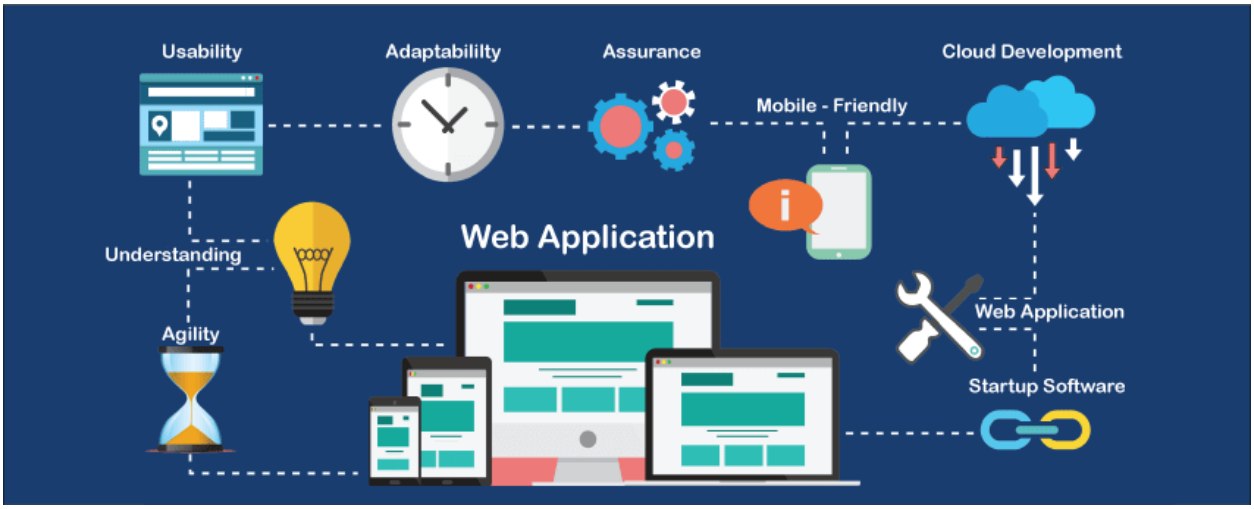
What is a web application?

A web application (web app) is an application program that is stored on a remote server and delivered over the internet through a browser interface. Web services are web apps by definition and many, although not all, websites contain web apps.



In general, a web application can contain online shops (or we can also say them e-commerce shops), webmail's, calculators, social media platforms, etc. There is also some kind of web application that usually requires a special kind of web browser to access them. We cannot access those kinds of web applications by using regular web- browsers. However, most of the web applications available on the internet can be accessed using a **standard web browser**.

If we talk about the web application in general, a web application usually uses a combination of the server-side scripts such as **PHP**, **ASP**, for handling the information/ data storage and retrieval of the data.

Some of them also use the client-side scripts such as **JavaScript**, **HTML** to represent the data/information in front of the users, and some of the web applications are also using both **server-side** and **client-side** at the same time.

It allows the users to communicate with the organization or companies by using the online form, online forums, shopping carts, content management system, and much more.

Apart from that web applications also allow its users to create documents, share them, or share the data/ information. By using the web application, users can collaborate on same projects by event when they are not available on the same geographical location.

How does a web- application work?

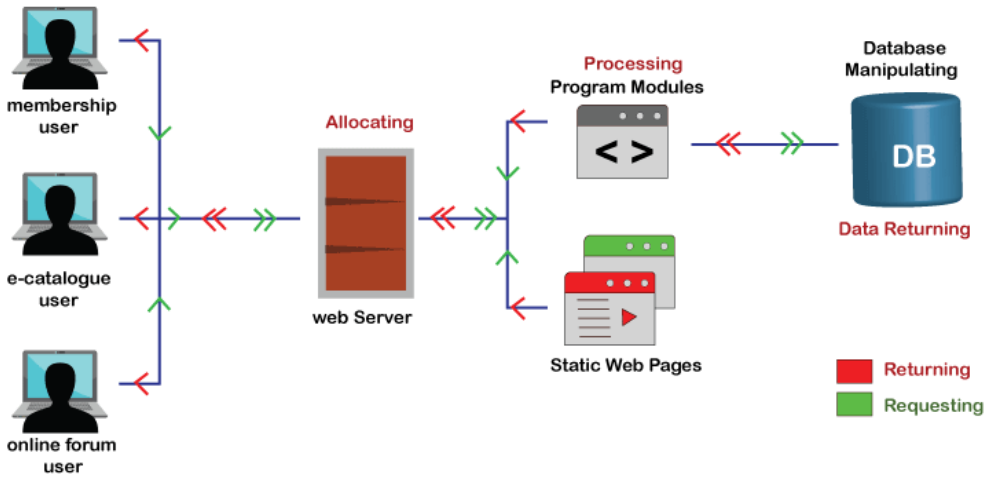
In general, web-application does not require downloading them because, as we already discussed, the web application is a computer program that usually resides on the remote server. Any user can access it by using one of the standard web browsers such as **Google Chrome, Safari, Microsoft Edge, etc.,** and most of them are available free for everyone.

A web application are generally coded using the languages supported by almost every web-browsers such as HTML, JavaScript because these are the languages that rely on the web browsers to render the program executable.

Some of the web applications are entirely static due to which they not required any processing on the server at all while, on the other hand, some web applications are dynamic and require server-side processing.

To operate a web- application, we usually required a web server (or we can say some space on the web-server for our programs/application's code) to manage the clients' upcoming requests and required an application server.

The application server performs the task that requested by the clients, which also may need a database to store the information sometimes. Application server technologies range from **ASP.NET, ASP**, and **ColdFusion to PHP and JSP**.



A standard web application usually has short development cycles and can be easily developed with a small team of developers. As we all know, most of the currently available web applications on the internet are written using the programming languages such as the **HTML (or HyperText Markup Language), CSS(or Cascading Style Sheets), and Javascript** that are used in creating **front-end interface (Client-side programming).**

To create the web applications script, server-side programming is done by using programming languages such as **Java, Python, PHP, and Ruby,** etc. **Python** and **Java** are the languages that are usually used for server-side programming.

Benefits

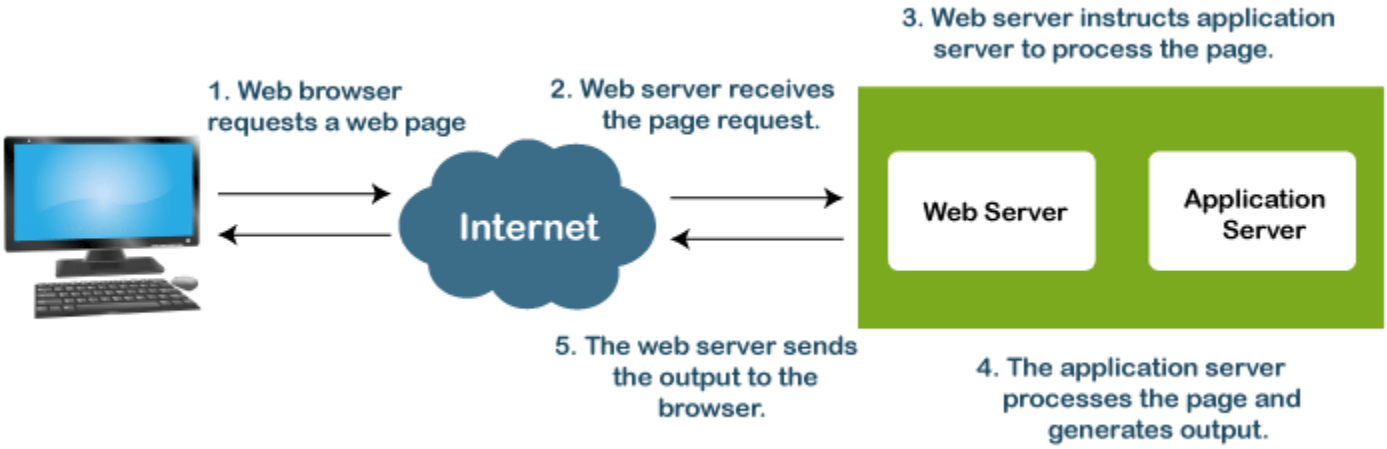
Web applications have many benefits. Some common benefits include the following:

- Multiple users can access the same version of an application.
- Users don't need to install the app.
- Users can access the app through various platforms such as a desktop, laptop or mobile.

- Users can access the app through multiple browsers.

The Flow of the Web Application

Let's understand how the flow of the typical web application looks like.



1. In general, a user sends a request to the web-server using web browsers such as **Google Chrome, Microsoft Edge, Firefox**, etc over the **internet**.
2. Then, the request is forwarded to the appropriate web **application server** by the **web-server**.
3. Web application server performs the requested operations/ tasks like **processing the database, querying the databases; produces** the result of the requested data.
4. The obtained result is sent to the web-server by the web application server along with the requested data/information or processed data.
5. The web server responds to the user with the requested or processed data/information and provides the result to the user's screen .

Benefits of a web application

Let see some of the significant benefits offered by a web application:

- Any typical web application can run or accessible on any operating system such as the Windows, Mac, Linux as long as the browser is compatible.
- A web application is usually not required to install in the hard drive of the computer system, thus it eliminates all the issues related to the space limitation.
- All the users are able to access the same version of the web application, which eliminates all compatibility issues.
- It also reduces software piracy in subscription-based web applications, for example, **SAAS (or Software as a service).**
- They also reduce the expense for end-users, business owners because the maintenance needed by the business is significantly less.
- Web applications are flexible. A user can work from any geographical location as long as he has a working internet connection.
- It just takes a moment to create a new user by providing a username, password, and URL, and it's all.
- After the availability of the cloud, storage space is now virtually unlimited as long as you can afford it.
- A web application can be programmed to run on a wide variety of operating systems, unlike native applications that can run on a particular platform.
- Any standard web application is developed with some basic programming languages like HTML, CSS that are compatible and well known among the IT professionals.

Disadvantages of the Web Applications

As we all know, there are two sides of anything; if something has some advantages, it may also have limitations/ disadvantages. Consider the following disadvantages of the web applications.

- Internet connection is necessary to access any web application, and without an internet connection, anyone can't use any of the web applications. It is very typical to get an internet connection in our modern cities, still rural area internet connectivity not so well.
- Several people in business believe that their data on the cloud environment is no that secure and likes to stick with old methods; they even don't want to use new methods.
- As we all know that many users like to use different web browsers according to their needs and choices. So while creating a web application, you must remember that your application must support several web browsers, including new and old versions of browsers.
- Speed-related issues are also affecting the web application's performance because there are several factors on which the performance of a web application depends, and these all factors affect the performance of the web application in their own way.
- If a user's web application faces any kind of issues, or if he does not have a good quality corporate website, his web application will not be going to run correctly, smoothly.
- A user must have to spend enough money to maintain the good condition of his web application, provide an update whenever an issue occurs, and make an attractive user interface, which is not so cheap at all.
- A web application must be programmed/ coded in such a way that it will be run regardless of the device's operating system.
- A web application may face some issues while running on Windows, Android, or several other operating systems if it is not responsive.

There are several advantages and disadvantages of web applications; it is impossible to discuss them all at once. So in the above, we only discussed some critical and useful points that may help you quickly understand the pros and cons of the web application.

Web app vs. native app vs. hybrid app

Within the mobile computing sector, web apps are sometimes contrasted with native apps, which are applications developers build specifically for a particular platform or device and install on that device. Native apps can commonly make use of device-specific hardware, such as a GPS or camera on a mobile native app.

Programs that combine the two approaches are sometimes referred to as hybrid applications. Hybrid apps work similar to web apps but install to the device as a native app would. Hybrid apps can also take advantage of device-specific resources by using internal APIs. Downloaded native apps can sometimes operate offline; however, hybrid apps don't have this functionality. A hybrid app will typically share similar navigation elements to a web app since they are primarily based on web apps.

Best Web Application Examples

From Gmail to Facebook to Microsoft Office, there are many great examples of successful web apps. Here's a shortlist of nine of the best.

1. Google Docs

Google Workspace, the Google Office suite, is one of the most popular collections of web apps. For example, Google Docs empowers collaborative creation and automatically saves changes to documents. It offers the added bonus that it works even without an internet connection. Everything syncs up once the internet connection is back.

This web app is accessible from almost any device on just about any operating system. Google Workspace apps are also available as mobile app downloads. The versatility and accessibility of the Google Workspace platform are among its best features. Beyond Google Docs, the cloud platform includes Google Sheets, Google Slides, and the ever-popular Gmail.

2. Netflix

One of the top video-streaming platforms is also a web app. Netflix allows paying users to watch movies and tv shows on demand with no limitations. And, as with other web apps, it's accessible across devices and operating systems. Netflix illustrates how web apps are ideal as content platforms. The company also offers a mobile app.

3. Trello

This web app replaces brightly-colored post-its with a digital solution. The attractive interface simplifies the organization and tracking of tasks. Trello enables team collaboration for more effective project management. Collaboration is one of the most common functions of web apps, allowing multiple people to work on a single dashboard.

4. Basecamp

This popular platform is a web app for managing projects. Businesses use it to communicate with clients through messages while keeping tasks on schedule. Basecamp's availability as a web app makes it easy to invite users to projects without worrying about device or browser types. For power users, it is also available as both a desktop and mobile app.

5. Microsoft Office

The Microsoft Office Suite contains multiple products including Word, Excel, and Powerpoint. Originally, it had to be installed onto your computer, with saved files on your hard drive. Since then, Microsoft Office has transformed into one of the top web application examples.

The popular suite of products is now among the top enterprise application examples. Collaboration is easy because users can securely work on shared files online. Further, collaborative tools like Teams are now part of the suite. And yes, alongside the web app version of Microsoft Office, you can also download a desktop and mobile app.

6. Uber

You might think of Uber as a mobile app because most people access it on their phones. However, the team at Uber rebuilt everything as a Progressive Web App (PWA). Now Uber users can access the app through any modern browser.

The Uber PWA is designed to go where native apps just can't. For example, it's viable on low-speed networks including 2G. It's also accessible through the browser on low-cost devices that might not be able to run the native mobile app.

Loading quickly on any device requires a lightweight design. To this end, the Uber team kept the core of this web app to only 50kB. The design focuses on helping users get value as easily as possible, with no extra fluff. As a result, this is a good web application example to think about when you follow the checklist to build your MVP.

7. eBay

Buyers and sellers from all over the world can use eBay as their digital auction house. It manages bidding as well as allowing sales for fixed prices. The multi-vendor eCommerce platform facilitates simple, secure transactions between parties. Beyond payment processing, top features include product reviews, user ratings, customizable filters, and strong search functionality.

8. Facebook

The social networking giant has had its share of good and bad press in the last few years. Whatever you think of Facebook, it's hard to argue with roughly 2.98 billion active users as of early 2023. Simply put, this is among the most popular web applications of our time.

Like some of the others on this list, Facebook started as a pure web app before becoming a hybrid app. Cross-platform functionality gives users the option to access the social media platform with a native-like experience on almost any smartphone. Some of the top features include messaging, live streaming, and groups.