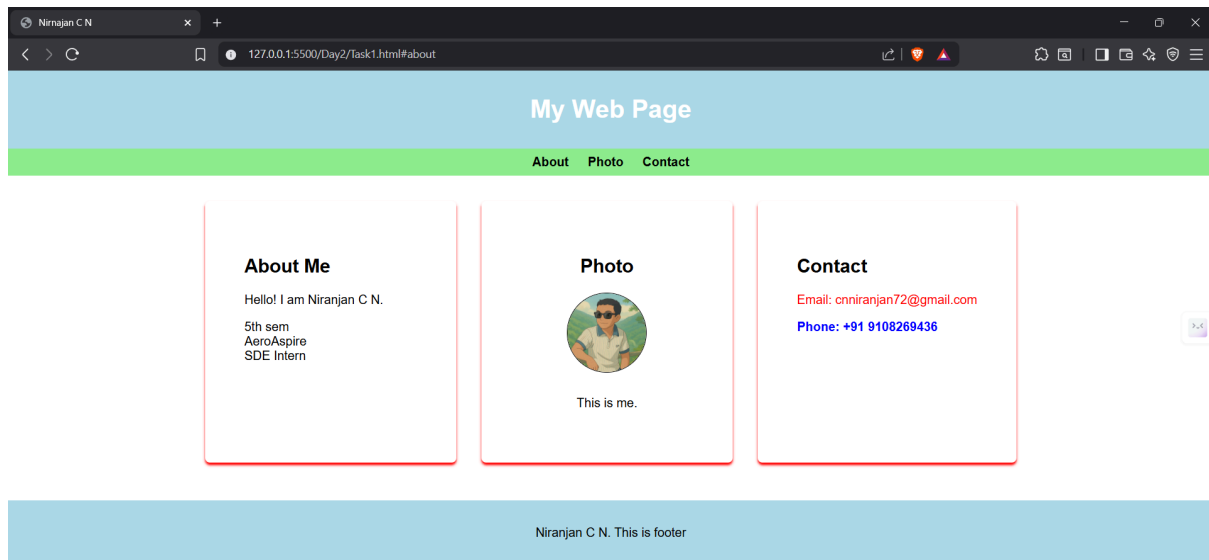


## AeroAspire-SDE Intern NIRANJAN C N

Day 2-Sep 23

This is the webpage I developed for the task:

Build basic HTML page: About / Photo / Contact sections, Style the sections; header/nav/footer; layout using Flexbox or Grid.



This is the webpage I developed for the task:

Build basic HTML page: About / Photo / Contact sections, Style the sections; header/nav/footer; layout using Flexbox or Grid

Questions:

1. What is <section> vs <div>?

A

- The <div> element is used as a container for HTML elements.
- It is used as a default block element.
- The <div> element has no required attributes, but style , class and id are common.

B

- The <section> tag defines a section in a document.
- The <section> tag also supports the global attributes
- The <section> tag also supports the event attributes

2.Why semantics matter?

- Semantics in general is logic or meaning of the code.
- Semantics matter because they add meaning and structure to the webpage.

- A semantic element clearly describes its meaning to both the browser and the developer.
- There are many semantic elements we can work on in webpage like in this project is section, header and footer.

### 3. What is the flow from writing HTML → rendering by browser?

- First, the browser gets the HTML file from the internet or locally from computer.
- It reads the HTML code piece by piece, understanding what tags and text are there.
- The browser builds a big family tree called the DOM, showing how all parts of the page connect.
- At the same time, it gets the CSS files that tell how the page should look.
- The CSS is turned into another tree (CSSOM) that shows the styles for each part.
- The browser combines the DOM and CSSOM trees into one called the render tree, which shows exactly what will be visible and how it should be styled.
- Then the browser figures out where everything goes on the screen and how big each part should be.
- Finally, the browser colors and draws everything on your screen so you can see the webpage.

### 4. How does semantic HTML improve accessibility and SEO?

- Semantic HTML uses meaningful tags like `<header>`, `<nav>`, `<article>`, which describe content.
- The structure of the page is better organized with semantics so it increases accessibility.
- Overall, semantic HTML improves usability, accessibility, and boosts SEO performance.

### 5. Describe how the browser parses HTML + CSS to render layout.

- Browser starts by receiving HTML and CSS files.
- It parses HTML into a DOM tree which is represented like a page structure.
- It parses CSS into a CSSOM tree that represents styles.
- The DOM and CSSOM are combined to create a render tree of visible elements with styles.
- Browser calculates a layout that determines the exact size and position for each element.
- Finally, it paints elements on the screen to display the page

### 6. How Flexbox handles alignment when container resizes?

- The flexbox is used to make the layout adapt automatically when the screen size changes  
Items grow, shrink, or wrap based on container size and flex properties.
- We can set display to flex to implement flex properties in the css.

### 7. Describe the CSS box model and how margin/padding/border/content interact.

- The css box model is used to design the webpage and alter the layout.

- It is basically a box that wraps around every HTML element. Every box consists of four parts: content, padding, borders and margins.
- Padding is space between content and border (inside the box).
- Border wraps around padding and content.
- Margin is transparent space outside the border and separating the box from others.
- Width/height set the content size;
- Padding and border add extra space outside content.
- Margin doesn't affect box size but adds space around boxes.

8.What is the flow of CSS specificity: inline styles, IDs, classes, element selectors?

- Inline styles have the highest specificity.
- ID selectors come next, more specific than others.
- Classes, attribute selectors, and pseudo-classes have medium specificity.
- Element selectors have the lowest specificity.
- If multiple rules target the same element, the one with highest specificity wins.
- If specificity ties, the last declared rule applies.
- All of these work like a waterfall model following hierarchy

9.How would you approach making a layout responsive?

To make a layout responsive one could add transitions, hovers and cursor effects, add different css style for example buttons before and after clicking and their hover. Change the margin of a section on hover like a toggle etc. Can make multiple changes in css for a responsive webpage.