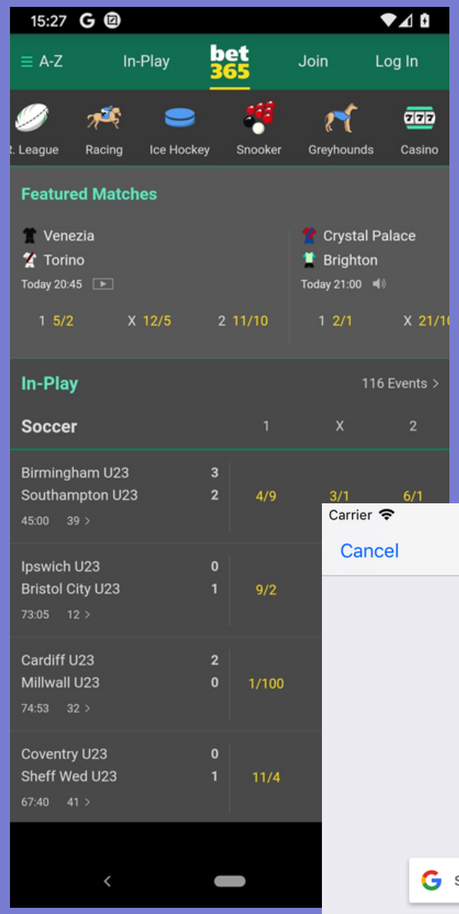
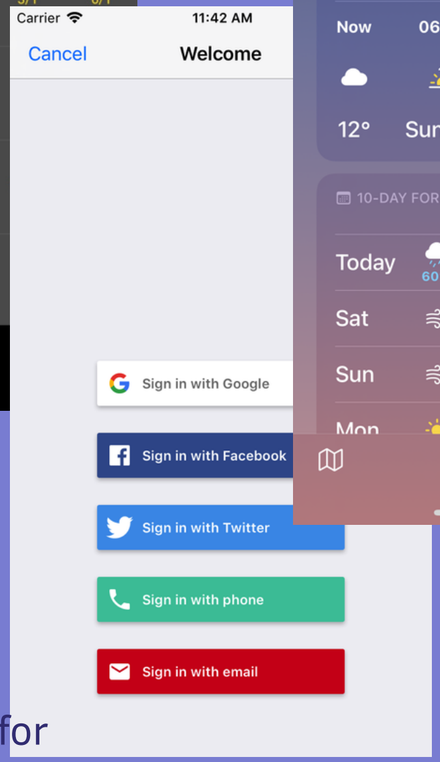
What´s an API

And how it works

Arlette Alejandra García Mata



Betting & Sports Apps



Universal Logins for authentication

Weather Apps

Application Programming Interface

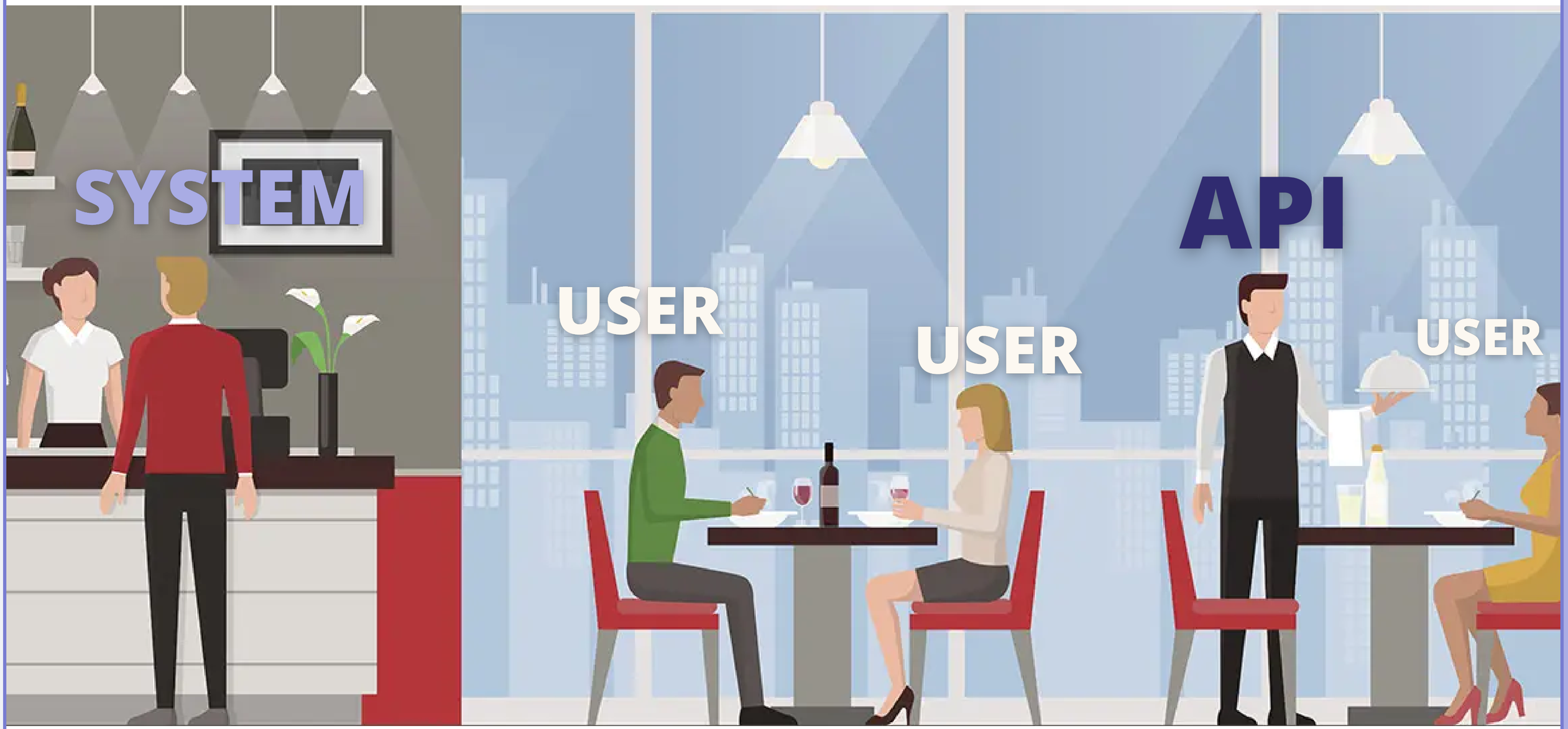
API use has surged over the past decade, to the degree that many of the most popular web applications today would not be possible without APIs.

An API enables companies to open up their applications' data and functionality to external third-party developers and business partners, or to departments within their companies.

Programmers don't need to know how an API is implemented; they simply use the interface to communicate with other products and services.

How an API works

APIs sit between an application and the web server, acting as an intermediary layer that processes data transfer between systems.


SYSTEM
USER
USER
API
USER

Here’s how an API works:

1.A client application initiates an API call

This request is processed from an application to the web server via the API’s Uniform Resource Identifier (URI) and includes a request verb, headers, and sometimes, a request body.

2.After receiving a valid request

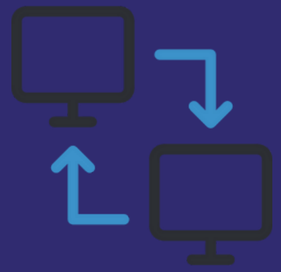
the API makes a call to the external program or web server.

3.The server sends a response

to the API with the requested information.

4.The API transfers the data

to the initial requesting application.



While the data transfer it will differ depending on the web service being used, this process of requests and response all happens through an API.

API calls usually include authorization credentials to reduce the risk of attacks on the server, and an API gateway can limit access to minimize security threats.

Example of an API

PayPal

Customers can enter their card details on the frontend of an application for an ecommerce store.

The payment processor doesn’t require access to the user’s bank account; the API creates a unique token for this transaction and includes it in the API call to the server

This ensures a higher level of security against potential hacking threats.

Why we need APIs

Improved collaboration

APIs enable integration so that platforms and apps can seamlessly communicate with one another
Without APIs, many enterprises would lack connectivity and information.

Data monetization

Many companies choose to offer APIs for free, at least initially. However, if the API grants access to valuable digital assets, you can monetize it by selling access (this is referred to as the API economy).

Added security

As noted above, APIs create an added layer of protection between your data and a server. Developers can further strengthen API security by using authentication tokens, signatures, and Transport Layer Security (TLS) encryption;

The End