

# Unit 5 Mobile Web Development

Q] What is mobile first? Explain the concept of mobile web?

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- Desktop, smartphone & tablet are having different screen size ~~or~~ & user experience to website or application too.
  - If the developers designs website or web application for desktop screen size. then it is very difficult to design for mobile devices such as smartphone, tablet etc.
  - Designing & developing UI for mobile devices before designing for web or any other device is known as Mobile-first approach.

What is concept of mobile web?

- The use of internet can be through various ways such as laptop, desktop & smartphones.
- The internet can be used through wireless or wired connection through these devices.
- Most of the time user uses internet on their mobile devices because it is easy to use.
- Mobile devices or smartphones are movable so it is flexible to access internet or web content on the go.
- The use or access of internet & get web content through mobile devices is known as mobile web.

Q] What are mobile devices? Their types & what are desktop devices different types

- Mobile devices refers to smartphones &
- compact version of computers.
  - They are handled & battery-powered, mostly with touch screens,

Types of mobile devices are -

- Smartphones
- Tablets
- Smart watch
- Fitness bands etc.
- iPod etc.

## Desktop Devices

- Desktop devices cannot be move from one place to another place easily.
- They are large & heavy
- The web content are larger i.e. fit to screen display
- These devices are designed for heavy use such as programming, In offices, Gaming designing etc...

Q] What is jquery mobile?

→ JQuery mobile is touch optimized web framework.

- JQuery mobile is also known as mobile framework which is an open source cross-platform framework.
- It is used to build responsive web application that works on all smartphones, tablets, and desktop.
- It is based on HTML5, CSS3 & jquery.
- JQuery mobile helps to create mobile app only using HTML & javascript.
- It follows the "write less-do more" principle
- You just have to write the code once and it will work seamlessly on Android, iPhone, iPod and other mobile OS. The same code can be run on web browsers. Such as Google Chrome, Safari on your desktop.

## Features of JQuery Mobile

- Accessibility → from any <sup>device.</sup> ~~website~~ we can access website or web app easily
- Lightweight size → It is lightweight
- Responsive Design → Adapts to various screen sizes.
- Touched optimized UI → Supports UI
- Supports Ajax → Page reloads Dynamically, without refreshing whole page.

• Great Simplicity & Usability →

- The jQuery mobile framework is easy & flexible

### Advantages

- 1) Easy to learn & use if familiar with HTML, CSS & JS.
- 2) Saves Time.
- 3) Device Independence (one code for all devices)
- 4) No installation needed
- 5) One can create custom theme without writing the line of code.

### Disadvantages

- ① Slower performance
- ② Limited Customization
- ③ Not used for modern projects.
- ④ Slower application on mobile devices.
- ⑤ Limited options for CSS themes

Q] Difference between jQuery & jQuery mobile.

jQuery	jQuery mobile
① Javascript library	mobile web framework based on jQuery
② Used for desktop website.	used for mobile & tablet-friendly website
③ No built-in mobile UI component	⑤ Has built-in mobile UI components.
④ Needs extra CSS for responsive design	Responsive design is built-in
⑤ Lightweight & faster	Heavier due to extra features
⑥ No default touch support	Touch support is built-in
⑦ Suitable for general web development	Suitable for mobile-first web development

Q] What is CDN & how it is powerful in web development

- • CDN stands for content delivery network.
- It is group of servers placed in different location around the world.
- These server store & deliver website like images, videos, CSS, JS etc.
- It helps website load faster by sending data from the server that is closest to the user.

How CDN is powerful in web Development

- 1) Faster loading.
- 2) Less load on main server.
- 3) Can handle many users.
- 4) Always online.
- 5) Safe & secure.
- 6) Saves money.

Q] What is content? Write a code to create content div in jQuery mobile.

- In JQuery mobile, the content area is the part of the web page where main info is shown.
- It is placed between the header & footer.
- It holds text, images, forms, buttons, etc..

Syntax = `<div data-role="content">`

`<!doctype html>`

`<head>`

`<html>`

`<head>`

`<link rel="stylesheet" href="https://code.jquery.com/css">`

`<script src="https://code.jquery.com/min.js"></script>`

`<script src="https://code.jquery.com/min.js"></script>`

`</head>`

`<body>`

`<div data-role="page">`

`<div data-role="header"><h1> Header </h1></div>`

`<div data-role="content">`

`<p> Hello! This is content. </p>`

`</div>`

`<div data-role="footer"><h4> footer </h4></div>`

`</div>`

`</body>`

`</html>`



Q] What is Navigation? write a code to navigate from one page to another page in JQuery mobile.

- Navigation means moving from one page to another in a website or mobile app.
- We can create navigation with button click or a tag href property to new page.
  - In JQuery mobile we can navigate using `<a href="#">`

Code

```
<!DOCTYPE html>
<html>
<head>
  <title>Navigation Ex</title>
  <link rel="stylesheet" href="https://code.jquery.com/mobile/jquery.mobile-min.css">
  <script src="https://code.jquery.com/jquery-1.11.0.min.js"></script>
  <script src="https://code.jquery.com/jquery.mobile-1.4.5.min.js"></script>
</head>
<body>
  <div data-role="page" id="page1">
    <div data-role="header"><h1>Page 1</h1></div>
    <div data-role="content">
      <a href="#page2", class="ui-btn">Go to page 2</a>
    </div>
  </div>
```

```
<div data-role="page"; id="page2">
  <div data-role="header"><h1>Page 2</h1></div>
  <div data-role="content">
    <a href="#page1" class="ui-btn">Back to page 1</a>
  </div>
</div>
</body>
</html>
```

Q] What are widgets in JQuery mobile? List any five. widgets in jquery mobile & explain any two in detail.

- Widgets are the controller in jquery mobile.
- They are used to design from list, popups, tablets, & many more components in web apps.

Some of the widgets are

- 1) Button
- 2) Navbar
- 3) Slider
- 4) Checkbox
- 5) Popup
- 6) Tabbar

## 1) Button widgets

- Button widgets are used to create touch-friendly buttons
- One can convert links into buttons.

### Syntax

```
<a href="#" class="ui-btn" data-icon="home">Home</a>
```

### Code

```
<!DOCTYPE HTML>
<html>
<head>
<title> Button Example </title>
<link rel="stylesheet" href="https://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.css">
<script src="https://code.jquery.com/jquery-1.11.3.min.js"></script>
<script src="https://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.js"></script>
</head>
<body>
<div data-role="page" id="buttonpage">
<div data-role="header">
<h2> Button demo </h2>
</div>
<div data-role="content">
<a href="#" class="ui-btn">Click me </a>
</div>
</div>
</body>
</html>
```

## 2) Navbar

- Navbar is used to create menu tabs or links on a page.
- It helps the user navigate bet<sup>n</sup> different sections or pages.

### code

```
<!DOCTYPE html>
<html>
<head>
<title>Navbar Example</title>
<link rel="stylesheet" href="https://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.css">
<script src="https://code.jquery.com/jquery-1.11.3.min.js"></script>
<script src="https://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.js"></script>
</head>
<body>
<div data-role="page" id="NavbarPage">
<div data-role="header">
<h2>Navbar Demo</h2>
</div>
<div data-role="content">
<div data-role="Navbar">
<ul>
<li><a href="#" class="ui-btn-active">Home</a></li>
<li><a href="#">services</a></li>
<li><a href="#">contacts</a></li>
</ul>
</div>
</div>
</body>
</html>
```

Q3) Explain any 3 events in jQuery mobile with example

- Events in JQuery mobile are action or occurrence that happen in web page - like clicking a button, opening a page, swiping the screen, etc.
- When these events happen, you can write custom code to perform some tasks like showing message, loading content, or changing style.

1) Pagecreate Event

```
<script>
$(document).on("pagecreate", "#my page", function() {
    alert("page created!");
});
</script>
```

Triggered when page is created in DOM

2) pageshow Event

Triggered when page become visible to user.

```
<script>
$(document).on("pageshow", "#my page", function() {
    console.log("page is now visible");
});
</script>
```

3) click Event

```
<script>
$(document).on("click", "#my button", function() {
    alert("button clicked!");
});
</script>
```

Q3) Why CSS is important in designing mobile websites? Give an example of CSS class used for mobile website design

→ CSS is very important in designing mobile website. because of

- 1) Responsive Design.
- 2) Consistent UI/UX.
- 3) Faster loading
- 4) Improved readability
- 5) Touch-friendly Design
- 6) Custom styling

• JQuery mobile framework uses different classes to design web ~~page~~ app.

- `ui-corner-all` - To make elements in with rounded corners
- `ui-shadow` - To display shadow of element
- `ui-overlay-shadow` - To display overlay shadow of element.
- `ui-mini` - To make elements smaller
- `ui-btn` - To shows element as button style.