

# **Five most common software application categories**

# Objective

Understand the capabilities, features, benefits, and liabilities of the common application types.

# What is an Application?

Is a type of computer program that performs a specific function. Each application is designed to assist the end user with a particular process.

## Functions of an Application

- Managing information
- Manipulating data
- Managing resources

# According to Microsoft (2009), the most common software application categories are:

1. **Applications for mobile devices:** developed as **thin client** for connected scenarios or **rich client** for disconnected ones.
2. **Rich client applications** that are deployed on a client PC to support disconnected scenarios, and occasionally highly interactive interfaces with rich user interfaces but without the communication capabilities of the RIAs.
3. **Rich internet applications (RIA)** that are deployed from the Internet, with support of a rich user interface (camera, certain graphics card, virtual reality glasses, etc.)
4. **Service applications**, designed to support communication between distributed and poorly coupled components.
5. **Web applications** designed to run mainly from a web server, to support connected scenarios and different browsers on different operating systems and platforms.

# 1. Applications for mobile devices (or Mobile applications)

- Can be developed as thin client or rich client applications:
  - Thin client applications support connected scenarios only.
  - Rich client mobile applications can support disconnected or occasionally connected scenarios.
- Device resources may be a constraint when designing this type of application.



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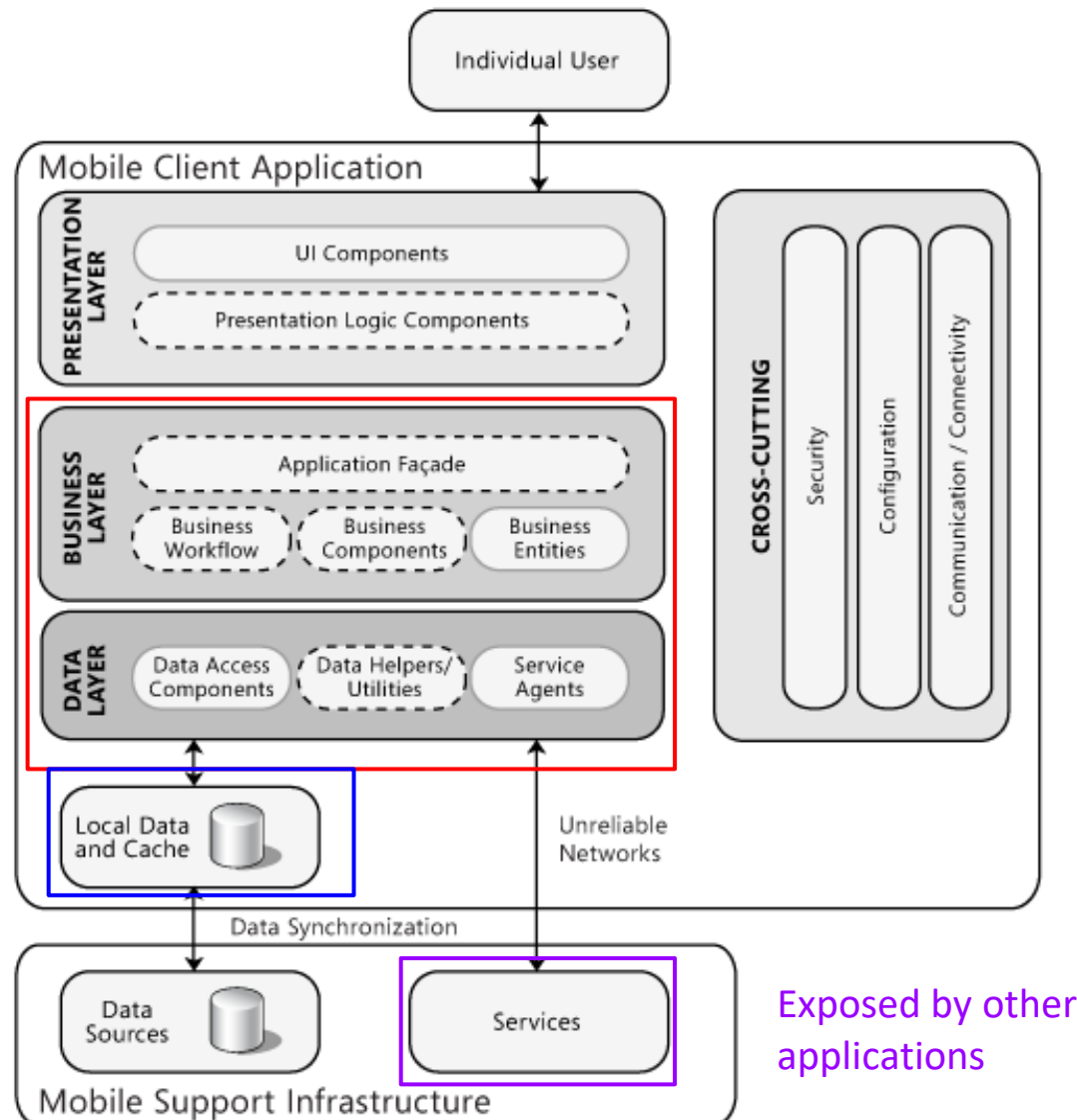
# Applications for mobile devices - Considerations

- Support for offline and occasionally-connected scenarios.
  - Support for handheld devices.
  - Availability and ease of use for out of office users.
- 
- Input and navigation limitations.
  - Limited screen display area.



# When to use it?

- Your users depend on handheld devices.
- Your application supports a simple UI that is suitable for use on small screens.
- Your application must be device independent and can depend on network connectivity. In this case, a Web application is usually the most appropriate.



Rich client -> device

Thin client -> server

For offline operation

Exposed by other applications



## 2. Rich Client Application

- Are usually developed as stand-alone applications with a **graphical user interface** that displays data using a range of controls.
- Can be designed for disconnected and occasionally connected scenarios if they need to access remote data or functionality. ▸



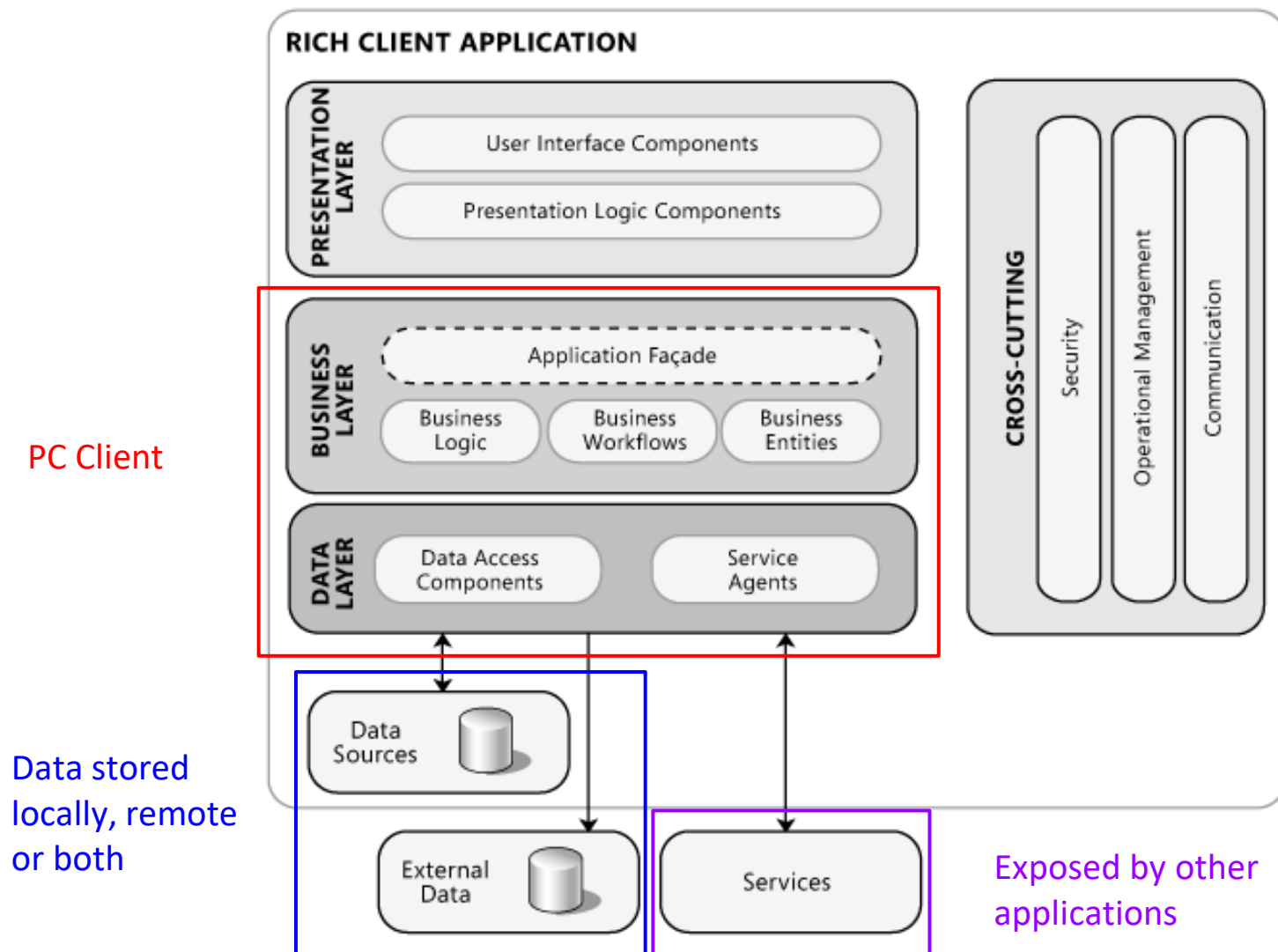
# Rich Client Application - Considerations

- Better responsiveness, rich UI functionality, and improved user experience.
  - Support for offline and occasionally connected scenarios.
  - Ability to leverage client resources.
  - Highly dynamic and responsive interaction.
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- Challenging to version over time.
  - Platform specific.
  - Deployment (complexity).



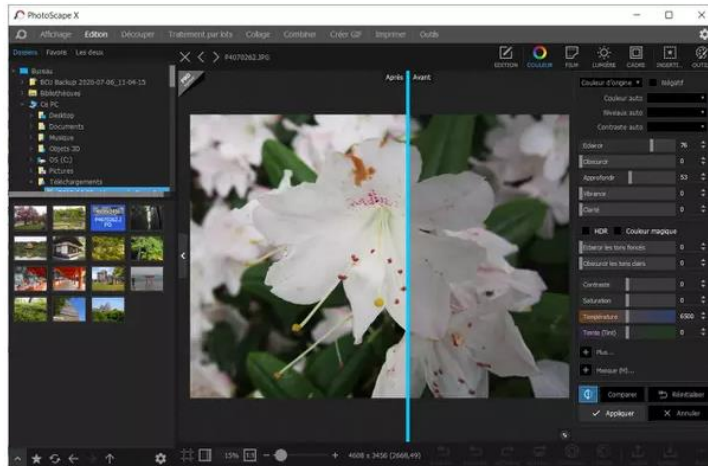
# When to use it?

- Your application must support disconnected or occasionally connected scenarios.
- Your application will be deployed on client PCs.
- Your application must be highly interactive and responsive.
- Your application UI must provide rich functionality and user interaction but does not require the advanced graphics or media capabilities of an RIA.
- Your application must utilize the resources of the client PC.



### 3. Rich Internet Application (RIA)

- Can be developed to support multiple platforms and multiple browsers, displaying **rich media** or graphical content.
- Runs in a browser sandbox that restricts access to some features of the client.



# Rich Internet Application - Considerations

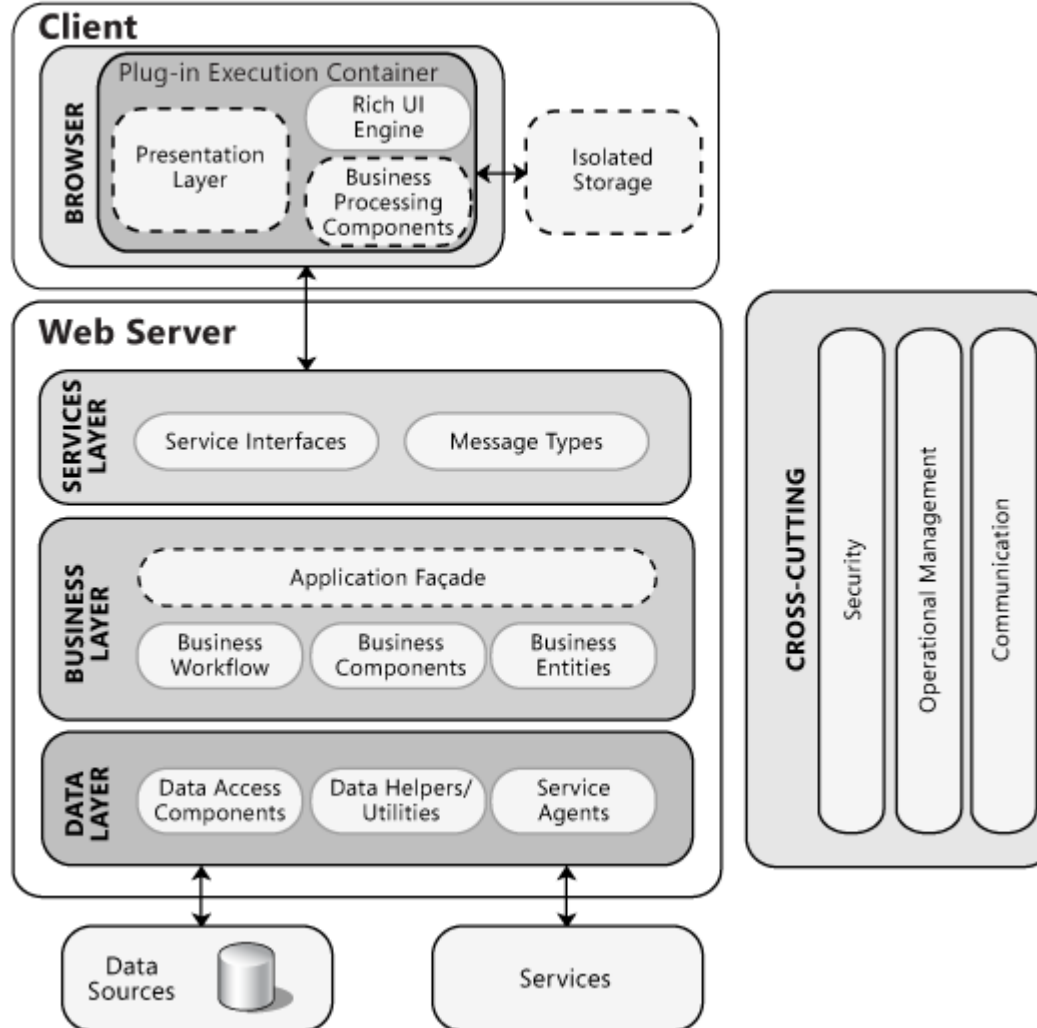
- Simple deployment with the same distribution capabilities as Web clients.
  - Simple upgrade and version updating.
  - Cross-platform and cross-browser support.
  - Support for rich and streaming media and graphical display.
- 
- Restrictions on leveraging client resources compared to a rich client application.
  - Requires deployment of a suitable runtime framework on the client.



# When to use it?

- Your application must support rich media and provide a highly graphical display.
- Your application must provide a rich, interactive, and responsive UI compared to Web applications.
- Your application will leverage client-side processing in a restricted manner.
- Your application will utilize client-side resources in a restricted manner.
- You want the simplicity of a Web-based deployment model.

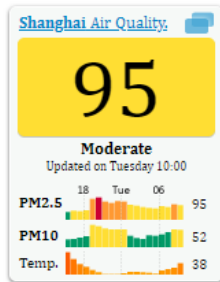
## Rich Internet Application



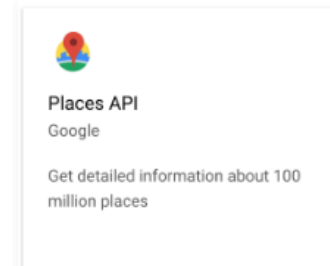


# 4. Service Application

- Services expose shared business functionality and allow clients to access them from a local or a remote system.
- Service operations are called using messages, based on XML schemas, passed over a transport channel.
- The goal of this type of application is to achieve loose coupling between the client and the server.



API - Air Quality Programmatic APIs



# Service Application - Considerations

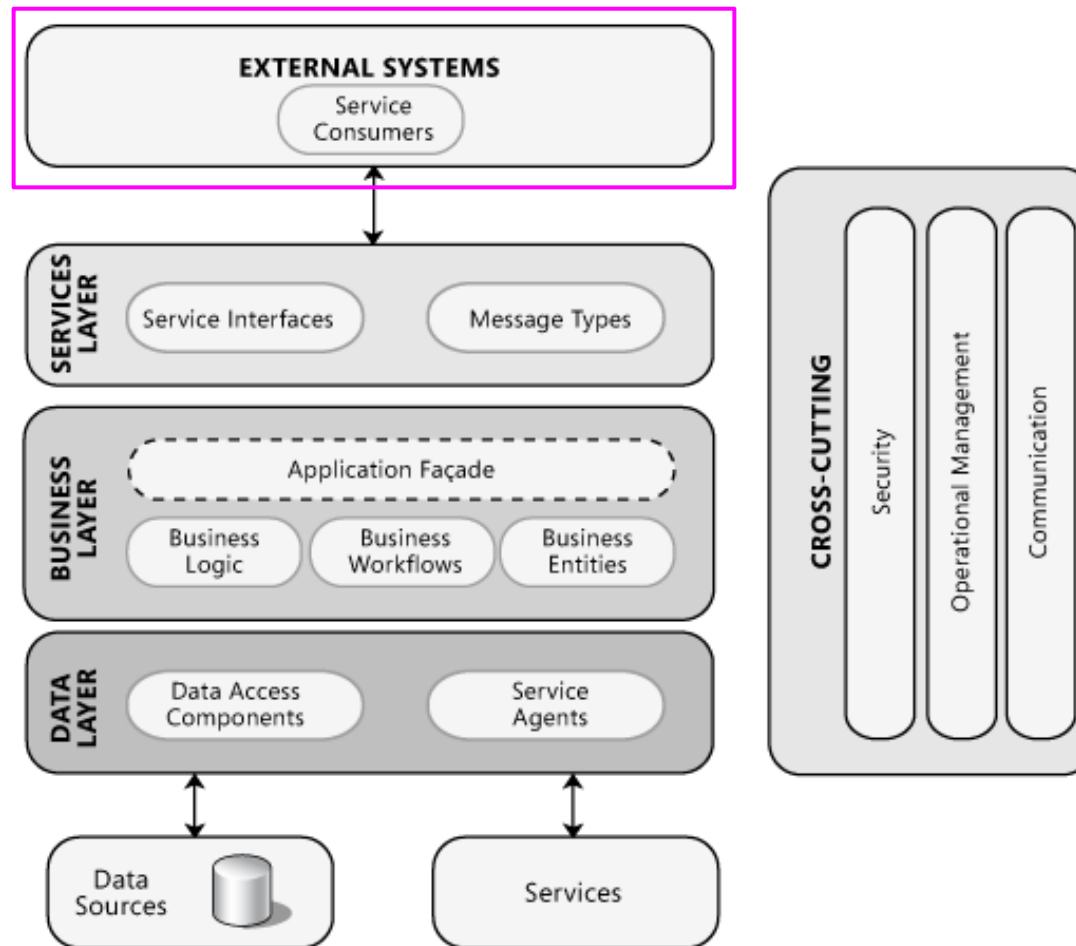
- Loosely coupled interactions between client and server.
- Can be consumed by different and unrelated applications.
- Support for interoperability.
- Dependent on network connectivity.
- No UI support.



# When to use it?

- Your application will expose functionality that does not require a UI.
- Your application must be loosely coupled with its clients.
- Your application must be shared with or consumed by other external applications.
- Your application must expose functionality that will be consumed by applications over the Internet, an intranet, or on the local machine.

## SERVICES



# 5. Web Application

- Typically supports connected scenarios and can support different browsers running on a range of operating systems and platforms.



# Web Application - Considerations

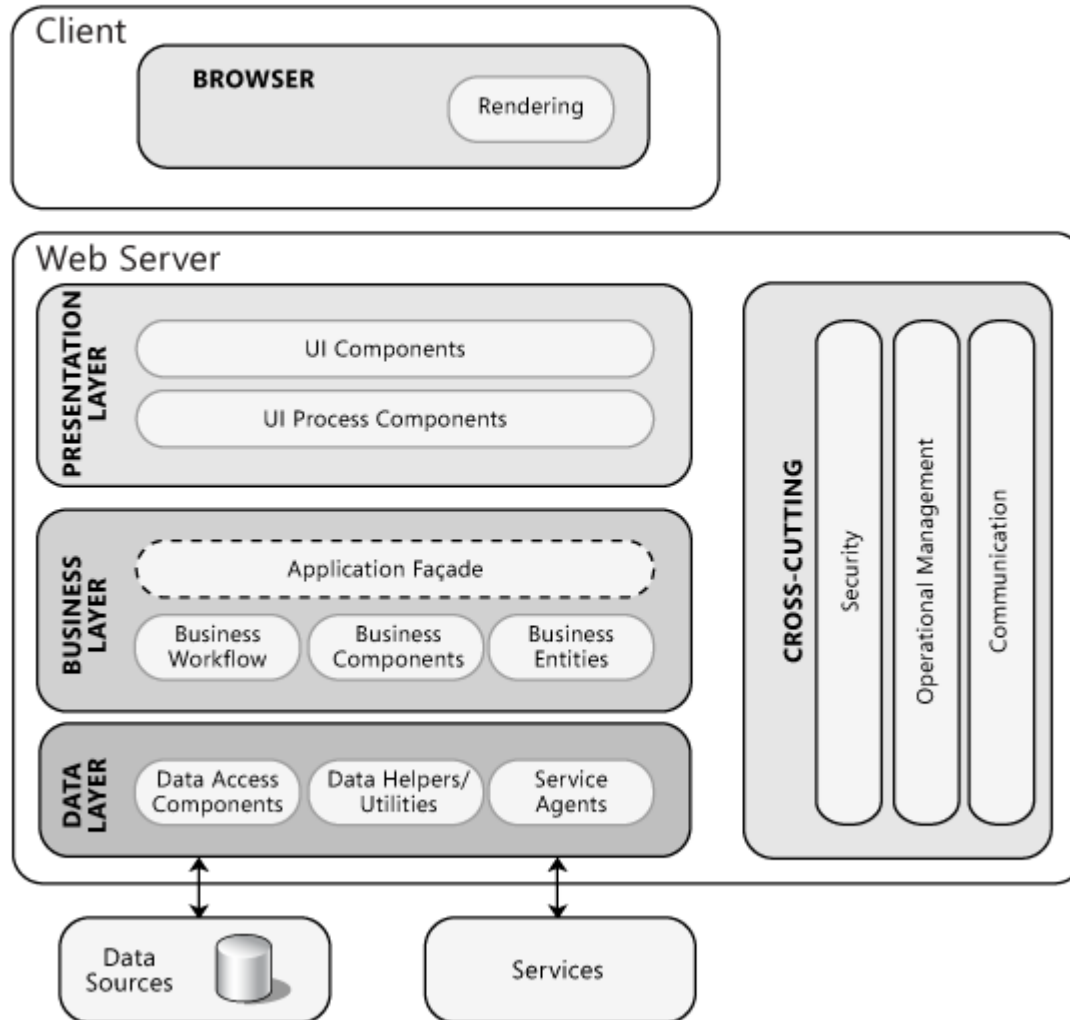
- Broad reach and a standards-based UI across multiple platforms.
- Ease of deployment and change management.
- Dependent on continual network connectivity.
- Difficult to provide a rich user interface.



# When to use it?

- Your application does not require the rich UI and media support offered by a rich Internet application.
- You want the simplicity of a Web-based deployment model.
- Your user interface must be platform independent.
- Your application must be available over the Internet.
- You want to minimize client-side dependencies and resource consumption, such as disk or processor usage.

## Web Application

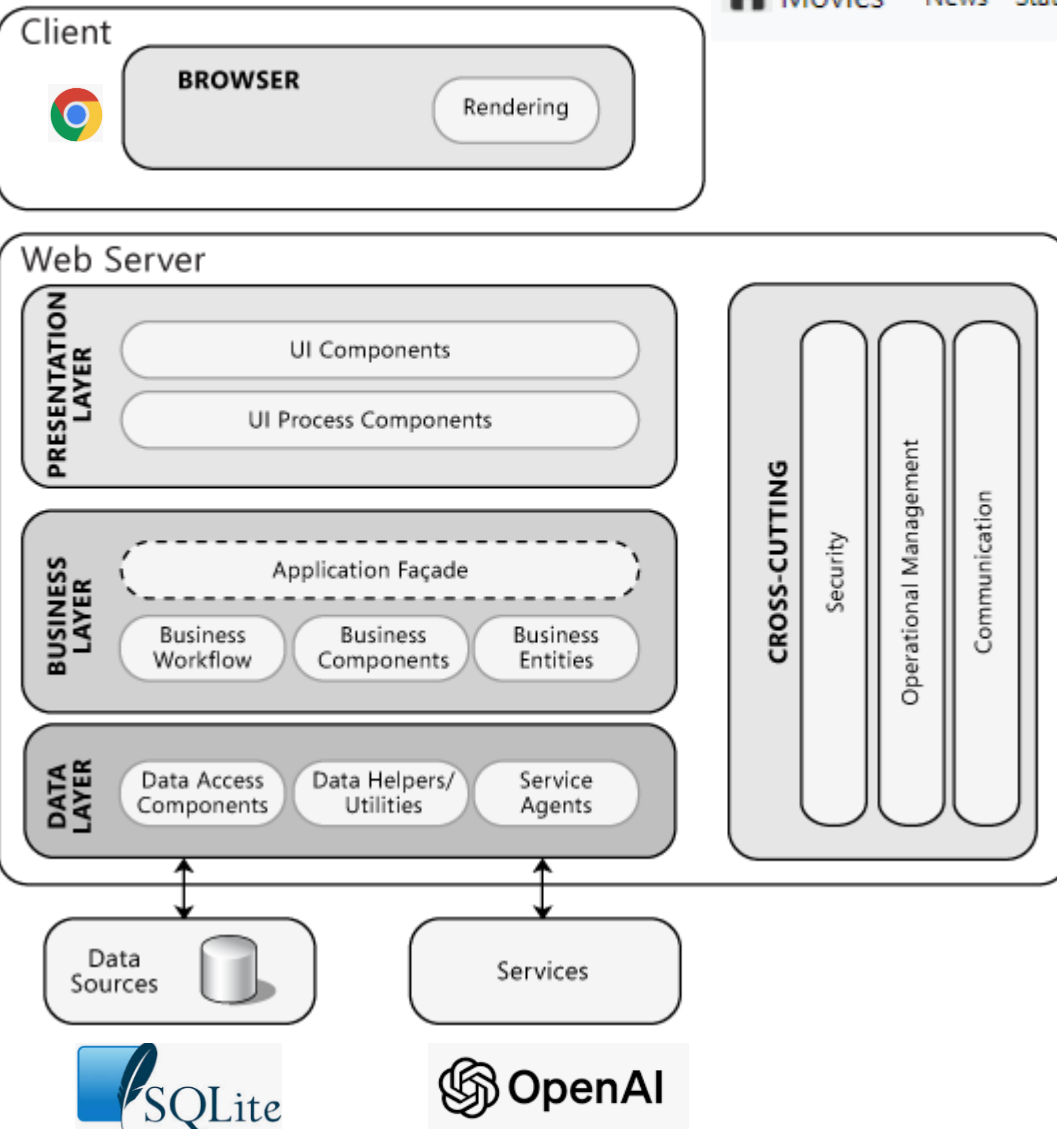




# Consider using Web applications if:

- Your application does not require the rich UI and media support offered by a rich Internet application.
- You want the simplicity of a Web-based deployment model.
- Your user interface must be platform independent.
- Your application must be available over the Internet.
- You want to minimize client-side dependencies and resource consumption, such as disk or processor usage.

## Web Application



Templates

View

Model

🏠 Movies News Statistics Logout (juan)



### Casablanca

Casablanca es un clásico del cine de drama romántico, dirigido por Michael Curtiz y estrenado en 1942. La historia se desarrolla en la ciudad de Casablanca durante la Segunda Guerra Mundial, donde un exiliado americano llamado Rick Blaine, interpretado por Humphrey Bogart, regenta un popular café. Su vida se complica cuando su antigua amante, Ilsa Lund, interpretada por Ingrid Bergman, aparece en la ciudad junto a su esposo, un líder de la resistencia checa. La película es conocida por su icónica banda sonora, que incluye la canción "As Time Goes By", y por sus diálogos memorables. Casablanca es una historia de amor, sacrificio y redención, ambientada en un momento histórico crucial. Con actuaciones brillantes y una dirección impecable, esta película ha sido aclamada por la crítica y el público, convirtiéndose en un referente del cine clásico. Recomendada para los amantes del cine romántico y los dramas históricos.

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### Reviews

Review by pvallej3

April 30, 2024, 3:28 p.m.

No me gustó para nada

Review by juan

April 30, 2024, 3:48 p.m.

La mejor película de los últimos tiempos

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# References

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Thank you!!!!