

Presentation Tier (User Interface):

The presentation tier is the **user interface** where end-users interact with the application.

It displays information to users and collects input from them. Examples of presentation tiers include **web browsers**, mobile apps, or graphical user interfaces (GUIs).

Web presentation tiers are typically developed using HTML, CSS, and JavaScript.

Application Tier (Logic Tier or Middle Tier):

The application tier, also known as the logic tier, is the heart of the application.

Here, information collected in the presentation tier is processed using business logic—a specific set of rules governing application behaviour.

The application tier can also add, delete, or modify data in the data tier.

Common languages for the application tier include Python, Java, Perl, PHP, or Ruby.

Communication with the data tier occurs via API calls.

Data Tier (Database Tier or Back-End):

The data tier, sometimes called the database tier, manages the storage, retrieval, and manipulation of application data. It stores the information processed by the application.

Examples of data tier technologies include relational databases (e.g., PostgreSQL, MySQL, Oracle) or NoSQL databases (e.g., Cassandra, MongoDB).

In a three-tier architecture, all communication flows through the application tier. The presentation tier and data tier cannot directly communicate¹.

Remember, the separation of these tiers allows for scalability, maintainability, and flexibility in web development. If you have any further questions or need additional details, feel free to ask!