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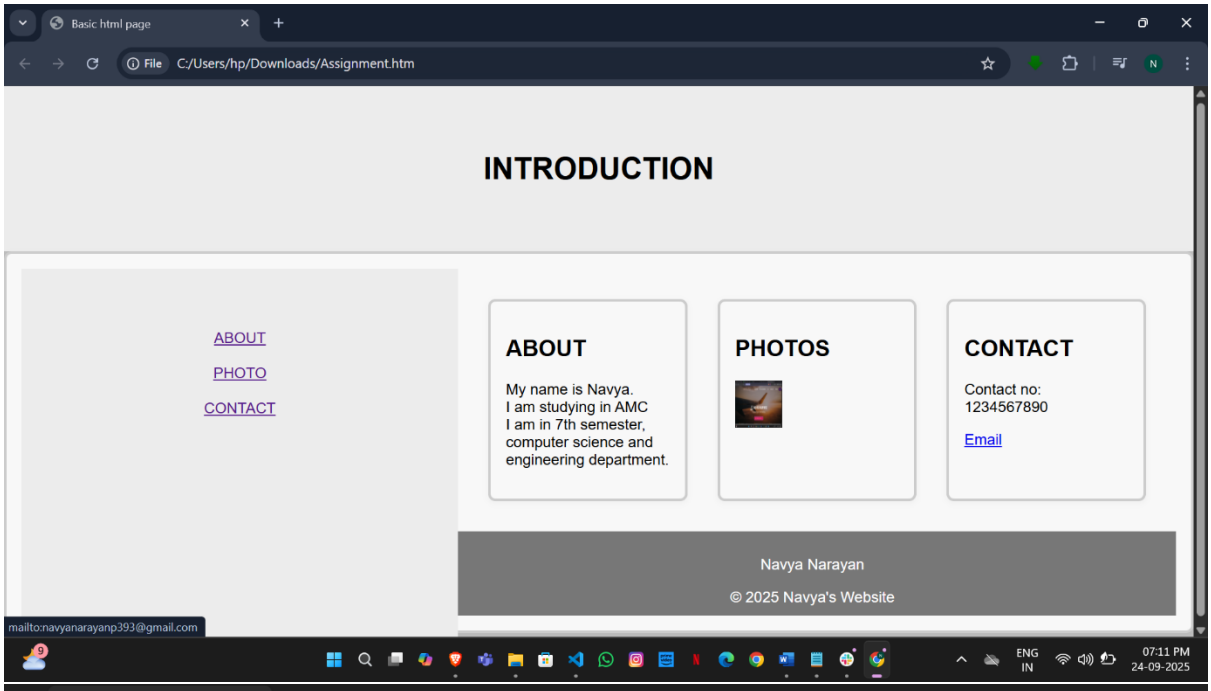
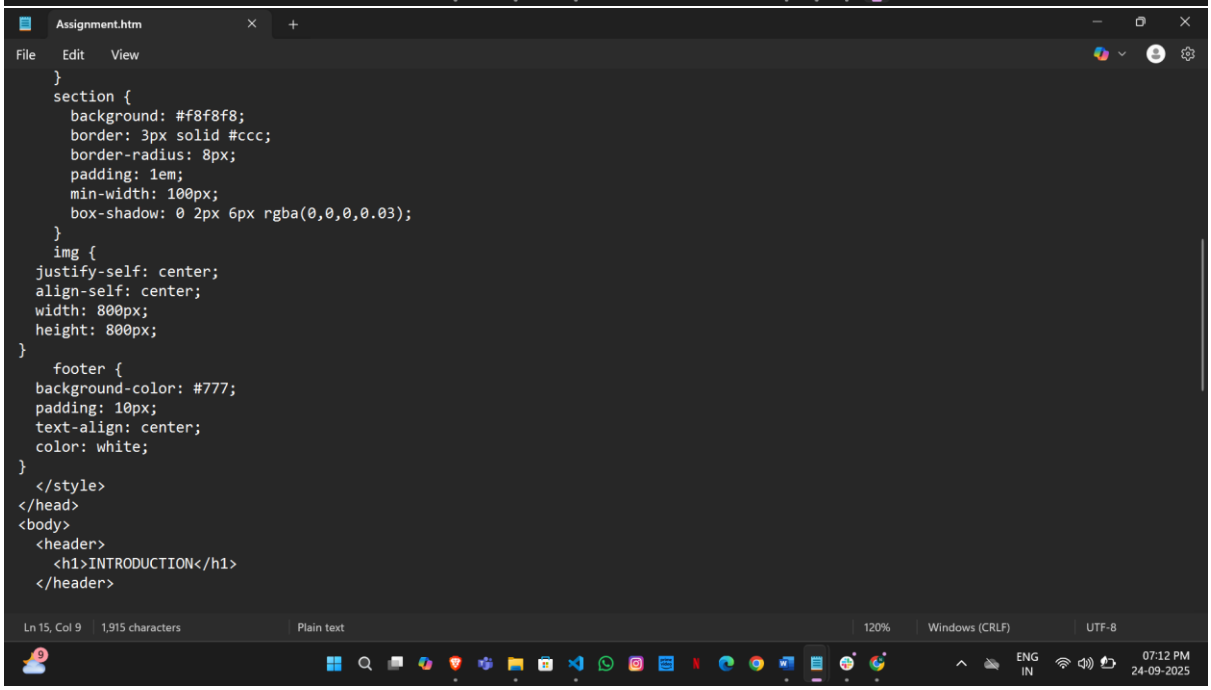
WEEK 1

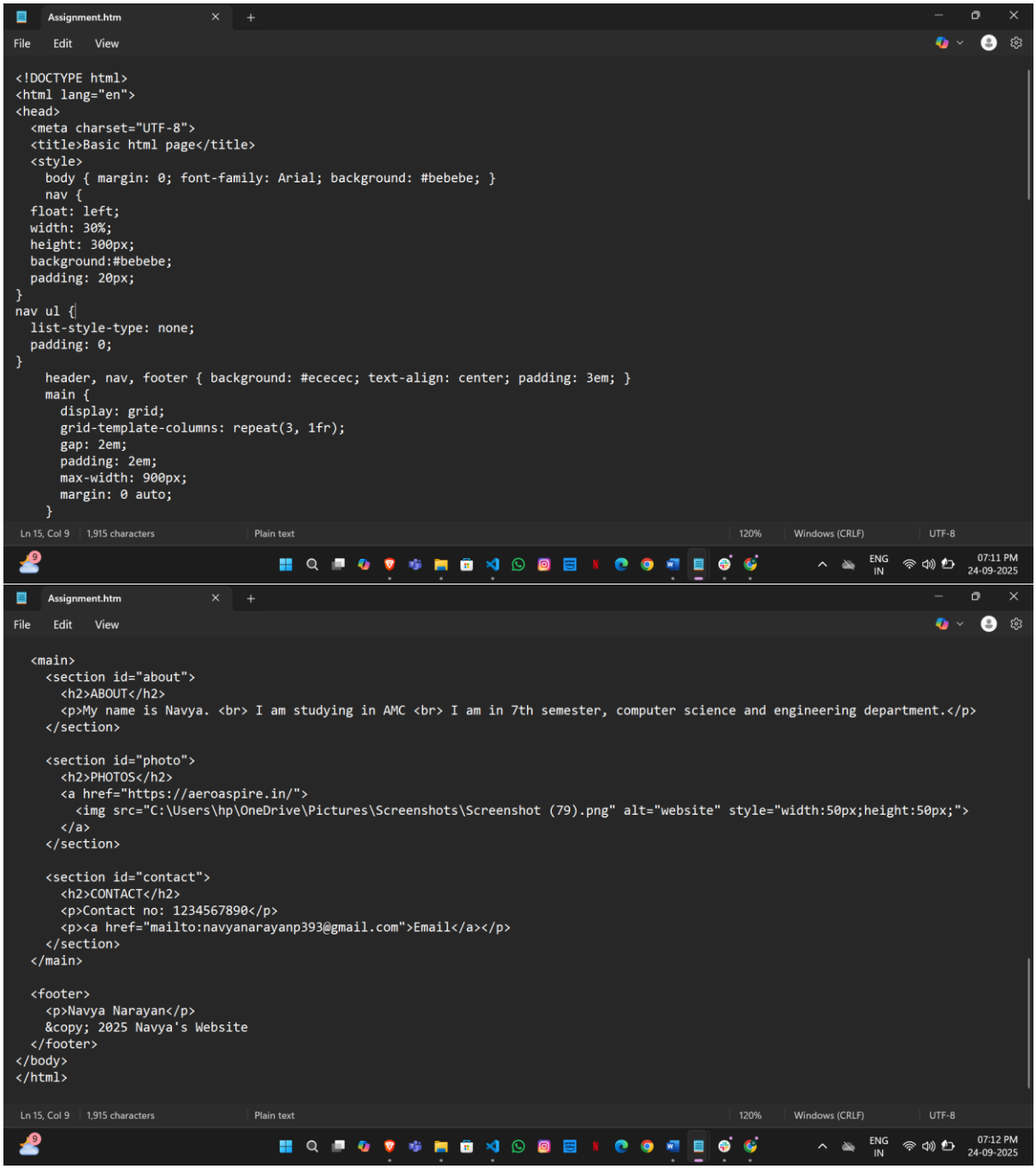
DAY 1: 23/09/25 [TUESDAY]

TASK 1: Build basic HTML page: About / Photo / Contact sections, Style the sections; header/nav/footer; layout using Flexbox or Grid

The below screenshots are from the first assignment given, in which I made a basic html page that gives information about, the photos and contacts.







QUESTIONS/ REFLECTION:

1. What is <section> vs ?
   <sections>defines a section in a document whereas element is used to group sections of a web page together.

2. Why semantics matter?
   semantic allows data to be shared and reused across applications, enterprises, and communities. It describes its meaning to both the browser and the developer.

3. What is the flow from writing HTML → rendering by browser?
   When the browser receives an HTML file, it parses the content to build a DOM tree.
   Then processes any CSS to create a CSSOM tree.
   It then merges both to form a render tree representing visible elements and their styles.
   Then the browser calculates the position and the size of each element on the screen before painting. This is the step where visual elements are drawn.
   Finally, combine different layers to display the complete webpage, and every time there are layout or style changes, this rendering flow repeats to keep the display updated.
   DOM-document object model
   CSSOM- CSS object model

4. How does semantic HTML improve accessibility and SEO?
   The semantic in HTML helps in making the code and the layout easier to under for the users as well as the machines.
   It also shows us where exactly each element is placed so that it's easier to navigate through the page.

5. Describe how the browser parses HTML + CSS to render layout.
   When the browser gets the webpage, it will read the html structure called DOM which reads the CSS to create the CSSOM, this is merged to form a render tree which calculates the size and position of the elements on the page, the browser paints the element on the screen and the completed webpage is shown to the user.

6. How Flexbox handles alignment when container resizes?
   Flexbox will adjust the size and position of the elements automatically inside the container. When the container changes its size, it will adjust that is grow or shrink to fit the space till everything is properly aligned. This is how flexbox handles alignment when the container resizes.

7. Describe the CSS box model and how margin/padding/border/content interact.
   It's a method where the browser will wrap every HTML element in a box that has 4 sections: content, padding, border and margin.

Content: text or images
Padding: gives the spacing inside the box
Border: its wraps the padding and content
Margin: creates space outside the box between the elements.

8. What is the flow of CSS specificity: inline styles, IDs, classes, element selectors?
   CSS specificity tells which style rules apply when multiple rules target the same element.
   Inline styles -> IDs-> classes-> element selectors.

9. How would you approach making a layout responsive?
   To make a layout responsive, use relative padding as the layout changes according to the devices. making layouts adapt to mobiles, tablets, and desktops. Use CSS tools like Flexbox and Grid for flexible structures that rearrange gracefully across various devices. Start by global styling so that the tasks to be done are reduced. It is better to avoid fixed sizes.