

Introduction to Front End

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List of Concepts Involved

- What is Frontend?
- Brief Introduction to



HTML

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CSS

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JS

- Roles and responsibilities of an FE Engineer
- Front-end libraries and frameworks.
- Difference between FE and BE
- How to Become a Front End Engineer?
- Interview Process of Front End roles in the industry.



What is FE?

- The part of the website that users see and interact with
- Frontend elements : logo, search bars, buttons overall layout is aesthetically designed
- The look and feel of the website is the front end part of the website
- **Take this example :** Open amazon.in and find the elements of the website

Brief Introduction to HTML, CSS and JavaScript

Let's imagine that a website is Deadpool! In that case, if you want to create a functional deadpool, we would need the following things :

The skeleton of Deadpool : HTML

The skin of Deadpool : CSS

The brain of Deadpool : Javascript

HTML
structure



CSS
presentation/appearance



JavaScript
dynamism/action



What is HTML?

- HTML : HyperText Markup Language
- Markup language : uses tags to identify different types of content : these tags are called “elements”
- Provides basic structure to the website.
- Core of the website
- **Take this example :** Open amazon website and find h1 tags, p tags, div tags, img tags etc
- Open console and see what does the HTML code looks like
- Create a small application in html

Welcome MI, Agent

Urgent : Contamination Alert

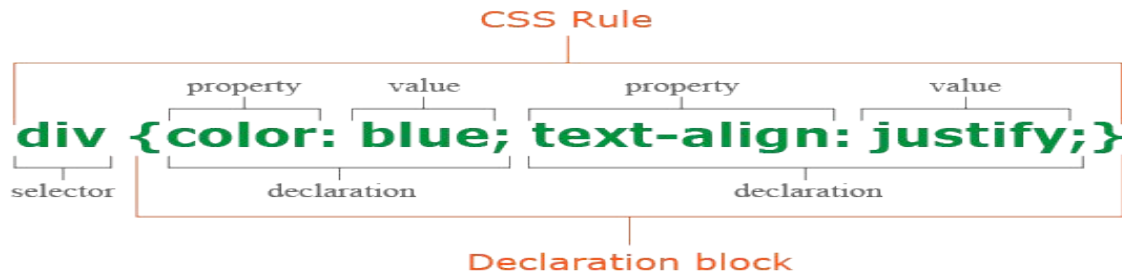
A dangerous virus is spreading with no control. Choose to accept this mission and destroy the virus.

[Do you choose to Accept?](#)



What is CSS?

- To make our site presentable and make the user interface better we use CSS
- CSS : Cascading Styles Sheets
- You can add color, modify size, add fonts etc to make your webpage look great
- Take this example : Open amazon and go to console, find what CSS code looks like in console
- Let's style our webpage using CSS:
- CSS Syntax:



Output:

Welcome MI, Agent

Urgent : Contamination Alert

A dangerous virus is spreading
with no control. Choose to
accept this mission and destroy
the virus.

Do you choose to Accept?

What is JS?

JavaScript : The brains and muscles of the website

- The logic - based programming that can be used to modify websites content.
- Make the elements of the HTML page respond in different ways to user's actions
- To make your web page interactive and dynamic, we make use of JavaScript.
- Let's say that when the MI agent clicks on the link, it shows them detailed information of the mission.
- We will learn JS in the coming sessions and understand how to manipulate the content and show the results.



HTML, CSS, JS together

Together, these three languages work together to make the front - end of the website.

HTML	CSS	JavaScript
<ul style="list-style-type: none">• Create the structure	<ul style="list-style-type: none">• Stylize the website	<ul style="list-style-type: none">• Increase Interactivity
<ul style="list-style-type: none">• Controls the layout of the content	<ul style="list-style-type: none">• Applies style to the web page elements	<ul style="list-style-type: none">• Adds interactivity to the web page
<ul style="list-style-type: none">• Provides structure to the web page design	<ul style="list-style-type: none">• Handles the look and feel of the website	<ul style="list-style-type: none">• Handles complex function and feature
<ul style="list-style-type: none">• Fundamental building block of any web page	<ul style="list-style-type: none">• Makes website responsive to various screen sizes	<ul style="list-style-type: none">• Programmatic logic based code to enhance functionality

Roles and Responsibilities of an FE Engineer

Frontend developers take care of the website's styles and user interface and make sure that the website looks good on all devices.

One general responsibility : to ensure that website visitors can easily interact with the page.

Whenever you visit a website, anything that you see, click on or otherwise use is the work of a front end developer.

Common roles :

- Optimising the user experience.
- Using HTML, JavaScript and CSS to bring concepts to life.
- Developing and maintaining the user interface.
- Implementing design on mobile websites.
- Creating tools that improve site interaction regardless of the browser.
- Managing software workflow.
- Following SEO best practises.
- Fixing bugs and testing for usability

Skills required

- HTML
- CSS
- JS
- Additional libraries and frameworks :
- Bootstrap : popular CSS Framework for developing responsive and mobile-first websites.
- React : js library for building user interfaces

Tools required



Graphic designing tools :

Before a front end developer begins coding, they typically use graphic design tools to create a prototype of their website, which lets them test and experiment with the user interface before working out the actual code.

- Sketch
- Photoshop
- Figma
- Illustrator



Code Editing Tools :

A code editing tool is simply the program a front end developer chooses to use to write the code for their website.

- Notepad
- Vs Code
- Atom
- Eclipse

Frontend Libraries/Frameworks:

Some of the popular frontend frameworks are:

AngularJS-

- Developed by Google and released in 2010.
- Has 20-25% market hold.
- Highly Opinionated(Tells the developers what to use and how to use)
- Has built in tools and state management systems.
- Steep learning curve.

Vue.js-

- Developed and released by Evan You, a former Google Employee in 2014.
- Lightweight and simple.
- Easier to learn.
- Doesn't have all tools and requires external components/libraries.

Some of the popular JavaScript libraries are:

jQuery-

- HTML/DOM manipulation is supported by jQuery.
- It also includes a wrapper for HTML event methods.
- It allows you to manipulate CSS.
- jQuery makes it easier to use effects and animations.
- On jQuery, AJAX calls are simpler.

React.js-

- Developed and released by Facebook in 2013.
- The most popular JavaScript library among developers and companies as of 2022.
- Contains the best portions of the above three.
- Developers who use React have access to React code snippets and components, allowing them to design certain elements of a UI.
- We can directly manipulate the DOM using JSX.
- It also includes a Virtual DOM to increase the website's performance.
- It's a free and open-source project.
- Whatever unique UI function a developer has to handle, there is a React module for it.
- The React library, as well as the community's vetted library add-ons, is rapidly expanding.

How to Become a Front End Engineer?

- Web design and structure implementation
- Come up with new ways to improve the user experience.
- Makes ensuring the website is responsive, safe, and scalable.
- Keep up with the current web design trends, for example.
- Creating the architecture of the front end website
- Designing engaging user interactions
- Making sure proper cross-platform optimization
- Checking the responsiveness of the website or application
- Monitoring the project from conception to delivery
- Catering the technical as well as consumer needs.
- Working together with graphic designers to integrate the designing features.



Skills required

- Knowledge of frontend technology : A front-end developer must possess strong knowledge of vital frontend technologies such as HTML, JavaScript, CSS3, etc.
- Learn how to use CSS on the server.
- Be familiar with graphic design software (e.g., Adobe Illustrator)
- Understand the fundamentals of SEO.
- Have good problem-solving abilities and be able to communicate effectively with coworkers, managers, and clients
- Possess strong interpersonal skills

Interview Process of Front End positions in the industry

- **Initial Technical Screening:**

This usually involves a coding round and a discussion of your past Frontend projects. The coding questions are typically at an Easy/Medium level on Leetcode. While discussing projects, basic questions related to the project might be asked to understand your knowledge of the stack

- **Assessment: 4-6 Rounds:**

1-2 Coding Rounds: Depending on the total years of experience, candidates go through 1-2 coding rounds. Usually, the difficulty level of these questions is easy/medium, but sometimes they ask some hard questions also.

FE/Web Fundamentals Round: They test knowledge of JS language. Candidates are asked to solve problems using JS.

- **Behavioural Round:**

This round is to judge your team skills, leadership qualities, your strengths and weaknesses etc.

Upcoming Class Teasers

- Conditional Statements.
- Iterative Statements.



**Thank
You**