

# Application Architecture and Delivery

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Understanding How Software Is Built and Delivered

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Student Engagement & Mentoring in Technology

# Objectives



Understand different  
application **delivery methods**



Learn about **application  
architecture models**



Prepare for foundational IT  
exams with key concepts



# What is Application Delivery?

Definition: The method by which an application reaches the end user

Relevance: Impacts usability, accessibility, and infrastructure

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# Local Installed Applications

**Installed directly** on the user's device

**No network required**

Examples: Microsoft Word, Adobe Photoshop

**Pros:** Fast performance, offline access

**Cons:** Limited to one machine, harder to update

# Local Network Hosted Applications



**Hosted on local servers**



Accessed via browser over internal network (LAN)



VPN needed for **remote access**



**Pros:** Centralized management



**Cons:** Requires LAN access

# Cloud Hosted Applications

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**Hosted on the internet**, managed by a vendor (SaaS)

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Accessible from anywhere with  
**Internet**

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Examples: Google Workspace,  
Salesforce

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**Pros:** Scalable, easy updates

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**Cons:** Requires constant internet,  
potential data privacy issues

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# Application Delivery Summary Table

Delivery Type	Installation Location	Network Required	Internet Required
Local	User's Computer	No	No
LAN Hosted	Local Server	Yes	No
Cloud Hosted	Cloud Infrastructure	Yes	Yes

What is  
Application  
Architecture?

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**Defines how software  
components are  
structured and interact**

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Organized by **tiers**  
representing layers of  
service

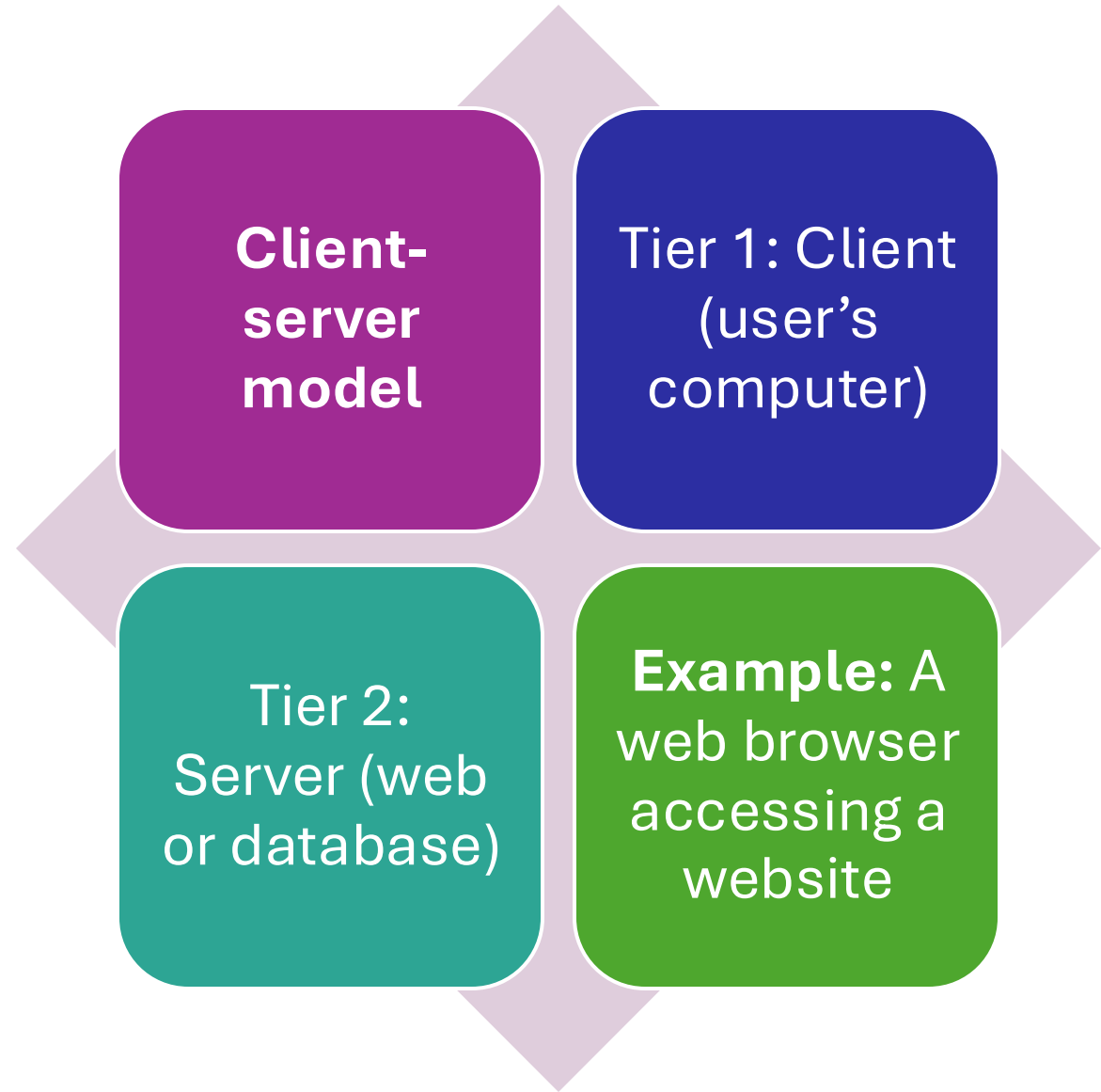
# One-Tier Architecture

The entire application runs on **one machine**

Includes data storage, processing, and presentation

**Example:**  
Standalone local software

# Two-Tier Architecture



# Three-Tier Architecture



Tier 1: Client (presentation)



Tier 2: Web Server (application logic)



Tier 3: Database Server (data storage)



**Example:** E-commerce website handling orders

# N-Tier Architecture



EXTENSION BEYOND THREE  
TIERS



ADDITIONAL SERVICES:  
CACHING, LOAD BALANCING,  
APIS, ANALYTICS, ETC.



DESIGNED FOR **SCALABILITY**  
AND **MODULAR DESIGN**

# Architecture Tier Summary

Architecture	Tiers Included	Use Case
1-Tier	User's Device	Local standalone apps
2-Tier	Client + Web Server	Basic websites
3-Tier	Client + Web Server + Database	Dynamic web apps
N-Tier	Client + Multiple Intermediary Services + Data	Large-scale enterprise applications

# Practice & Review

## Practice Question #1

**Scenario:** Web server +  
database + client

**Q:** What architecture is  
this?

**A:** Three-tier application

# Practice & Review

## Practice Question #2

**Scenario:** Salespeople need access without internet

**Q:** What delivery method is best?

**A: Locally installed application**



# Exam Tips

01

Always count the **client device** as one tier

02

Know the **network and internet requirements** for each delivery method

03

Review real-world examples to connect theory to practice

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# Final Thoughts

Application architecture  
and delivery impact  
**performance, security,  
and user experience**

Understanding these  
models helps in  
**designing robust  
systems**

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# Questions & Discussion

