**Exercise: Build a Responsive Webpage**

**Objective**: Create a responsive webpage that displays a list of products in a grid layout. The webpage should adapt to different screen sizes using Bootstrap and custom CSS.

**Instructions:**

1. Set up your HTML structure with the following elements:
   * 1. Header with a title (e.g., "Product Showcase").
     2. A container for the product grid.
     3. Create at least 6 product cards (you can use placeholder images and text).
2. Use Bootstrap classes to create a responsive grid for the product cards.
3. Apply custom CSS to style the product cards. You can implement transitions for hover effects, change the background color, font styles, and add some padding and margins.
4. Create a responsive design using @media queries:
   * 1. Make sure the webpage layout adjusts for smaller screens.
     2. Modify the number of columns in the grid.
     3. Adjust the font size, margins, or padding as needed.
5. Use Flexbox for the header to center the title both horizontally and vertically.
6. Add hover effects to the product cards. When a user hovers over a product card, change its background color or add a slight shadow to give it a visual response.
7. Test your webpage on different screen sizes to ensure it's responsive.

Good Luck!!!