

(Scalability)

Hi everyone my name is Jalal Khan,
Today we're talking about a crucial topic in Software development architecture.

Scalability:-

What is it?

Why imp?

What happen if didn't use?

"Let's dive in"

What is Scalability:-

Scalability is the ability of software to handle increase load - whether it's more users, more data or more requests.

without compromising performance. it's like building a road.

if we make a Road for light traffic and after a month the traffic increases then we double the road as visual always done in Pakistan. 😊

The same applies to Software.

Why Scalability is Imp:-

ensure that our software can handle the extra load. Think about social media platforms like, whatsapp, facebook, Insta etc.

These platform handle millions of users in a single day;

Without Scalability, their services would slow down or crash every time new user joins,

① Example:-

Same as the problem we faced in the lab when all the student visit to a website and the website didn't handle it. This is your personal experience of scalability we ever faced;

② Why Important:-

Performance:-

Scalability ensure your software remain fast no matter how many users access it;

• User Satisfaction:-

- Quick Response Time
- Not slow functioning through any error;

• Future proofing:-

like we host a website on hostinger and then we ~~shift~~ shift to another platform so our website will be scalable to transfer all the data.

☹️ Not Using Scalability:-
if we ignore Scale ability. what happen

Imagine we start a social media platform. It fine with 1000 users but as it grows to millions, problem begins.

[1.] Server Overload:-
• All the incoming request hit single server.
• It would cause slowdown / crashed.

[2.] Database Overload:-
The request and response from database is slowdown because of overloaded.

[3.] Downtime:
Server might be crashed entirely due to overload, causing downtime,
[Load in more time.]

[Wrap-up]:-

Scalability is crucial for any software that want to grow.

Without it, Performance drops, cost increase, users are left. These are main issues.

Thanks for watching, and I hope
this helped you understand why
Scalability is so important. See
you in the next video!

Allah Hafizi