



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)



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COIMBATORE-641 035, TAMIL NADU**

DEPARTMENT OF COMPUTER APPLICATIONS

23CAT605 – WEB STACK DEVELOPMENT

UNIT – I: OVERVIEW OF WEB TECHNOLOGIES & HTML 5

TOPIC: MOBILE WEB



Mobile web refers to **browsing the internet using**

a web browser on a mobile device, such as a

Smartphone or tablet. This can include accessing

websites, searching for information, and using

web-based applications.





Examples

Mobile web:

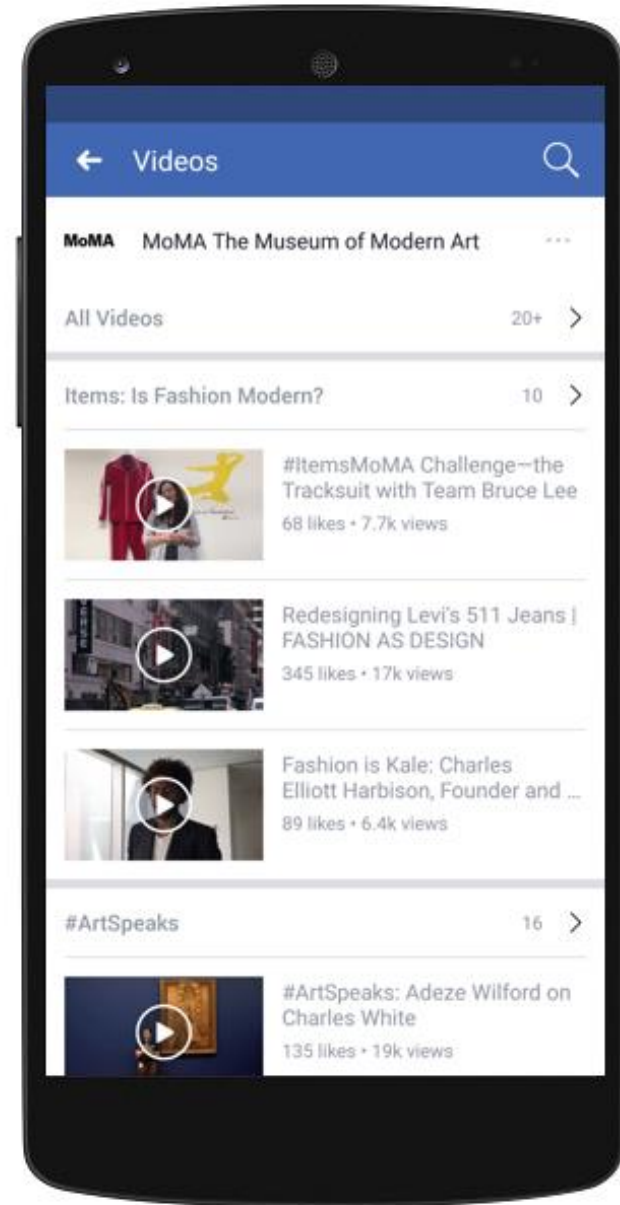
- ✓ Using a web browser such as Google Chrome, Safari, or Firefox on your Smartphone to search for information on Google.
- ✓ Checking your email using the web-based version of Gmail.
- ✓ Visiting a news website, such as CNN or BBC, to read the latest headlines.





Mobile web apps:

- ✓ Using the Twitter mobile web app to browse tweets and post updates.
- ✓ Using the Google Maps web app to get directions and search for nearby locations.
- ✓ Accessing the Spotify web app to stream music on your mobile device.





It refers to designing and creating websites optimized for viewing and interacting with on mobile devices like Smartphones and tablets.

Mobile web design considers the smaller screen size, touch-based interactions of mobile devices, varying screen resolutions, and internet connectivity speeds.

Here are different elements considered in mobile-first web design:

Responsive design: A mobile website must be designed using multiple responsive design techniques to ensure that it can adapt to different screen sizes and orientations. You can test your mobile website's responsive design on multiple device-browser-OS combinations using BrowserStack Automate, App Automate, App Live, and Live to ensure a seamless user experience with your software. BrowserStack provides automated and manual options for online mobile testing for websites and apps.



Simplified navigation: Mobile users must find what they want on a website. Mobile web design should simplify navigation and minimize the clicks required to access the content.

Optimized content: Mobile web design should optimize content for mobile devices, including using smaller images and simplified layouts to reduce load times and improve user experience.

Touch-based interactions: Mobile devices rely on touch-based interactions, so mobile web design should consider how users interact with the website using touch gestures.

Fast load times: Mobile web design should optimize for fast load times, including reducing the size of images and using caching techniques.



Responsive frameworks for building Mobile Web



1. Bootstrap: It offers a wide range of pre-built components, such as navigation bars, modals, forms, and typography, as well as a grid system for creating responsive layouts. It also comes with various CSS and JavaScript plugins and utilities for adding interactivity and functionality to your web pages.

One of the benefits of using Bootstrap is that it is designed to be mobile-first, meaning that its components and layout are optimized for use on mobile devices. This makes it an excellent choice for building mobile web and mobile web applications.



Responsive frameworks for building Mobile Web



2. Materialize: It is an open-source CSS and JavaScript framework for building responsive and modern web applications. It is based on Google's Material Design guidelines, which provide a set of design principles and guidelines for creating user interfaces that are visually appealing and intuitive to use.

Materialize is easy to get started with, and it provides comprehensive documentation and a variety of templates and examples to help you get started quickly. It also has a large community of developers who contribute to its development and provide support to other users.



Responsive frameworks for building Mobile Web



3. Ionic: Ionic is a popular framework for building mobile web and hybrid mobile applications. It provides a range of responsive design components, including grids, typography, and navigation, that can be used to build mobile-friendly applications. It is built on top of AngularJS, a popular JavaScript framework, and provides a range of features, such as native app integration and offline support.

4. Semantic UI: Semantic UI is a front-end framework that provides multiple responsive design components. It includes pre-built templates and themes that can be customized to fit specific design needs. It also offers a range of customization options, such as theming and modularization.



Mobile web vs Web Apps vs Mobile Apps

Category	Mobile Web	Web App	Mobile App
Platform	Accessible via web browser on a mobile device.	Accessed through a web browser, but designed to work like an app.	Installed on a mobile device and accessed through an app icon
Development	Designed to be responsive to mobile devices.	Designed to work like an app, with additional features such as offline functionality and push notifications.	Developed specifically for the mobile platform.
User experience	May require more scrolling and zooming.	Offers an app-like experience, but it may not be as smooth as a mobile app.	Provides a smooth and optimized user experience.
Performance	Can be slower due to internet connectivity and reliance on web browsers.	May be slower than a native app, but can still offer good performance.	Provides fast and responsive performance.



Mobile web vs Web Apps vs Mobile Apps

Category	Mobile Web	Web App	Mobile App
Access	Accessible to anyone with a mobile device and internet connectivity.	Accessible through a web browser and internet connectivity.	You must download and install it on a mobile device.
Features	Limited to what can be accomplished through a web browser.	Can offer additional features, such as offline functionality and push notifications.	It offers features including access to device hardware (camera, microphone, etc.)
Maintenance	Easier to maintain as you can change the website.	The maintenance is simple, as you can easily change a web app.	Requires regular updates and maintenance.