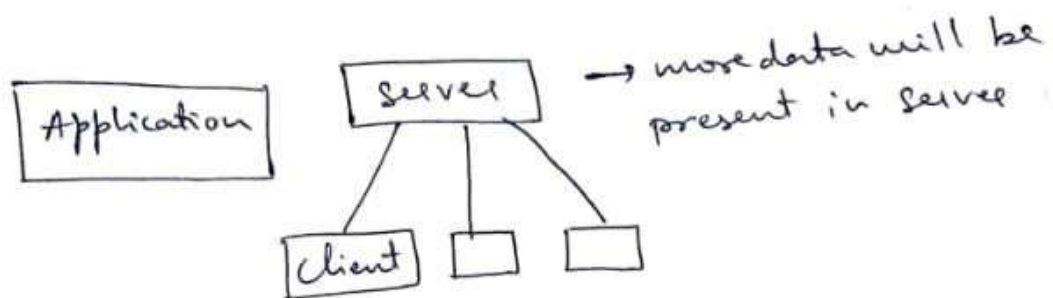


The Evolution of the Software Industry

From Binary to High-Level Language and Beyond.

⇒ Continue of yesterday part 2.

Around 2000's two important things happened which made a big impact on IT industry



and that is called Dot Com Bubble

* what item you take it will be in .com (commercial)
 Eg: Flower.com
 Cars.com etc.

* But world was not ready because of lack of Technology like delivery technology, consumer tracking technology, Banking online.

* within 6-9 months they got to know that the money they invested they are not getting it back

* VC stopped the additional Investment.

* year 2000's Y2K issue is ~~the~~ one of the interesting issue.

earlier computers - 1950 → 1990
 → 1970

year

~~70~~
70

* To save the memory they use to save using 2 digits.

Eg: Jan 1st 1970

1-1-70 in system.

many like govt system, military system, security system, Business system they used to save only two digits to save the memory:

- * Somewhere around 1995/96 one guy said the above technique will make us problem (1)

How means.

12 - 31 - 1999 at 12am

1 - 1 - 2000

System think it
like 1900 (1) 2000

but in system we
used to store like

~~99~~ → 99

~~00~~ → 00

- * This confusion will be in
Software

- * In this case we take banking sector as example
 - It may make mistake in calculating interest

- product valently mess up
many financial consequences may occur

- * By luckily in 4-5 year the world recognised the problem and they started resolving

- In 1996-97. They started teaching programming language to many people

- what programming means

→ open software

→ change the year's digit using different datatype

→ Some Software are like we can upgrade
2 digit → 4 digit using datatype

* Coding → testing → changing → deploying
was the job.

* Some Software's are cannot be upgrade because
they were written in old languages

→ they migrated that Software to another
system

→ So many Softwares are rewritten.

* Around 300 → 500 B \$ was invested to overcome
this problem.

* Many Engineer's was hired they trained them for
6 months. sent to US and the programmer
know that particular Skill itself

* After fixing the problem they removed many
people.

⇒ Software Industry widely moved towards
client → Server Architecture

Server

Client

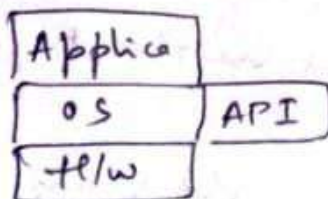


Browser. →

* It became famous

NetScape v/s IE.

Internet Explorer

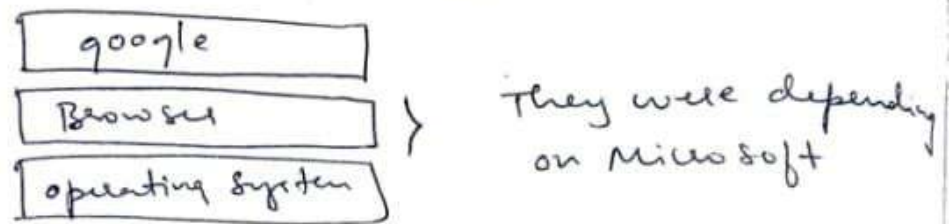


* Case ~~file~~ filed on Microsoft
for giving **OS + IE**

* They paid some fine and
the case filed was
withdrawn

Eg: Firefox was built using the open source code of Netscape

- * The famous product that using client-server Architecture was Search-engine [Google]

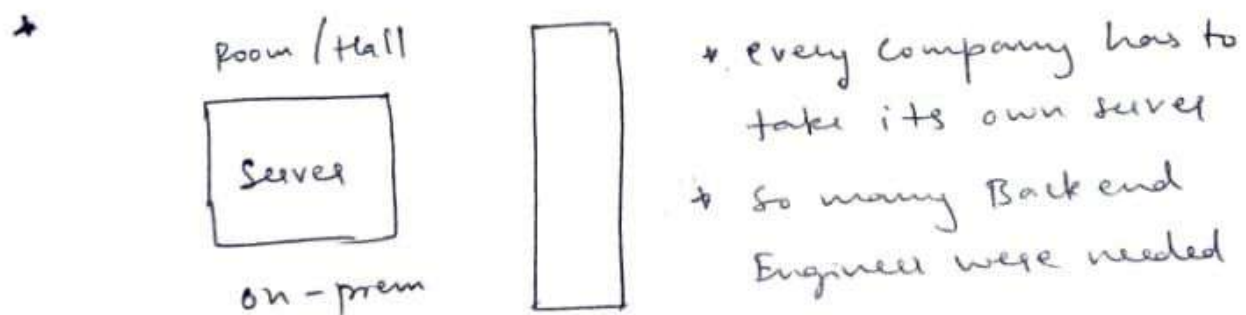


- * To overcome the dependency they built their own browser called Chrome

- * The major advantage of web application is we use JS and if the operating system contains the browser we can easily run the application.

- * JavaScript is Machine Independent

- * For the first time ^{for} Billions users using client server architecture we started delivering the web application
google, facebook, billions of people are using



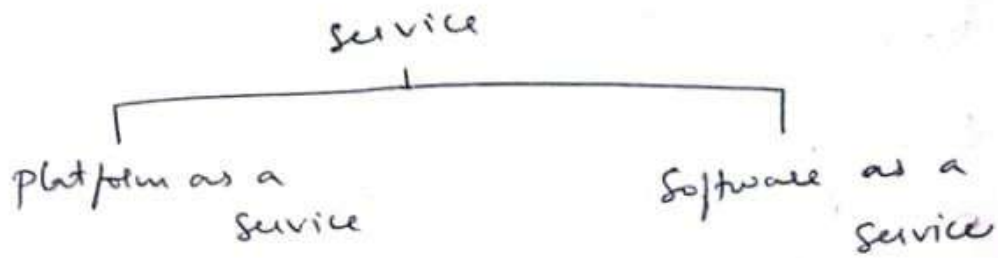
- ↑ the server has to run 24/7 * If it fails also we should have an ability to tolerate it.

- fault tolerance

- ↑ main goal is to run the server without failing it

- ↑ for doing all ^{these} things we need a world class Engineers

- * Amazon, Microsoft gave the servers as a services



where on-prem → cloud happend

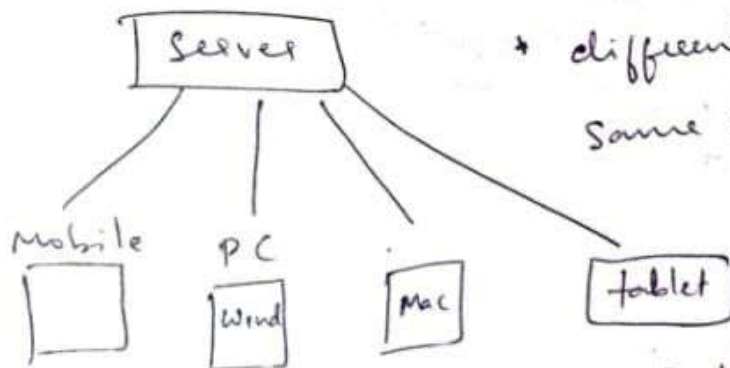
After 2000's Mobile Revolution.

there was a drawback that browser has to be run only in laptop

- * Mobile phone made computing accessable to large no. of people

Mobile == Mini computer

- * Mobile Application developers role started.



* different client same server

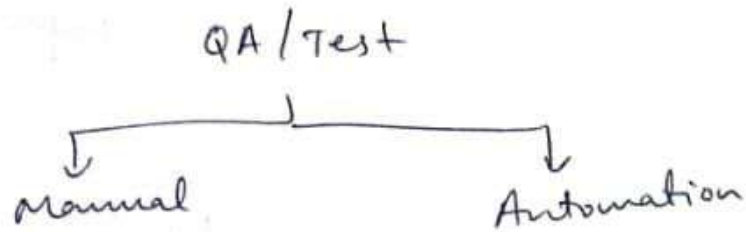
- * B2C revolution has come because of this

This year LLM's & GPT AI.

- * The software world has to be upgraded in next upcoming day
- * using AI we can take the video then and their in the traffic who has violating and we can generate the bills.

Roles of Software Industry

- Developer / programmer 60-70%
- Quality Assurance / Tester 10-20%
- product / project Managers 10-20%



Eg: Amazon Cart option

- * they were not tested it correctly they just deployed
- * then we can also give the -five value in the no. of item in the cart.
- * Because of this what happen means instead of Money came to the customer Account.
↓
going to Amazon Account.
- * By this many \$ was loss. to Amazon

Eg: NASA

loss 300 million \$ because of the difference in code (datatype) different in two models.

→ Dev / SDET
Dev.

→ DevOps (Developer + operations)

Server s/w as to be bundled/packed that has to be deployed in Server And that has to be done automatically

Dev/Ops
manual

→ SRE (Site Reliability Engineer)

They look after the server down operation to resolve, alter....

→ Security : to protect the data

Cyber Security Expert

→ Cloud Engineer

→ UI / UX

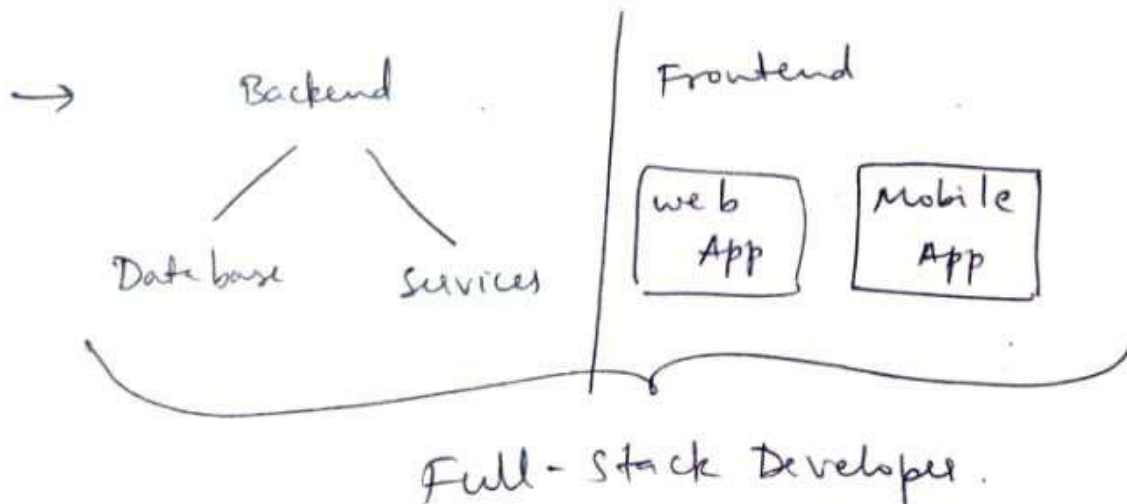
B2C importance become important in this stage

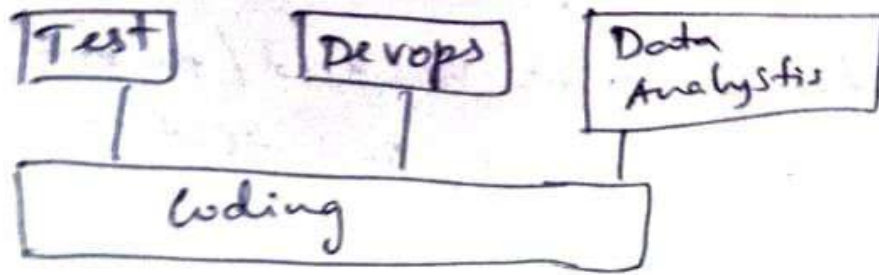
→ Data analyst
Data Scientists

} to understand the data
to get to know about raw material....

→ AI / ML : you are build new model

Quality role will be parallel





- Coding is the foundation for every role