Flexbox

- Flexbox (flexible box) is a one dimensional (either work in row or column) layout mode of CSS3. Using this mode, you can easily create layouts for complex applications and web pages.
- Flexbox module in CSS3 to easy align elements in different directions and orders.
- Flexbox is a one-dimensional layout method for laying out items in rows or columns. Items flex to fill additional space and shrink to fit into smaller spaces.
- The only reliable cross browser-compatible tools available for creating CSS layouts were things like floats and positioning. These are fine and they work, but in some ways, they are also rather limiting and frustrating so in this case we use Flexbox.
- Flexbox is to give container the ability to expand and shrink elements to best use all the available space.
- CSS3 Flexbox layout replaces float layout.
- The key point about Flexbox is the ability to make items flex, which changes their width and height to fill space in a given dimension.
- Flexbox gives us complete control over the alignment, direction, order, and size of our boxes.
- Flexbox have "main-axis"(horizontally by default) & "cross-axis"(vertically by default).
- The cross axis is the axis perpendicular to the main axis. Its direction depends on the main axis direction.
- For creating Flexbox container we use "display:flex".
- Flexbox always has a direction either in "column" or "row" but by default, the direction is horizontal with items being displayed left to right. This is also known as a row.
- We can combine flexbox with media queries to create a layout that responds to different sized screens / RWD.

Features of Flexbox

- **Direction –** You can arrange the items on a web page in any direction such as left to right, right to left, top to bottom, and bottom to top.
- **Order –** Using Flexbox, you can rearrange the order of the contents of a web page.
- **Wrap –** In case of inconsistent space for the contents of a web page (in single line), you can wrap them to multiple lines (both horizontally) and vertically.
- **Alignment –** Using Flexbox, you can align the contents of the webpage with respect to their container.
- **Resize –** Using Flexbox, you can increase or decrease the size of the items in the page to fit in available space.

Flexbox Advantages

- It is easier to make our responsive website using flexbox.
- Flexbox structure is simple.
- We can easily create complex webpage layouts with flexbox.
- Supported by all the web browsers.

Flexbox Terminology

Flexbox has following terminology: -

a) Flex Container
b) Flex Items
c) Cross Axis
d) Main Axis

Note : To see the output in VS code, side-by-side, we need to install the extension

- **Live server preview** (by negokaz)

Examples

1) Creating Flexbox

We can create "flexbox" by using "display:flex" inside the parent container.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *
        {
            box-sizing: border-box;
        }
        html,body
        {
            margin: 0px;
            padding: 0px;
        }
        .container
        {
            width: 600px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
        }
        .items
        {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
        }
        .item1
        {
            background-color: red;
        }
        .item2
        {
            background-color: green;
        }
        .item3
        {
            background-color: yellow;
        }
        .item4
        {
            background-color: indigo;
        }
    </style>
</head>
<body>
        <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
    </div>
</body>
</html>
```

2) Flexbox Items Directions

- The flex-direction property is a sub-property of the Flexible Box Layout module.
- The "flex-direction" CSS property sets how flex items are placed in the flex container defining the main axis and the direction (normal or reversed).
- This property works with parent container.
- The main axis of a flex container is the primary axis along which flex items are laid out. Beware, it is not necessarily horizontal; it depends on the flex-direction property.
- The flex-direction property accepts 4 different values: row, row-reverse, column, column-reverse.
- The by default value of "flex-direction" property is "row".

Syntax

```
flex-direction: row | row-reverse | column | column-reverse
```

Example -- flex-direction : row

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *
        {
            box-sizing: border-box;
        }
        html,body
        {
            margin: 0px;
            padding: 0px;
        }
        .container
        {
            width: 600px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            flex-direction: row;
        }
        .items
        {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
        }
```

```
 .item1
        {
            background-color: red;
        }
        .item2
        {
            background-color: green;
        }
        .item3
        {
            background-color: yellow;
        }
        .item4
        {
            background-color: indigo;
        }
    </style>
</head>
<body>

    <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
    </div>

</body>
</html>
```

Example -- flex-direction : row-reverse

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *
        {
            box-sizing: border-box;
        }
        html,body
        {
            margin: 0px;
            padding: 0px;
        }
        .container
        {
            width: 600px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            flex-direction: row-reverse;
        }
        .items
        {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
        }
```

```
.item1
        {
            background-color: red;
        }
        .item2
        {
            background-color: green;
        }
        .item3
        {
            background-color: yellow;
        }
        .item4
        {
            background-color: indigo;
        }
    </style>
</head>
<body>

    <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
    </div>

</body>
</html>
```

Example -- flex-direction : column

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *
        {
            box-sizing: border-box;
        }
        html,body
        {
            margin: 0px;
            padding: 0px;
        }
        .container
        {
            width: 600px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            flex-direction: column;
        }
        .items
        {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
        }
```

```
.item1
    {
      background-color: red;
    }
    .item2
    {
      background-color: green;
    }
    .item3
    {
      background-color: yellow;
    }
    .item4
    {
      background-color: indigo;
    }
  </style>
</head>
<body>

  <div class="container">
    <div class="items item1">Item1</div>
    <div class="items item2">Item2</div>
    <div class="items item3">Item3</div>
    <div class="items item4">Item4</div>
  </div>

</body>
</html>
```

Example -- flex-direction : column-reverse

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <meta http-equiv="X-UA-Compatible" content="ie=edge">
   <title>Document</title>
   <style>
      *
      {
         box-sizing: border-box;
      }
      html,body
      {
         margin: 0px;
         padding: 0px;
      }
      .container
      {
         width: 600px;
         padding: 10px;
         border: 2px solid black;
         margin: 40px auto;
         background: silver;
         display: flex;
         flex-direction: column-reverse;
      }
      .items
      {
         color:#fff;
         font-size: 20px;
         font-weight: bold;
      }
```

```
.item1
        {
            background-color: red;
        }
        .item2
        {
            background-color: green;
        }
        .item3
        {
            background-color: yellow;
        }
        .item4
        {
            background-color: indigo;
        }
    </style>
</head>
<body>

    <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
    </div>

</body>
</html>
```

3) Flex-wrap Vs Flex-flow property

a) flex-wrap property

- These properties defines whether the flex items are forced in a single line or can be flowed into multiple lines.
- The flex-wrap property is a sub-property of the Flexible Box Layout module.
- flex-wrap is generally used when our "flex_items" go outside of "flex_container".
- This property accepts three values : nowrap(default), wrap & wrap-reverse.

Syntax

flex-wrap: nowrap | wrap | wrap-reverse

Example -- before flex-wrap when flex-direction is row

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *       {
            box-sizing: border-box;
        }
        html,body       {
            margin: 0px;
            padding: 0px;
        }
        .container      {
            width: 300px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
        }
        .items      {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
        }
        .item1      {
            background-color: red;
        }
        .item2      {
            background-color: green;
        }
        .item3       {
            background-color: yellow;
        }
        .item4       {
            background-color: indigo;
        }
        .item5       {
            background-color: blue;
        }
        .item6       {
            background-color: green;
        }
        .item7       {
            background-color: pink;
        }
    </style>
</head>
<body>

    <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
        <div class="items item5">Item5</div>
        <div class="items item6">Item6</div>
        <div class="items item7">Item7</div>
    </div>

</body>
</html>
```

Example -- before flex-wrap when flex-direction is column

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *       {
            box-sizing: border-box;
        }
        html,body       {
            margin: 0px;
            padding: 0px;
        }
        .container       {
            height: 100px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            flex-direction: column;
        }
        .items       {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
        }
        .item1       {
            background-color: red;
        }
        .item2       {
            background-color: green;
        }
        .item3      {
            background-color: yellow;
        }
        .item4      {
            background-color: indigo;
        }
        .item5      {
            background-color: blue;
        }
        .item6      {
            background-color: green;
        }
        .item7      {
            background-color: pink;
        }
    </style>
</head>
<body>

    <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
        <div class="items item5">Item5</div>
        <div class="items item6">Item6</div>
        <div class="items item7">Item7</div>
    </div>

</body>
</html>
```

Example -- flex-wrap:wrap with flex-direction:row

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <meta http-equiv="X-UA-Compatible" content="ie=edge">
   <title>Document</title>
   <style>
      *      {
         box-sizing: border-box;
      }
      html,body      {
         margin: 0px;
         padding: 0px;
      }
      .container      {
         width: 300px;
         padding: 10px;
         border: 2px solid black;
         margin: 40px auto;
         background: silver;
         display: flex;
         flex-wrap: wrap;
      }
      .items      {
         color:#fff;
         font-size: 20px;
         font-weight: bold;
      }
      .item1      {
         background-color: red;
      }
      .item2      {
         background-color: green;
      }
```

```
        .item3      {
            background-color: yellow;
        }
        .item4      {
            background-color: indigo;
        }
        .item5      {
            background-color: blue;
        }
        .item6      {
            background-color: green;
        }
        .item7      {
            background-color: pink;
        }
    </style>
</head>
<body>

    <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
        <div class="items item5">Item5</div>
        <div class="items item6">Item6</div>
        <div class="items item7">Item7</div>
    </div>

</body>
</html>
```

Example -- flex-wrap: wrap with flex-direction:column

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *       {
            box-sizing: border-box;
        }
        html,body       {
            margin: 0px;
            padding: 0px;
        }
        .container      {
            height: 100px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            flex-wrap: wrap;
            flex-direction: column;
        }
        .items      {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
            padding: 10px;
            margin: 10px;
        }
        .item1      {
            background-color: red;
        }
        .item2       {
            background-color: green;
        }
        .item3       {
            background-color: yellow;
        }
        .item4       {
            background-color: indigo;
        }
        .item5       {
            background-color: blue;
        }
        .item6       {
            background-color: green;
        }
        .item7       {
            background-color: pink;
        }
    </style>
</head>
<body>

    <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
        <div class="items item5">Item5</div>
        <div class="items item6">Item6</div>
        <div class="items item7">Item7</div>
    </div>

</body>
</html>
```

Example -- flex-wrap:wrap-reverse with flex-direction column

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <meta http-equiv="X-UA-Compatible" content="ie=edge">
   <title>Document</title>
   <style>
      *       {
         box-sizing: border-box;
      }
      html,body       {
         margin: 0px;
         padding: 0px;
      }
      .container       {
         height: 100px;
         padding: 10px;
         border: 2px solid black;
         margin: 40px auto;
         background: silver;
         display: flex;
         flex-wrap: wrap-reverse;
         flex-direction: column;
      }
      .items       {
         color:#fff;
         font-size: 20px;
         font-weight: bold;
         padding: 10px;
         margin: 10px;
      }
      .item1       {
         background-color: red;
      }
```

```
        .item2      {
          background-color: green;
        }
        .item3      {
          background-color: yellow;
        }
        .item4      {
          background-color: indigo;
        }
        .item5      {
          background-color: blue;
        }
        .item6      {
          background-color: green;
        }
        .item7      {
          background-color: pink;
        }
      </style>
    </head>
    <body>

      <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
        <div class="items item5">Item5</div>
        <div class="items item6">Item6</div>
        <div class="items item7">Item7</div>
      </div>

    </body>
    </html>
```

b) flex-flow property

It is a shorthand for flex-direction and flex-wrap.

Syntax

flex-flow: <‘flex-direction’> || <‘flex-wrap’>

Example -- with direction column

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *       {
            box-sizing: border-box;
        }
        html,body       {
            margin: 0px;
            padding: 0px;
        }
        .container       {
            height: 100px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            flex-flow: column wrap-reverse;
        }
        .items       {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
            padding: 10px;
            margin: 10px;
        }
        .item1
        {
            background-color: red;
        }
        .item2      {
            background-color: green;
        }
        .item3      {
            background-color: yellow;
        }
        .item4      {
            background-color: indigo;
        }
        .item5      {
            background-color: blue;
        }
        .item6      {
            background-color: green;
        }
        .item7      {
            background-color: pink;
        }
    </style>
</head>
<body>

    <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
        <div class="items item5">Item5</div>
        <div class="items item6">Item6</div>
        <div class="items item7">Item7</div>
    </div>

</body>
</html>
```

Example -- with direction row

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <meta http-equiv="X-UA-Compatible" content="ie=edge">
   <title>Document</title>
   <style>
      *        {
         box-sizing: border-box;
      }
      html,body        {
         margin: 0px;
         padding: 0px;
      }
      .container        {
         width: 300px;
         padding: 10px;
         border: 2px solid black;
         margin: 40px auto;
         background: silver;
         display: flex;
         flex-flow: row wrap-reverse;
      }
      .items        {
         color:#fff;
         font-size: 20px;
         font-weight: bold;
         padding: 10px;
         margin: 10px;
      }
      .item1        {
         background-color: red;
      }
```

```
.item2      {
      background-color: green;
    }
    .item3      {
      background-color: yellow;
    }
    .item4      {
      background-color: indigo;
    }
    .item5      {
      background-color: blue;
    }
    .item6      {
      background-color: green;
    }
    .item7      {
      background-color: pink;
    }
  </style>
</head>
<body>

  <div class="container">
    <div class="items item1">Item1</div>
    <div class="items item2">Item2</div>
    <div class="items item3">Item3</div>
    <div class="items item4">Item4</div>
    <div class="items item5">Item5</div>
    <div class="items item6">Item6</div>
    <div class="items item7">Item7</div>
  </div>

</body>
</html>
```

4) Flexbox items alignment properties

- The flexbox items are aligned at the start of the cross axis.
- By default, the cross axis is vertical. This means the flexbox items will be aligned vertically at the top.
- The flexbox items are aligned at the end of the cross axis.
- With these alignment properties we aligned flexbox items across main axis.

We have following properties for Flexbox items alignment :-

a) justify-content
b) align-items
c) align-content
d) align-self

a) justify-content

- This property aligns the flexbox items horizontally and along the main axis when flex-direction is row.
- This property aligns the flexbox items vertically and along the main axis when flex-direction is column.
- The justify-content property accepts following values : flex-start(default) / flex-end / center / space-between / space-around / space-evenly.

Syntax

justify-content: flex-start | flex-end | center | space-between | space-around | space-evenly

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *       {
            box-sizing: border-box;
        }
        html,body       {
            margin: 0px;
            padding: 0px;
        }
        .container      {
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            justify-content: center;
        }
        .items      {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
            padding: 10px;
            margin: 10px;
        }
        .item1      {
            background-color: red;
        }
```

```
.item2      {
      background-color: green;
    }
    .item3      {
      background-color: yellow;
    }
    .item4      {
      background-color: indigo;
    }
    .item5      {
      background-color: blue;
    }
    .item6      {
      background-color: green;
    }
    .item7      {
      background-color: pink;
    }
  </style>
</head>
<body>

  <div class="container">
    <div class="items item1">Item1</div>
    <div class="items item2">Item2</div>
    <div class="items item3">Item3</div>
    <div class="items item4">Item4</div>
    <div class="items item5">Item5</div>
    <div class="items item6">Item6</div>
    <div class="items item7">Item7</div>
  </div>

</body>
</html>
```

Example -- justify-content:space-evenly

With this value every flex items have equal space around it.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *       {
            box-sizing: border-box;
        }
        html,body       {
            margin: 0px;
            padding: 0px;
        }
        .container      {
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            justify-content: space-evenly;
        }
        .items      {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
            padding: 10px;
            margin: 10px;
        }
        .item1      {
            background-color: red;
        }
        .item2      {
            background-color: green;
        }
        .item3      {
            background-color: yellow;
        }
        .item4      {
            background-color: indigo;
        }
        .item5      {
            background-color: blue;
        }
        .item6      {
            background-color: green;
        }
        .item7      {
            background-color: pink;
        }
    </style>
</head>
<body>

    <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
        <div class="items item5">Item5</div>
        <div class="items item6">Item6</div>
        <div class="items item7">Item7</div>
    </div>

</body>
</html>
```

b) align-items

- This property aligns the flexbox items vertically and along the cross axis when flex-direction is row.
- This property aligns the flexbox items horizontally and along the cross axis when flex-direction is column.
- The align-items property accepts following values : flex-start / flex-end / center / baseline / stretch(default).

Syntax

align-items: flex-start | flex-end | center | baseline | stretch

Example -- align-items:stretch

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *       {
            box-sizing: border-box;
        }
        html,body       {
            margin: 0px;
            padding: 0px;
        }
        .container       {
            height: 300px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            align-items: stretch;
        }
        .items       {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
            padding: 10px;
            margin: 10px;
        }
        .item1       {
            background-color: red;
        }
```

```
 .item2      {
      background-color: green;
    }
    .item3      {
      background-color: yellow;
    }
    .item4      {
      background-color: indigo;
    }
    .item5      {
      background-color: blue;
    }
    .item6      {
      background-color: green;
    }
    .item7      {
      background-color: pink;
    }
  </style>
</head>
<body>

  <div class="container">
    <div class="items item1">Item1</div>
    <div class="items item2">Item2</div>
    <div class="items item3">Item3</div>
    <div class="items item4">Item4</div>
    <div class="items item5">Item5</div>
    <div class="items item6">Item6</div>
    <div class="items item7">Item7</div>
  </div>

</body>
</html>
```

Example -- align-items : center

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *       {
            box-sizing: border-box;
        }
        html,body       {
            margin: 0px;
            padding: 0px;
        }
        .container      {
            height: 300px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            align-items: center;
        }
        .items      {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
            padding: 10px;
            margin: 10px;
        }
        .item1      {
            background-color: red;
        }
```

```
.item2      {
           background-color: green;
        }
        .item3      {
           background-color: yellow;
        }
        .item4      {
           background-color: indigo;
        }
        .item5      {
           background-color: blue;
        }
        .item6      {
           background-color: green;
        }
        .item7      {
           background-color: pink;
        }
    </style>
</head>
<body>

    <div class="container">
        <div class="items item1">Item1</div>
        <div class="items item2">Item2</div>
        <div class="items item3">Item3</div>
        <div class="items item4">Item4</div>
        <div class="items item5">Item5</div>
        <div class="items item6">Item6</div>
        <div class="items item7">Item7</div>
    </div>

</body>
</html>
```

align-items : baseline

- The baseline value will align flex items along their text content's baseline.
- But if content size varies among flex items, then baseline can make a noticeable difference.
- In terms of where baseline alignment occurs, that is determined by the tallest item in the row.

Example : before baseline

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
    <style>
        *       {
            box-sizing: border-box;
        }
        html,body       {
            margin: 0px;
            padding: 0px;
        }
        .container       {
            height: 300px;
            padding: 10px;
            border: 2px solid black;
            margin: 40px auto;
            background: silver;
            display: flex;
            align-items: flex-start;
        }
        .items       {
            color:#fff;
            font-size: 20px;
            font-weight: bold;
            padding: 10px;
            margin: 10px;       }
    .item1    {
      background-color: red;
    }
    .item2    {
      background-color: green;
      font-size: 40px;
      height: 200px;
    }
    .item3    {
      background-color: yellow;
    }
    .item4    {
      background-color: indigo;
    }
    .item5    {
      background-color: blue;
    }
    .item6    {
      background-color: green;
      font-size: 10px;
    }
    .item7    {
      background-color: pink;
    }
  </style>
</head>
<body>
    <div class="container">
    <div class="items item1">Item1</div>
    <div class="items item2">Item2</div>
    <div class="items item3">Item3</div>
    <div class="items item4">Item4</div>
    <div class="items item5">Item5</div>
    <div class="items item6">Item6</div>
    <div class="items item7">Item7</div>
  </div>
</body>
</html>
```

Example -- after baseline

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <meta http-equiv="X-UA-Compatible" content="ie=edge">
   <title>Document</title>
   <style>
      *        {
         box-sizing: border-box;
      }
      html,body        {
         margin: 0px;
         padding: 0px;
      }
      .container        {
         height: 300px;
         padding: 10px;
         border: 2px solid black;
         margin: 40px auto;
         background: silver;
         display: flex;
         align-items: baseline;
      }
      .items        {
         color:#fff;
         font-size: 20px;
         font-weight: bold;
         padding: 10px;
         margin: 10px;
      }
      .item1        {
         background-color: red;
      }
```

```
.item2      {
      background-color: green;
      font-size: 40px;
      height: 200px;
    }
    .item3      {
      background-color: yellow;
    }
    .item4      {
      background-color: indigo;
    }
    .item5      {
      background-color: blue;
    }
    .item6      {
      background-color: green;
      font-size: 10px;
    }
    .item7      {
      background-color: pink;
    }
  </style>
</head>
<body>
    <div class="container">
    <div class="items item1">Item1</div>
    <div class="items item2">Item2</div>
    <div class="items item3">Item3</div>
    <div class="items item4">Item4</div>
    <div class="items item5">Item5</div>
    <div class="items item6">Item6</div>
    <div class="items item7">Item7</div>
  </div>
</body>
</html>
```