**1. Explain all the CSS positions(static, fixed, sticky, relative, absolute) with one code example each.**

Static:

* The default position for all elements.
* Elements with **position: static** are positioned according to the normal flow of the document.
* The **top**, **right**, **bottom**, and **left** properties have no effect on statically positioned elements.

<style>

    .static-element {

      position: static;

      border: 1px solid black;

      padding: 10px;

    }

  </style>

  <div class="static-element">

    This is a static element.

  </div>

Fixed:

* Positioned relative to the viewport, i.e., it remains fixed even when the page is scrolled.
* The element's position is specified using **top**, **right**, **bottom**, and **left** properties.

<style>

    .fixed-element {

      position: fixed;

      top: 10px;

      right: 10px;

      background-color: yellow;

      padding: 10px;

    }

  </style>

  <div class="fixed-element">

    This is a fixed element.

  </div>

Sticky:

* Acts like **position: relative** until it reaches a specified threshold, then becomes **position: fixed**.
* It toggles between **position: relative** and **position: fixed** based on the user's scroll position.
* Requires the use of **top**, **right**, **bottom**, or **left** properties to set the threshold.

<style>

    .sticky-element {

      position: sticky;

      top: 100px;

      background-color: lightblue;

      padding: 10px;

    }

  </style>

  <div style="height: 2000px;">Scroll down...</div>

  <div class="sticky-element">

    This is a sticky element.

  </div>

Relative:

* Positioned relative to its normal position.
* The element is first positioned according to the normal flow, and then offset using **top**, **right**, **bottom**, or **left** properties.

<style>

    .relative-element {

      position: relative;

      top: 20px;

      left: 20px;

      border: 1px solid black;

      padding: 10px;

    }

  </style>

  <div class="relative-element">

    This is a relative element.

  </div>

Absolute:

* Positioned relative to the nearest positioned ancestor.
* If there are no positioned ancestors, it is positioned relative to the initial containing block (usually the viewport).
* The element is completely removed from the normal flow of the document.

<style>

    .parent {

      position: relative;

      height: 200px;

      width: 200px;

      background-color: lightgray;

    }

    .absolute-element {

      position: absolute;

      top: 50%;

      left: 50%;

      transform: translate(-50%, -50%);

      background-color: pink;

      padding: 10px;

    }

  </style>

  <div class="parent">

    <div class="absolute-element">

      This is an absolutely positioned element.

    </div>

  </div>