**Assignment 1**

**Flexbox Assignment**

1. **Describe the main differences between the CSS Flexbox layout and the CSS Grid layout model. When would you choose to use one over the other?**

**Ans: Introduction to Differences:**

* **Flexbox is designed for one-dimensional layouts. It works either in a row or a column. It uses the concept of the main axis and cross axis. Items can be aligned along these axes.**
* **Flexbox adjusts its items according to the content within them. It is ideal for situations where you want to distribute space among items in a container, even if their size is unknown or dynamic.**
* **It provides powerful alignment capabilities such as align-items, justify-content, and align-self. It is great or small-scale layouts, such as navigation bars, footers, or components within a larger design.**
* **Grid is designed for two-dimensional layouts. It works both in rows and columns, allows you to control both dimensions simultaneously.**
* **Grid allows for the creation of complex layouts, independent of the content size. It provides a systematic approach to design a webpage.**
* **Items can be placed precisely in a grid cell or span multiple cells with properties like grid-column and grid-row.**

1. **Explain the role of following key properties in the Flexbox layout model:**
2. **justify-content: This property is used to align and distribute elements the flex items across the main axis. It has the following values: flex-start, flex-end, center, space-between, space-around and space-evenly.**
3. **align-items: This property is used to align and distribute elements the flex items across the cross axis. It has the following values: flex-start, flex-end, center, baseline and stretch.**
4. **gap: This property is used to set the gap between the flex items.**
5. **flex-direction: Each flex container has a direction attached to it. The items inside the container are arranged in that direction only. The default direction is row. We can change it to column, column-reverse, row-reverse.**
6. **flex-wrap: This property allows flex items to wrap in multiple lines.**