FSD Lab Program - 1

Title : Develop the javascript program to perform filter operation on image gallery.

Problem Description: Create a Gallery of images with buttons shown below. Each image is tagged. The Buttons are labelled with tags. Default all images are shown when page loads. Script should allow the user to filter the images upon clicking appropriate button.

Method: Series of images are created using <img> tag. Each <img> with the attribute data-tags. The script creates an object called tagged, each tag is added as property. The value of the property is array which refers to each <img> element. Buttons can be generated or created by looping through keys of the tagged object. Each button is given event handler based on the user selection, images are shown or hidden.

Solution:

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <title>Lab Program 1 - Image Gallery Filter</title>
 <style>
  body { font-family: Arial, sans-serif; padding: 20px; text-align: center; }
  h1, h3 { color: #2c3e50; }
  .buttons { margin: 20px 0; }
  button {
   padding: 8px 16px; margin: 5px;
   background: #3498db; color: white; border: none; border-radius: 4px;
   cursor: pointer;
  }
  button:hover { background: #2980b9; }
```

```css
    .gallery {
      display: flex; flex-wrap: wrap;
      justify-content: center; gap: 15px;
    }
    .gallery img {
      width: 200px; height: 150px;
      object-fit: cover; border: 2px solid #ccc;
    }
  </style>
</head>
<body>
```

```html
  <h1>Cambridge Institute of Technology</h1>
  <h3>Dept. of ISE | Course: FSD | Lab Program 1</h3>
  <p><strong>Title:</strong> Develop the JavaScript program to perform filter operation on image gallery</p>

  <div class="buttons" id="buttonsContainer"></div>

  <div class="gallery" id="imageGallery">
      <img src="images/c2.jpg" data-tags="city" alt="Cityscape">
       <img src="images/f2.jpg" data-tags="mountain" alt="Himalayas">
      <img src="images/o2.jpg" data-tags="beach" alt="Beach">
      <img src="images/f1.jpg" data-tags="nature" alt="Forest">
      <img src="images/a1.webp" data-tags="animal" alt="Forest Animals">
  </div>

  <script>
    const images = document.querySelectorAll('#imageGallery img');
    const tagMap = {};
```

```
    images.forEach(img => {
      img.dataset.tags.split(',').forEach(tag => {

        if (!tagMap[tag]) tagMap[tag] = [];

        tagMap[tag].push(img);

      });

    });


    const bc = document.getElementById('buttonsContainer');

    const allBtn = document.createElement('button');

    allBtn.textContent = 'Show All';

    allBtn.onclick = () => images.forEach(i => i.style.display = 'block');

    bc.appendChild(allBtn);


    Object.keys(tagMap).forEach(tag => {

      const btn = document.createElement('button');

      btn.textContent = tag;

      btn.onclick = () => {

        images.forEach(i => i.style.display = 'none');

        tagMap[tag].forEach(i => i.style.display = 'block');

      };

      bc.appendChild(btn);

    });
  </script>


</body>

</html>
```