Software Architecture

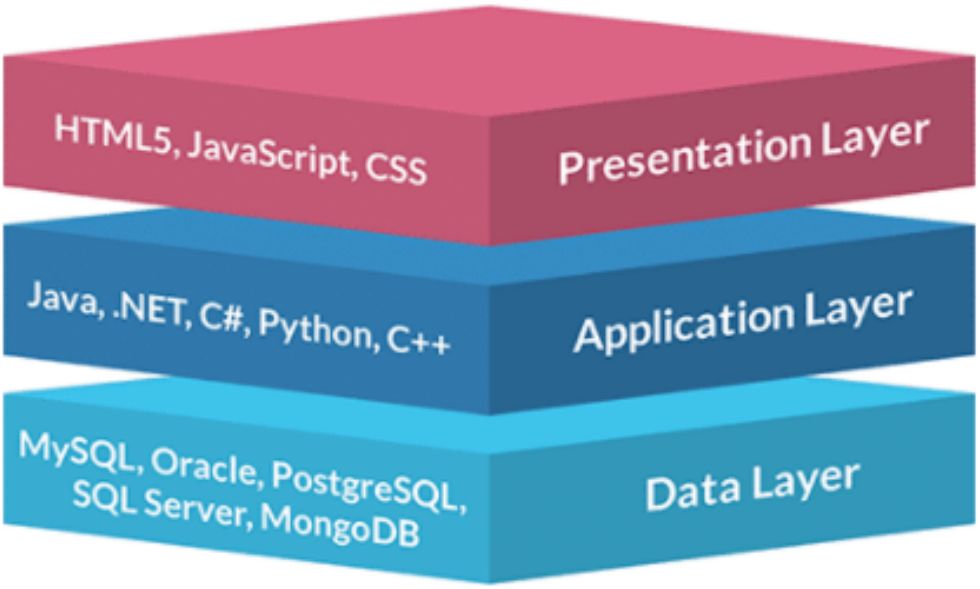
🎯 **CONTENTS**

👉**Layers and Tiers**
👉**Overview of N-Tier architecture**

For complete placement'22 resources
👉https://github.com/Aj7t/Placement22

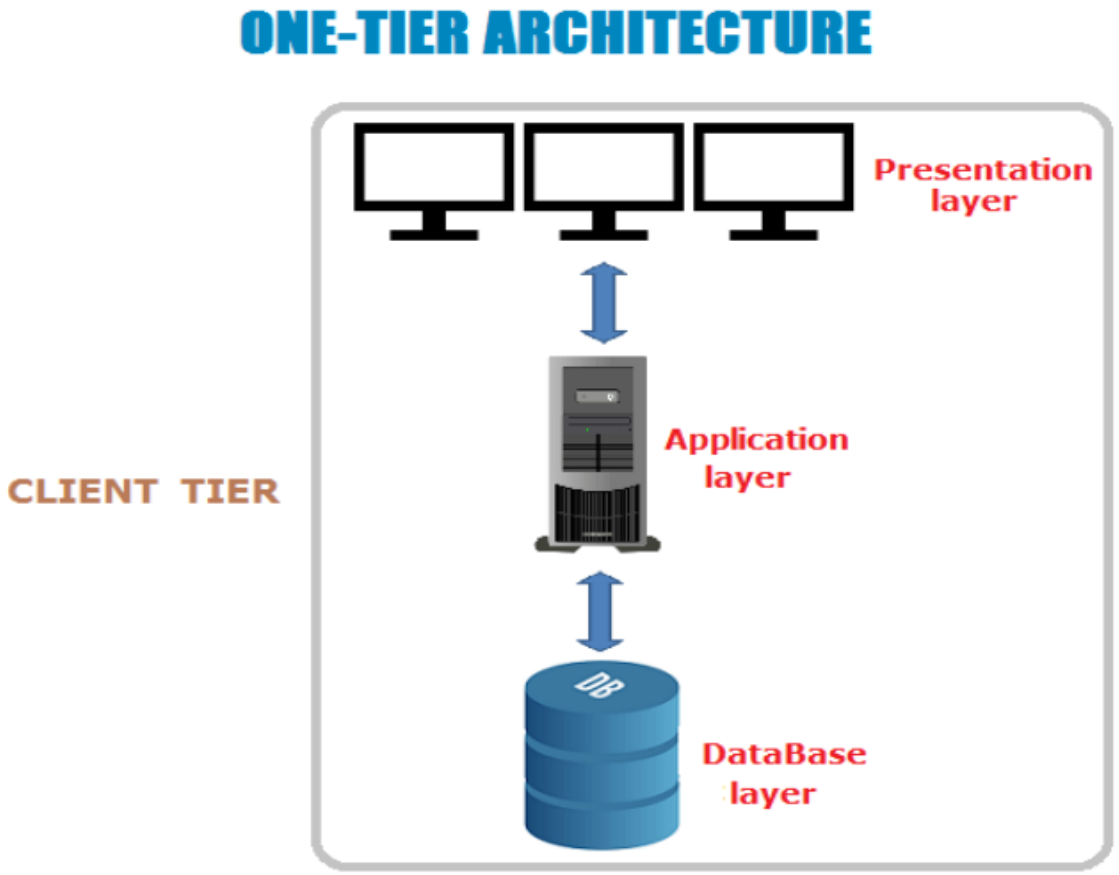
☑️**layer = a part of your code**, if your application is a cake, this is a Slice.

✔️ Presentation layer = usually all the code related to the User Interface
✔️ Application layer = all the code perform operations on the application
✔️ Data Access layer = all the code related to your database access

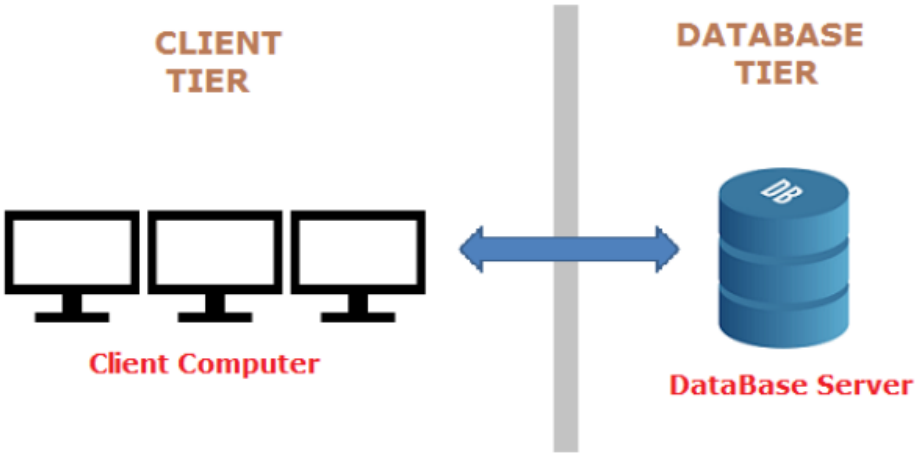


☑️ **tier = a physical machine**, a server.

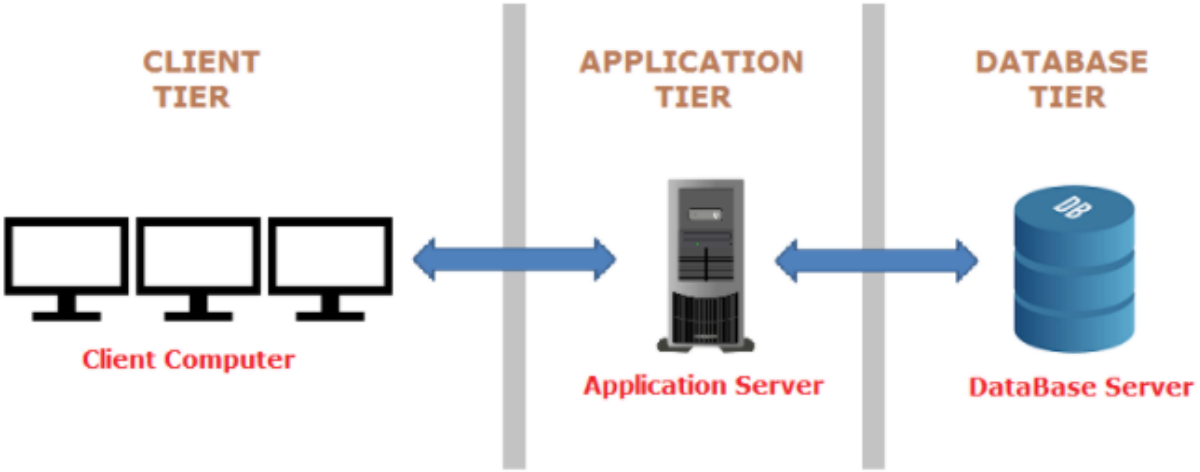
✔️ one-tier architecture =
✔️ two-tier architecture =
✔️ three-tier architecture
✔️ n-tier architecture



TWO-TIER ARCHITECUTRE

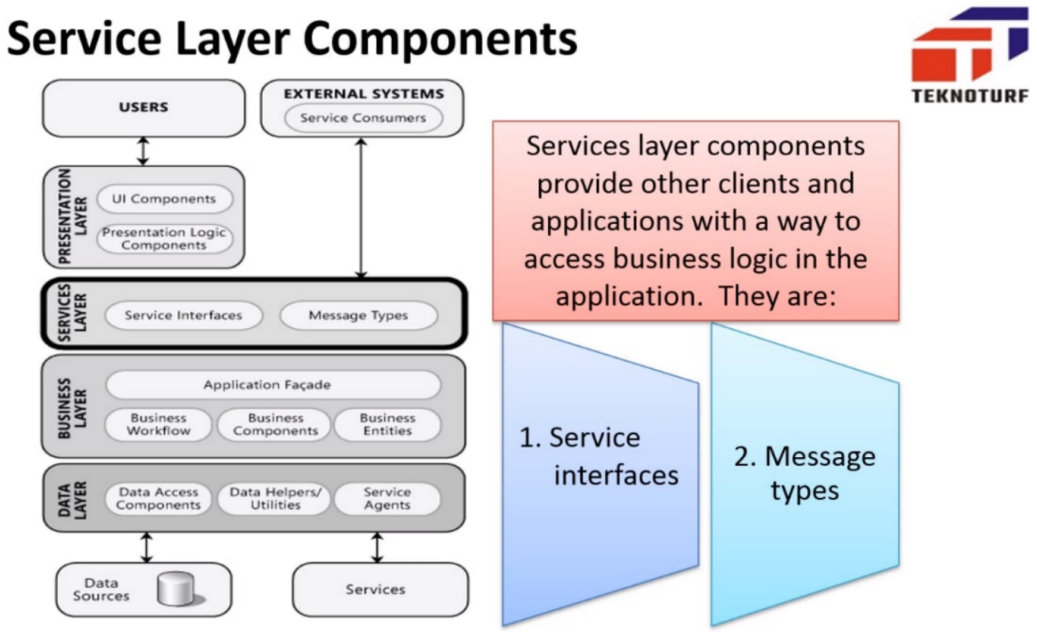


THREE-TIER ARCHITECTURE

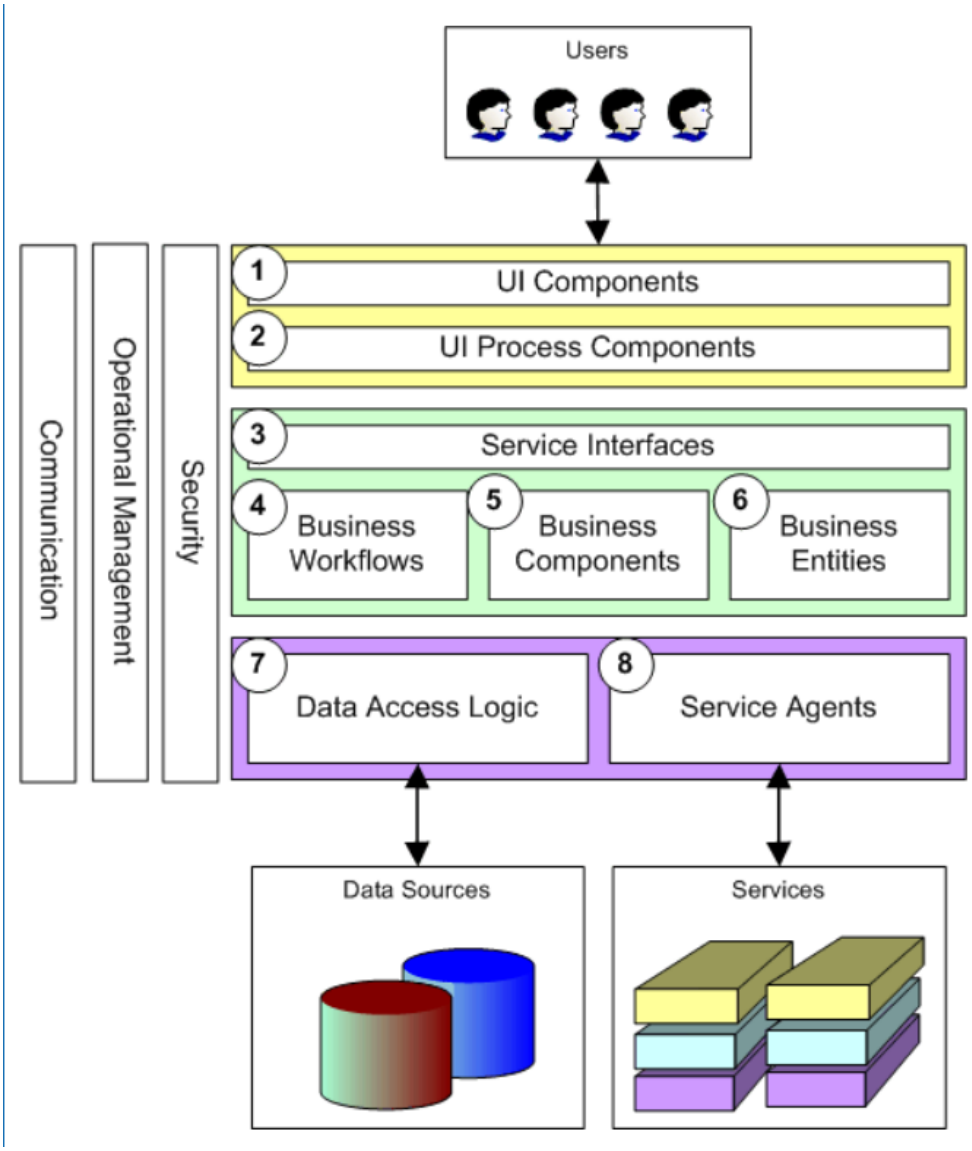


3-tier architecture is general architecture in software development and it consists of

- Presentation layer (client browser) [1,2]
- Application or Business logic layer [3,4,5,6]
- Data Layer [7,8]



Integration Layer	Responsible for communicating with external resources
Service Layer	Application will act as the provider of services to other applications
Data Layer	External data sources like SQL server, oracle, etc.
Presentation Layer	UI, Web Page or Mobile App
Business Layer	Business logic and data validation


Users
Communication
Operational Management
Security
1
UI Components
2
UI Process Components
3
Service Interfaces
4
Business Workflows
5
Business Components
6
Business Entities
7
Data Access Logic
8
Service Agents
Data Sources
Services

Component Type	Related Design Pattern
UI Component	Presentation Layer View Layer Client Layer
UI Process Component	Application Controller Pattern Mediator Pattern Application Model Layer
Service Interfaces	Remote Facade Pattern
Business Workflows	Domain Layer
Business Components	Domain Layer Transaction Script Pattern
Business Entities	Data Transfer Object Domain Model
Data Access Logic Components	Data Source Layer Infrastructure Layer Integration Layer
Service Agents	Data Source Layer Infrastructure Layer Integration Layer

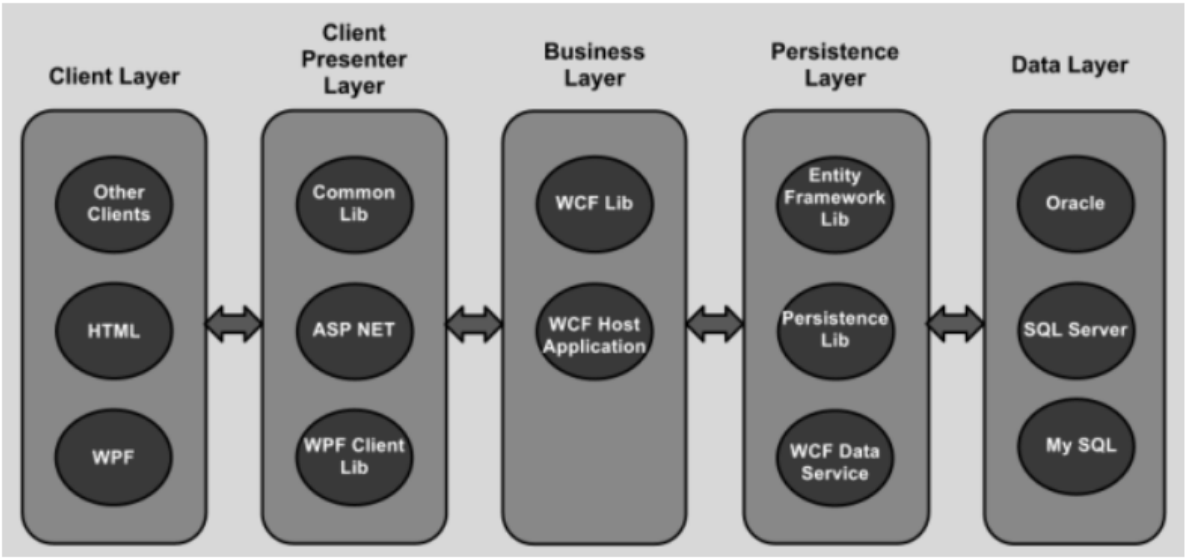


Diagram 1: N-Tier architecture in .NET