

1-(a) ----- HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>IEkart Homepage</title>
  <link rel="stylesheet" href="1-(a).css">
</head>
<body>
  <header>
    <h1>Welcome to IEkart</h1>
  </header>

  <main>
    <section class="media-content">
      <h2>Our Media</h2>

      <!-- Video Section -->
      <div class="media-frame">
        <h3>Promotional Video</h3>
        <video controls>
          <source src="path/to/your/video.mp4" type="video/mp4">
          Your browser does not support the video tag.
        </video>
      </div>

      <!-- Audio Section -->
      <div class="media-frame">
        <h3>Audio Advertisement</h3>
        <audio controls>
          <source src="path/to/your/audio.mp3" type="audio/mpeg">
          Your browser does not support the audio element.
        </audio>
      </div>

      <!-- iFrame Section -->
      <div class="media-frame">
        <h3>Our YouTube Channel</h3>
```

```

        <iframe width="560" height="315"
src="https://www.youtube.com/embed/your_video_id" frameborder="0"
allowfullscreen></iframe>
    </div>
</section>
</main>

<footer>
    <p>&copy; 2024 IEkart. All rights reserved.</p>
</footer>
</body>
</html>

```

1-(a) -----> CSS

```

body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
    background-color: #f4f4f4;
}
header {
    background-color: black;
    border-radius: 5px;
    color: yellow;
    padding: 1rem 0;
    text-align: center;
    font-family: cursive;
    font-weight: 900;
    font-size: 25px;
}
main {
    padding: 2rem;
}
.media-content {
    max-width: 800px;
    margin: 0 auto;
    background: #fff;
}

```

```

        padding: 2rem;
        box-shadow: 0 0 10px rgba(0,0,0,0.1);
    }
    .media-frame {
        margin-bottom: 2rem;
    }
    .media-frame h3 {
        margin-bottom: 1rem;
    }
    video, audio, iframe {
        width: 100%;
        max-width: 100%;
    }
    footer {
        text-align: center;
        padding: 1rem 0;
        background-color: black;
        color: yellow;
        font-size: small;
        font-family: cursive;
    }
}

```

2-(a)---->HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>IEKart Signup</title>
    <link rel="stylesheet" href="2-(a).css">
</head>
<body>
    <div class="signup-container">
        <h1>Sign Up</h1>
        <form id="signup-form">
            <!-- Username -->
            <div class="form-group">
                <label for="username">Username</label>

```

```
        <input type="text" id="username" name="username" required
minlength="4" maxlength="20" placeholder="Enter your username">
    </div>

    <!-- Email -->
    <div class="form-group">
        <label for="email">Email</label>
        <input type="email" id="email" name="email" required
placeholder="Enter your email">
    </div>

    <!-- Password -->
    <div class="form-group">
        <label for="password">Password</label>
        <input type="password" id="password" name="password" required
minlength="8" placeholder="Enter your password">
    </div>

    <!-- Confirm Password -->
    <div class="form-group">
        <label for="confirm-password">Confirm Password</label>
        <input type="password" id="confirm-password" name="confirm-
password" required minlength="8" placeholder="Confirm your password">
    </div>

    <!-- Date of Birth -->
    <div class="form-group">
        <label for="dob">Date of Birth</label>
        <input type="date" id="dob" name="dob" required>
    </div>

    <!-- Phone Number -->
    <div class="form-group">
        <label for="phone">Phone Number</label>
        <input type="tel" id="phone" name="phone" pattern="[0-9]{3}-[0-
9]{3}-[0-9]{4}" placeholder="123-456-7890">
    </div>

    <!-- Submit Button -->
    <div class="form-group">
        <button type="submit">Sign Up</button>
    </div>
</form>
```

```
    </div>

    <script src="2-(a).js"></script>
</body>
</html>
```

2-(a)----->CSS

```
body {
  font-family: Arial, sans-serif;
  background-color: #f4f4f4;
  margin: 0;
  display: flex;
  justify-content: center;
  align-items: center;
  height: 100vh;
}

.signup-container {
  background: #fff;
  padding: 2rem;
  box-shadow: 0 0 10px rgba(0,0,0,0.1);
  width: 100%;
  max-width: 400px;
  border-radius: 8px;
}

h1 {
  text-align: center;
  margin-bottom: 1.5rem;
}

.form-group {
  margin-bottom: 1rem;
}

label {
  display: block;
  margin-bottom: 0.5rem;
}
```

```

input {
  width: 100%;
  padding: 0.5rem;
  border: 1px solid #ccc;
  border-radius: 4px;
}

button {
  width: 100%;
  padding: 0.75rem;
  border: none;
  background-color: #333;
  color: white;
  border-radius: 4px;
  cursor: pointer;
  font-size: 1rem;
}

button:hover {
  background-color: #555;
}

```

2.(a)----->JS

```

document.getElementById('signup-form').addEventListener('submit', function(event)
{
  event.preventDefault();

  const password = document.getElementById('password').value;
  const confirmPassword = document.getElementById('confirm-password').value;

  if (password !== confirmPassword) {
    alert('Passwords do not match!');
    return;
  }
}

```

```

    }

    alert('Form submitted successfully!');
    // Add actual form submission logic here
  });

```

2-(B)---->HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>JavaScript Classes Example</title>
</head>
<body>
  <h1>Check the console for the result</h1>
  <p>1 - For opening the console you have to right click on the page and click
</b>INSPECT</b></p>
  <p>2 - There is description and all information about the respective page is
shown on the right side of the page</p>
  <p>3 - There in the nav-bar select an option called "CONSOLE"</p>
  <p>4 - You can see live output in the console </p>
  <script src="3-(a).js"></script>
</body>
</html>

```

2-(B)---->JS

```

// Base class for basic operations
class BasicOperation {
  // Method to add two numbers
  add(a, b) {

```

```

        return a + b;
    }
}

// Derived class for displaying results
class DisplayOperation extends BasicOperation {
    // Method to add two numbers and display the result
    addAndDisplay(a, b) {
        const result = this.add(a, b);
        console.log(`The result is: ${result}`);
        return result;
    }
}

// Create an instance of the DisplayOperation class
const operation = new DisplayOperation();

// Call the addAndDisplay method to add two numbers
operation.addAndDisplay(5, 7);

```

3-(a)---->HTML

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>IEKart Homepage</title>
    <!-- Meta Description for SEO -->
    <meta name="description" content="IEKart's is an online shopping website that
    sells goods in retail. This company deals with various categories like
    Electronics, Clothing and Accessories etc.">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <header>
        <h1>Welcome to IEKart</h1>

```



```

</header>
<main>
  <h2>Our Categories</h2>
  <ul>
    <li>Electronics</li>
    <li>Clothing</li>
    <li>Accessories</li>
  </ul>
  <!-- Additional content -->
</main>
<footer>
  <p>&copy; 2024 IEKart. All rights reserved.</p>
</footer>
<script src="script.js"></script>
</body>
</html>

```

<!-- Meta Description Tag:

The <meta> tag with the attribute name="description" is used to provide a description of the webpage content. This description is typically used by search engines to display a summary of the page in search results.

The content attribute contains the actual description of your website. In this case: "IEKart's is an online shopping website that sells goods in retail. This company deals with various categories like Electronics, Clothing and Accessories etc." -->

3-(b)---->HTML

```

function addNumbers(a: number, b: number = 0, c?: number): number {
  if (c !== undefined) {
    return a + b + c;
  }
  return a + b;
}

```

// Usage examples:

// Using only the first parameter

```
console.log(addNumbers(5)); // Output: 5 (5 + 0)
```

```
// Using the first and second parameters
```

```
console.log(addNumbers(5, 10)); // Output: 15 (5 + 10)
```

```
// Using all three parameters
```

```
console.log(addNumbers(5, 10, 20)); // Output: 35 (5 + 10 + 20)
```

```
0)
```