

Web development - Intermediate

Agenda

Day 1(How the web works):

- How the web works
- Client-server architecture
- Evolution of web(WWW vs Internet)
- Set up Developer Environment

Day 2(Bootstrap, JQuery and DOM manipulation):

- Bootstrap
- DOM
- DOM selectors and events
- jQuery

Day 3(HTTP/JSON/AJAX +Async JS):

- HTTP/HTTPS
- JSON
- AJAX
- Asynchronous JavaScript

Agenda

Day 4(Frameworks):

- Introduction about frameworks and How the frameworks work under the hood?
- Introduction to React(state, props, component)

Day 5(APIs and microservices):

- How APIs work?
- Evolution of APIs
- Micro services and Web services

Day 6-7(Backend):

- Basics
- Introduction to NodeJs and ExpressJs

Day 2

- Bootstrap
- DOM
- DOM selectors and events
- jQuery

Project ideas

- Portfolio website
- Car Rental app (<http://pratilipi-car-rental.surge.sh/>)
- Send to Google Sheets
- Automation tool with Telegram bot API/Twitter bot API, Facebook Graph API
- URL shortener(For example, bitly)
- GitHub issue tracker using GitHub GraphQL API using React
- Notes-app like Google Notes

Example of websites you can take inspiration from

- <https://chiragshah.netlify.app/>
- Copy of LinkedIn profile
- <https://www.freecodecamp.org/news/15-web-developer-portfolios-to-inspire-you-137fb1743cae/>
- <https://nancychauhan.in/>
- <https://amitosh.in/>

Spreadsheet link: <https://bit.ly/3tVXuhe>

Resources for GitHub: https://kbroman.org/github_tutorial/pages/init.html

GitHub pages: <https://pages.github.com/>

Netlify/Surge: <https://bit.ly/3aAXwml> or <https://surge.sh/help/getting-started-with-surge>

Send to Google Sheets

- System for receiving a JSON data via POST(use Postman) and storing it in Google sheets.
- Add new column for entirely new field
- Use Python/NodeJS(backend)

Resources:

Postman: <https://www.postman.com/>

Full problem statement: <https://bit.ly/3exWzwG>

Automation app

Automation tool with Telegram bot API, Facebook Graph API(User submits a Google form,

- data gets posted to a server(Google Apps Script),
- gets saved in a database(MongoDB),
- request gets sent to an admin group on Telegram for approval or rejection,
- on approval same data gets posted on a Facebook group via a page

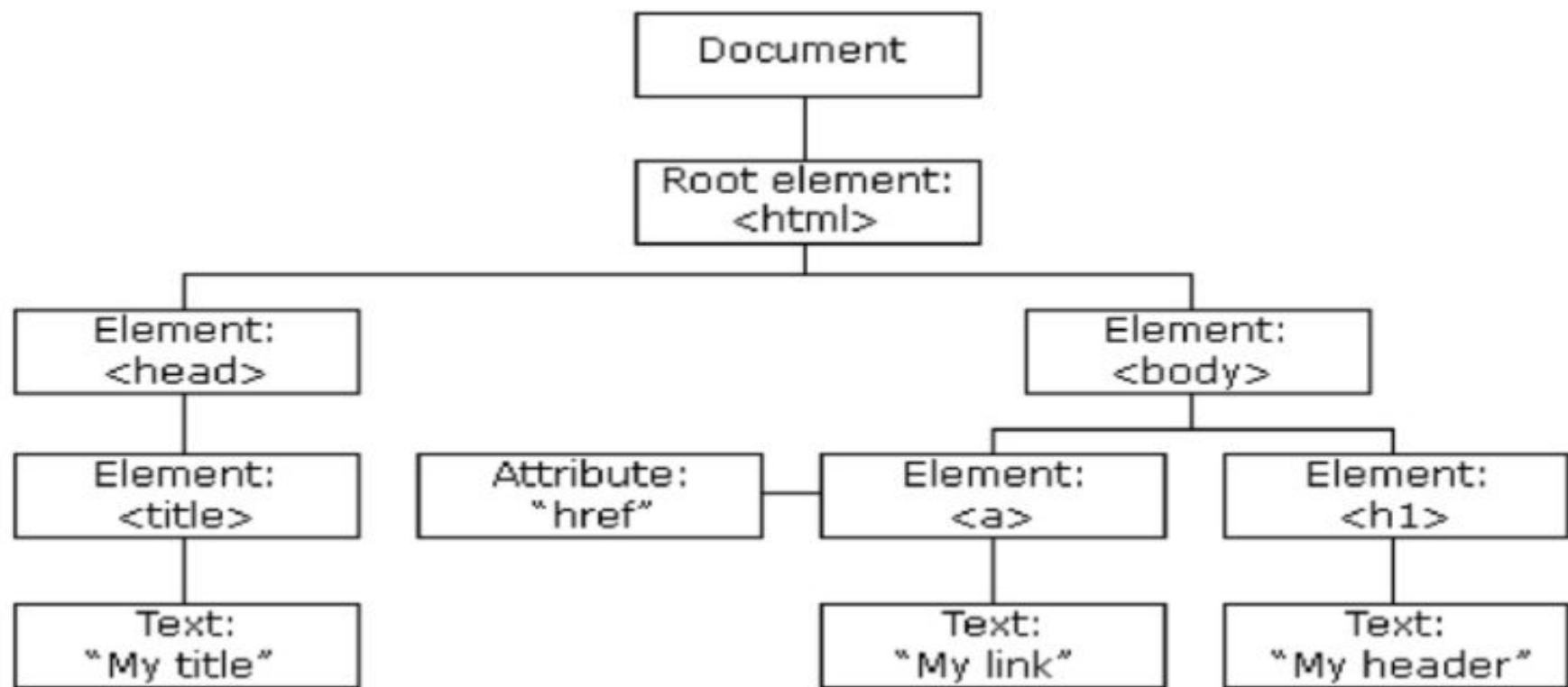
Bootstrap

- Free and open-source CSS framework
- Responsive, mobile-first front-end web development
- Contains CSS- and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components
- Don't reinvent the wheel

Get started: <https://getbootstrap.com/>

DOM

- cross-platform and language-independent interface
- treats an XML or HTML document as a tree structure
- node is an object representing a part of the document
- DOM methods allow programmatic access to the tree
- Nodes can have event handlers attached to them. Once an event is triggered, the event handlers get executed.



DOM Selectors

```
getElementsByName  
getElementsByClassName  
getElementById
```

```
querySelector  
querySelectorAll
```

```
getAttribute  
setAttribute
```

##Changing Styles

```
style.{property} //ok
```

```
className //best  
classList //best
```

```
classList.add  
classList.remove  
classList.toggle
```

##Bonus

```
innerHTML //DANGEROUS
```

```
parentElement  
children
```

DOM selectors and events

Resource for DOM selectors:

<https://blog.bitsrc.io/dom-selectors-explained-70260049aaf0>

Resources for DOM events:

<https://bit.ly/3dP8JIN>

<https://developer.mozilla.org/en-US/docs/Web/Events>

jQuery

- JavaScript feature-rich library
- Makes DOM manipulation easier
- Compatible with all browsers

Resources to get started:

<https://www.tutorialspoint.com/jquery/jquery-overview.htm>

```
</head>
```

```
<body>
```

```
<p>If you click on me, I will disappear.
```

```
</p>
```

```
<p>Click me away!</p>
```

```
<p>Click me too!</p>
```

```
<script>
```

```
$(document).ready(function(){  
    $("p").click(function(){  
        $(this).hide();  
    });  
});
```

```
</script>
```

```
<script
```

```
src="https://ajax.googleapis.com/ajax/libs/  
jquery/3.2.1/jquery.min.js"></script>
```

```
</body>
```

```
</html>
```

Thank you!