

CSS Flexbox

Q1: What is CSS Flexbox, and how is it useful for layout design? Explain the terms flex-container and flex-item.

Ans. :

CSS Flexbox is a one-dimensional layout system in CSS that helps arrange elements in a row or a column. It makes it easier to create responsive designs because it automatically adjusts the size and space of elements inside a container.

useful for layout design :

1. Helps align items horizontally or vertically without complex CSS.
2. Supports space distribution between elements.
3. Makes layouts responsive.
4. Provides powerful alignment features like center, stretch, space-between, space-around.

The term flex-container :

1. The parent element where `display:flex;` is applied.
2. It controls how its direct children flex items are positioned and aligned.

Example :

```
.container {  
  display: flex;  
}
```

The term flex-item :

1. The child elements inside the flex container.
2. They respond to the rules set by the container, such as direction, alignment, and spacing.

Example :

```
<div class="container">  
  <div class="item">Item 1</div>
```

```
<div class="item">Item 2</div>  
</div>
```

Q2. Describe the properties justify-content, align-items, and flex-direction used in Flexbox.

Ans. :

Properties of justify-content :

Defines horizontal alignment of flex-items along the main axis.

1. Flex-start - items align at the start default.
2. Flex-end - items align at the end.
3. Center - items align at the center.
4. Space-between - equal space between items.
5. Space-around - equal space around items.
6. Space-evenly - equal space between and at edges.

Properties of align-items :

Defines vertical alignment of flex-items along the cross axis.

1. Stretch - items stretch to fill container default.
2. Flex-start - items align at the top.
3. Flex-end - items align at the bottom.
4. Center - items align at the middle.
5. Baseline - items align by their text baseline.

Properties of flex-direction :

Defines the direction of the main axis (row or column).

1. Row - items placed left to right default.
2. Row-reverse - items placed right to left.
3. Column - items placed top to bottom.
4. Column-reverse - items placed bottom to top.