Q1: What does CSS stand for? Name three types of CSS. List three common properties used in CSS for styling text.

Ans: **CSS** stands for **Cascading Style Sheets**.

- Three types of CSS are:
    1. **Inline CSS**: Styles are applied directly within HTML tags using the style attribute.
    2. **Internal CSS**: Styles are defined within the <style> tag inside the <head> section of an HTML document.
    3. **External CSS**: Styles are placed in a separate file with a .css extension and linked to the HTML document.
- Three common CSS properties used for styling text:
    - color: Sets the color of the text.
    - font-size: Specifies the size of the font.
    - text-align: Aligns text within an element (e.g., left, center, right).

Q2: Explain the difference between internal, external, and inline CSS.

- **Inline CSS**: Applied directly within an HTML tag using the style attribute. This method is suitable for applying unique styles to individual elements but is not ideal for consistency across multiple pages.
- **Internal CSS**: Placed within the <style> tag in the <head> section of an HTML document. Internal CSS is useful for styling a single page and offers more organization than inline CSS but is not as reusable as external CSS.
- **External CSS**: Written in a separate .css file and linked to HTML documents using the <link> tag. External CSS allows you to apply a consistent style across multiple pages and is the best choice for large projects.

Q3: How does position: absolute differ from position: relative?

- **position: absolute**: Positions an element relative to its nearest positioned ancestor (an ancestor with any position other than static). If no such ancestor is found, it positions relative to the viewport. Absolute positioning removes the element from the normal document flow, so it won’t affect the layout of other elements.
- **position: relative**: Positions an element relative to its normal position in the document flow. The element's position can be adjusted with top, right, bottom, or left values without affecting the position of other elements in the flow.

Q4: Describe the difference between id and class selectors in CSS.

- **id Selector**: Used to style a single, unique element. IDs must be unique within a document, so each id can only be assigned to one element. IDs are targeted with the # symbol (e.g., #header).

- **class Selector**: Used to style multiple elements. Classes can be reused on multiple elements within a document. Classes are targeted with the . symbol (e.g., .menu-item).

Q5: Use CSS to create a hover effect that changes the text color of a button when a user hovers over it.

```
button:hover {
  color: #ff6600; /* Changes text color to orange when hovering */
}
```

Q6: Style a form using CSS so that the input fields have a specific width, border color, and padding.

```
form {
    width: 300px;
    margin: auto;
}
input[type="text"],
input[type="email"],
input[type="password"] {
    width: 100%;
    padding: 10px;
    border: 2px solid #4CAF50;
    border-radius: 5px;
    margin-top: 5px;
    margin-bottom: 15px;
    box-sizing: border-box;
}
button {
    padding: 10px 15px;
    background-color: #4CAF50;
```

```
 color: white;
    border: none;
    border-radius: 5px;
    cursor: pointer;
}

button:hover {
    background-color: #45a049;
}
```

Q7: Break down the structure of a CSS rule and explain each part of it.

```
selector {
   property: value;
}
h1 {
   color: blue;
   font-size: 24px;
   text-align: center;
}
```

Explanation of Each Part:

1. **Selector** (h1): This part selects which HTML element(s) the styles should apply to. In this case, h1 selects all <h1> elements.
2. **Property** (color, font-size, text-align): Each property specifies a specific style aspect of the selected elements, such as color, size, or alignment.
3. **Value** (blue, 24px, center): Each value defines the exact styling for the respective property.
4. **Declaration Block** ({ color: blue; font-size: 24px; text-align: center; }): The declaration block groups all style declarations (properties and values) together and is enclosed in curly braces {}.

Q8: Construct a CSS stylesheet for a form that uses advanced selectors, pseudo-classes, and media queries.

```
form {
    width: 100%;
    max-width: 500px;
    margin: 20px auto;
    padding: 20px;
    background-color: #f9f9f9;
    border: 1px solid #ddd;
    border-radius: 8px;
}

input[type="text"],
input[type="email"],
input[type="password"] {
    width: 100%;
    padding: 12px;
    margin-bottom: 10px;
    border: 1px solid #ccc;
```

```
    border-radius: 4px;
}

input[type="text"]:focus,
input[type="email"]:focus,
input[type="password"]:focus {
    border-color: #4CAF50;
    background-color: #eef;
}

/* Placeholder Styling */
input::placeholder {
    color: #888;
    font-style: italic;
}

input:disabled {
    background-color: #f2f2f2;
    cursor: not-allowed;
}
```

```
@media (max-width: 600px) {
    form {
        padding: 10px;
    }

    input[type="text"],
    input[type="email"],
    input[type="password"] {
        font-size: 16px;
    }

    button {
        width: 100%;
        font-size: 16px;
    }
}

button {
    padding: 12px;
```

```
    background-color: #4CAF50;
    color: white;
    border: none;
    border-radius: 4px;
    cursor: pointer;
}

button:hover {
    background-color: #45a049;
}
```