

Assignment Code: FSD-AG-002

Introduction to Python: Basics and Data Structures | Assignments

Instructions: Carefully read each question. Use Google Docs, Microsoft Word, or a similar tool to create a document where you type out each question along with its answer. Save the document as a PDF, and then upload it to the LMS. Please do not zip or archive the files before uploading them. Each question carries 20 marks.

Total Marks: 160

Question 1 : What are semantic HTML elements? Why is using them important for web development?

Answer:

Semantic HTML elements means HTML elements which have a clear meaning of the type of content which contains.

Semantic HTML is important for web development because it makes the website more structured and readable and accessible.

- I. Improves the code readability.
- II. Better search engine optimization.
- III. Accessibility for screen readers.

Question 2: You're designing a blog page. Which semantic elements would you use to structure the page, and why?

Answer:

1.<header>

i . At the top of the page contains title, logos and main navigation.

2.<nav>

ii . Inside <header> or placed below it and it holds navigation links.

3.<main>

iii. It contains the main part of the body.

Inside main we have <article>, <section>, <figure>.

4.<aside> : Sidebar with extra content like categories, recent posts, ads.

5.<footer> : Placed at bottom of the page. Contains copyright info, contact details, social media links.



Question 3: How can you make an HTML form more accessible to users with disabilities?

Answer:

Ways for more accessible to users:

1. Use <label> for every input.
2. Provide clear instructions.
3. Use Accessible Rich Internet Applications (ARIA).
4. Ensure keyword Accessibility.
5. Provide visible indicators.
6. Use proper Input types.
7. Error message should be clear.
8. It should be clear and readable.

Question 4: Identify and correct the errors in the following CSS code:

```
p {  
  font-size: 16;  
  color: #333  
  margin-top 10px;  
}
```

Answer:

```
p {  
  font-size: 16px;  
  color: #333  
  margin-top: 10px;  
}
```



Question 5: Write CSS rules to style all <h2> elements inside a <section> with a blue

color and center alignment.

Answer:

```
Section h2 {  
  color: blue;  
  text-align: center;  
}
```

Section h2: This descendant selector means it selects all <h2> elements that are inside a <section> element.

Question 6: Explain the CSS box model and its components.

Answer:

CSS box model is a fundamental concept in web design because every HTML element on a web page is treated as a rectangular box.

1. Content: It contains the actual content inside the element.
2. Padding: Space between the content and border.
3. Border: It wraps around padding and content.
4. Margin: Space outside the border, separating the elements from each other.

Question 7: How do the relative, absolute, and fixed positioning properties differ in CSS?

Answer:

position: relative; : The element is positioned relative to its normal position in the flow.

position: absolute; : The element is positioned relative to its nearest positioned ancestor. If no ancestor exists it is positioned relative to the <html>.

position: fixed; : The element is positioned relative to the viewport. It stays in fixed position when you scroll.

Question 8: Write a CSS rule to set a background image for a <div> with the class **.banner**, ensuring the image covers the entire area without repeating.

Answer:

```
.banner {  
  background-image: url("image.jpg");  
  background-size: cover;  
  background-repeat: no-repeat;  
  background-position: center;  
}
```