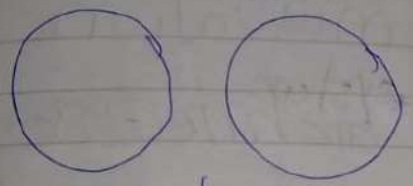


Program | IS | SW = $\sum$ 3File

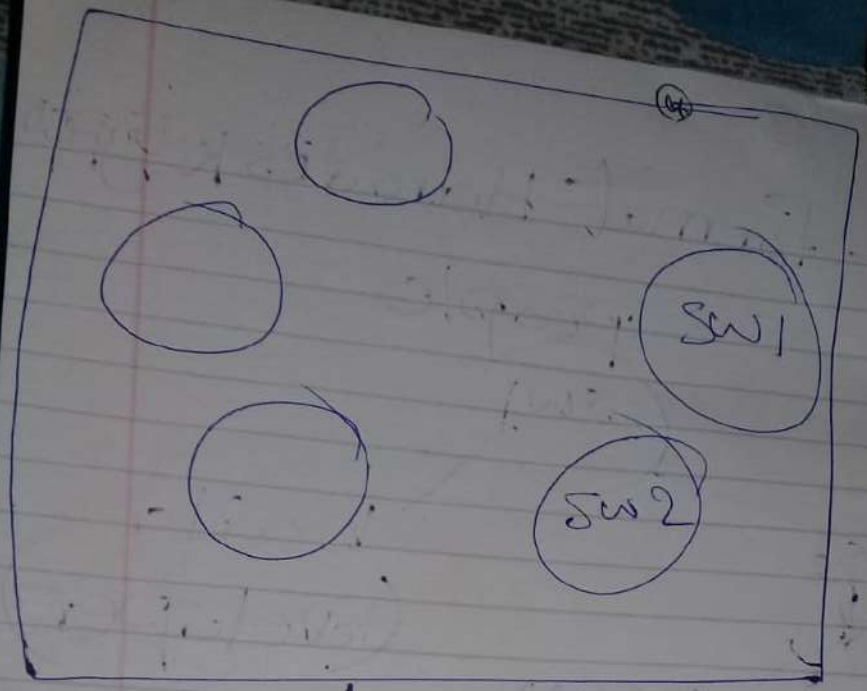

development
implementation
IS
1
develo
current
sw X
future
A
From scratch
current
sw
future
update
+
upgrade
B
2
migration
*system
architecture
* deploy - architch
3
customization

Human centered approach
Is → social system

* requirement
→ people, Business Domain → human resources



Enterprise
EU / departments
Firm/factory industry (domain)
education (domain)
Bank (economy domain)

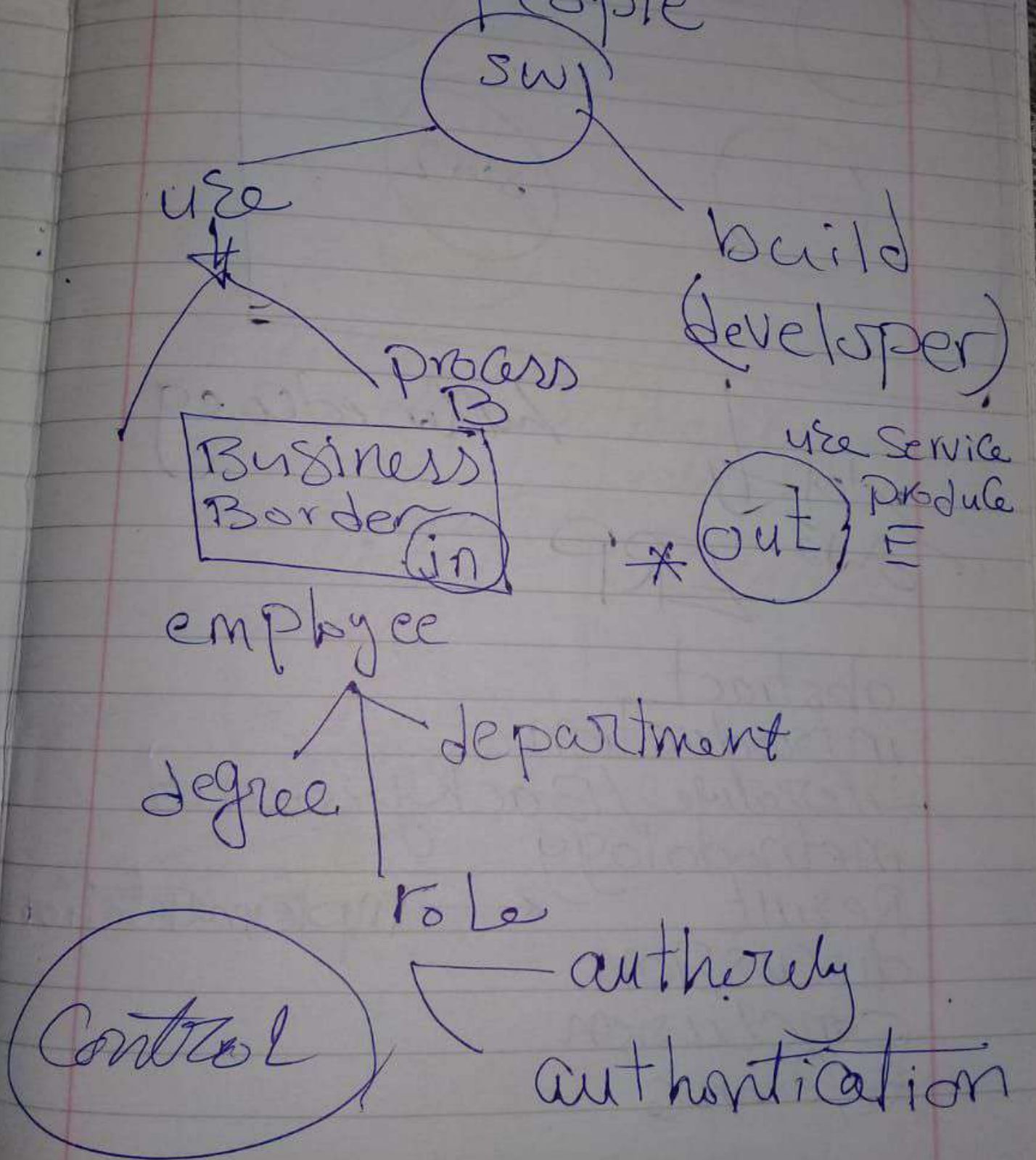


ERP

abstract
introduction
literature / Background
methodology ← implementation
Result
discussion
conclusion
Referance

③

— format Harddesk types



②

CaPPee

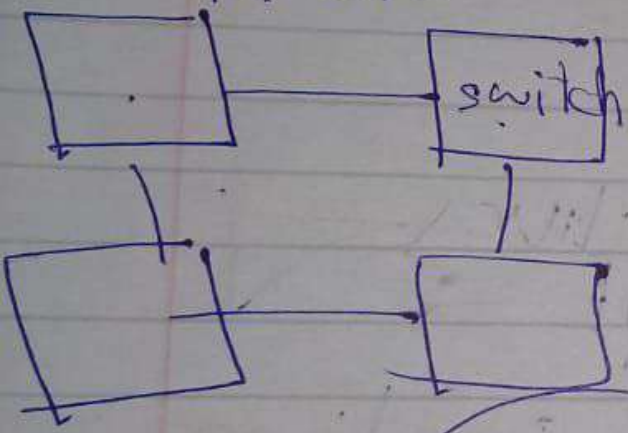
① Branches system

② sy

Distributed

Centralized

Router = i. T-network Data solution



IP switch

IS

C - Hw Sw network people Business

① Is strategy = Long term innovation idea تسجيل اكواد Plan

i T + Business strategy

compitition

Enterprise

achieve objectives (goal + Time + transaction

منتج ← صناعة

② scale ← horizental / vertical

switch / Router

network types / Topology