

CS213: Software Systems Laboratory

Autumn 2023-24

Koteswararao Kondepu

k.kondepu@iitdh.ac.in

Recap

- HyperText Markup Language (HTML)
- HTML Specifications
 - Heading
 - Paragraph
 - Link
 - Button
 - Image
 - Preformat
 - Lists
 - Tables
 - Form
- Cascading Style Sheets



Recap

- CSS Sytax
 - Ruleset
 - Selector Property
 - Values
- CSS Properties
 - text-alginment
- Integrating HTML and CSS
 - Container Elements → div
 - Class attributes

Cascading **S**tyle **S**heets



Outline



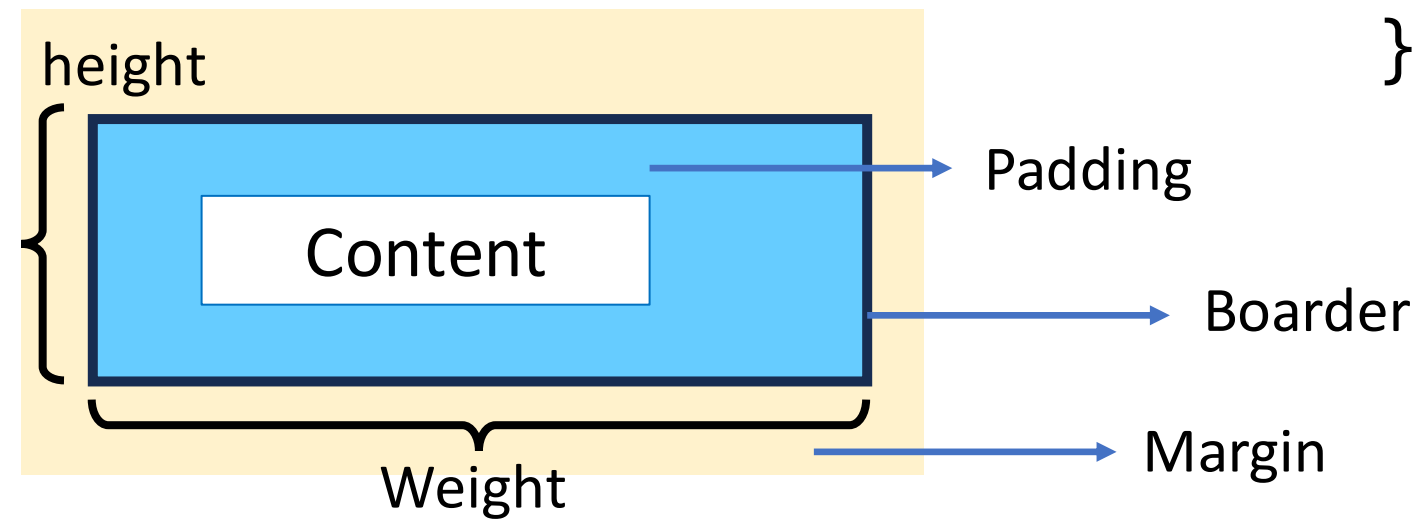
- Cascading Style Sheets
 - Background Image
 - Button Styling
 - Reusability of Rulesets
 - Multiple Class Names in HTML Elements
- Bootstrap Framework
 - Flexbox properties
 - Flex Container

CSS Multi-Ruleset

1 `.backgroundcolor{
background-color: lightblue;
text-align: center;
}`

2 `.header{
color: black;
}`

3 `.paragraph{
color: blue;
}`



Welcome to CS213 CSS Class

This class introduces different features of HTML such as attributes, order list, unordered list, tables, forms

Integration HTML and CSS: Multi-Ruleset

```
<!Doctype html>
<html>
<head>
    <meta charset="utf-8">
    <title>Welcome to CS213 </title>
    <link rel="stylesheet" href="header.css">
    <link rel="stylesheet" href="backgroundcolor.css">
    <link rel="stylesheet" href="paragraph.css">
</head>
<body>
    <div class="backgroundcolor">
        <h1 class="header"> Welcome to CS213 CSS Class </h1>
        <p class="paragraph">This class introduces different features of
HTML such as attributes, order list, unordered list, tables, forms </p>
    </div>
</body>
</html>
```

CSS Multi-Ruleset

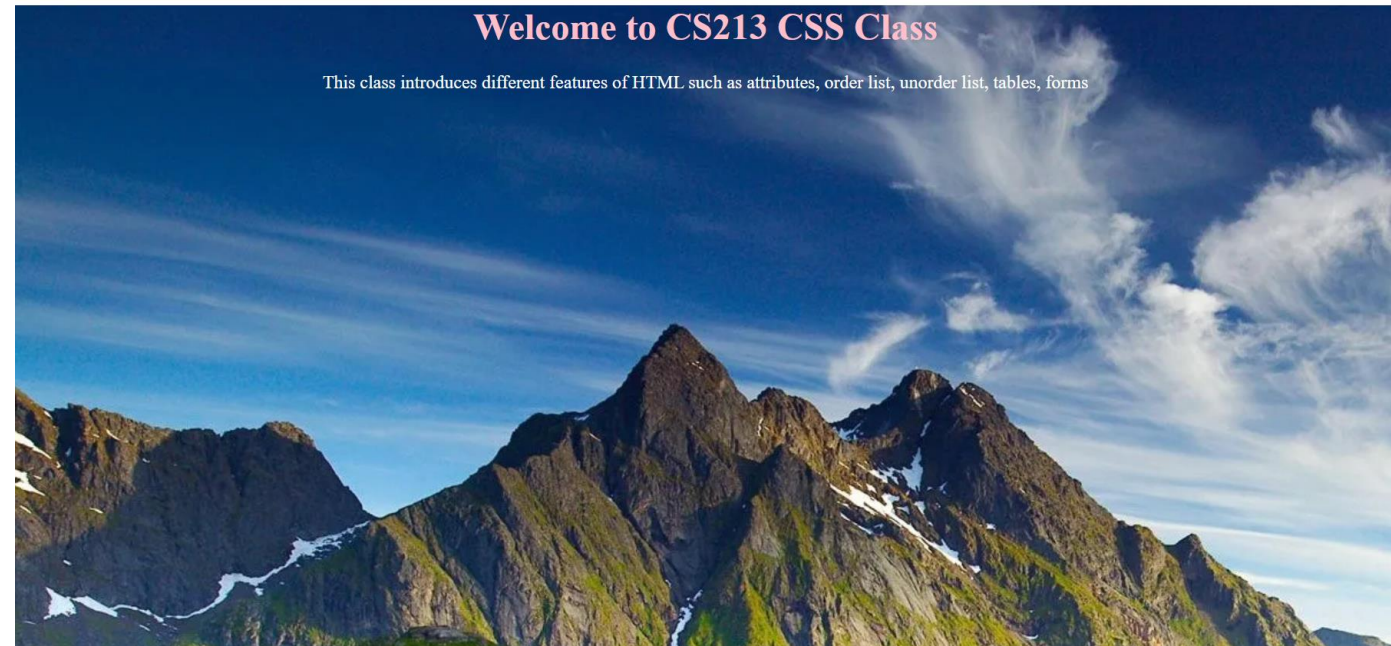
```
.header{                                     % "Lucida Console", "Courier New", monospace;
    color: black;                           % Arial, Helvetica, sans-serif;
    font-family: "Times New Roman", Times, serif;
    font-size: 24px
    font-style: italic
    font-weight: bold
    text-decoration: underline
}
```

CSS Background

```
.backgroundcolor{  
    background-color: lightblue;  
    text-align: center;  
    height: 200px;  
    width: 200px;  
}
```

```
.backgroundimage{  
background-image:url(https://wallpapers.com/images/hd/nature-landscape-hd-usqznq19dscdjfkf8.webp  
)  
    height: 200px;  
    width: 200px;  
}
```

<https://www.freepik.com/>
<https://wallpapers.com/>



CSS Background

Viewpoint

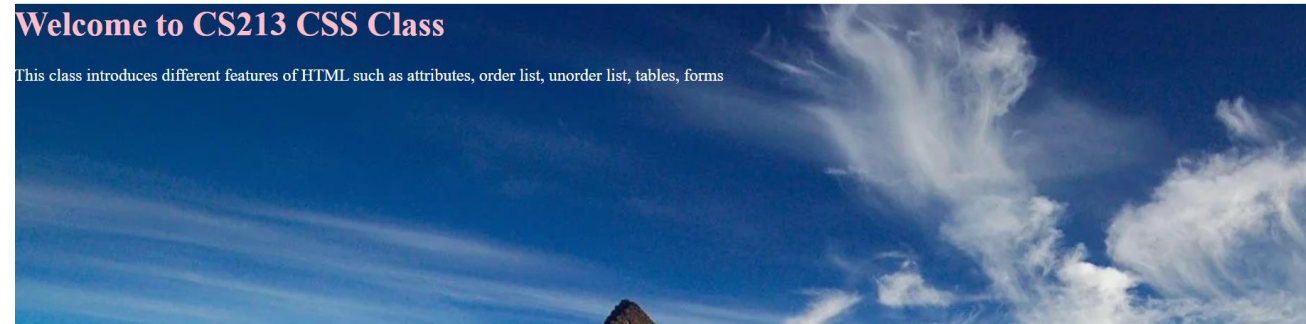
```
.backgroundimage{  
background-image:url(https://wallpapers.com/images/hd/nature-landscape-hd-usqznq19dscdjkf8.webp  
)  
height: 50vh;  
}
```

Viewpoint height → vh

Viewpoint width → vw

<https://www.freepik.com/>

<https://wallpapers.com/>



width: 50vw;

CSS Background

Background size

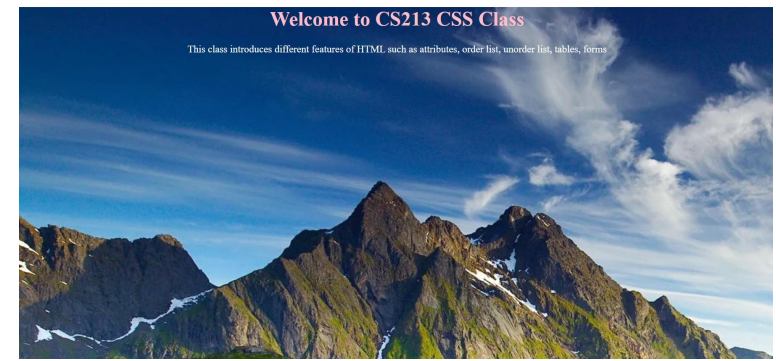
```
.backgroundimage{  
background-image:url(https://wallpapers.com/images/hd/nature-landscape-hd-usqznq19dscdjkh8.webp  
)  
background-size: cover;  
background-repeat: no-repeat;  
background-size: auto; %default  
auto  
length  
percentage  
cover  
contain  
initial  
inherit  
}
```

Viewpoint height → vh

Viewpoint width → vw

<https://www.freepik.com/>

<https://wallpapers.com/>



CSS Background

Button Styling

```
.button{  
    background-color: #eb34e8;  
    color: white;  
    height: 40px;  
    width: 200px;  
    border-radius: 25px;  
    border-color: white;  
    border-width: 5px;  
    padding: 20px;  
}
```



```
border-radius: 15px 30px 30px 15px;  
border-radius: 15px 50px 30px;  
border-radius: 15px 50px;  
  
border-top-left-radius: 15px;  
border-top-right-radius: 15px;  
border-bottom-left-radius: 15px;  
border-bottom-right-radius: 15px;
```

Integration HTML and CSS: Multi-Ruleset

```
<!Doctype html>
```

```
<html>
```

```
<head>
```

```
<link rel="stylesheet" href="header.css">
```

```
<link rel="stylesheet" href="backgroundimage.css">
```

```
<link rel="stylesheet" href="paragraph.css">
```

```
<link rel="stylesheet" href="button.css">
```

```
</head>
```

```
<body>
```

```
<div class="backgroundimage">
```

```
<h1 class="header"> Welcome to CS213 CSS Class </h1>
```

```
<button class="button"> Welcome to IITDh </button>
```

```
</div>
```

```
</body>
```

```
</html>
```

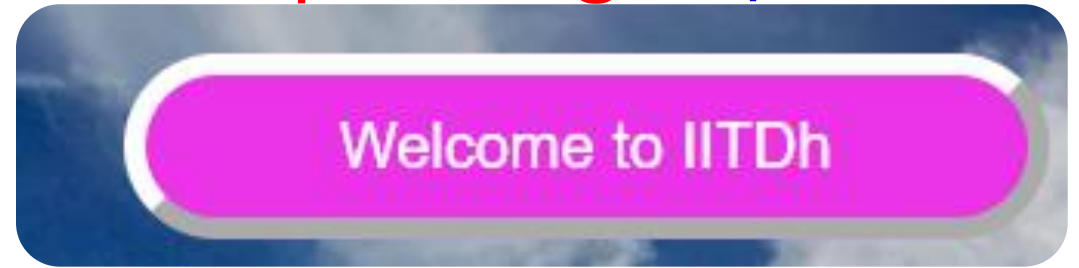
CSS Background

Padding

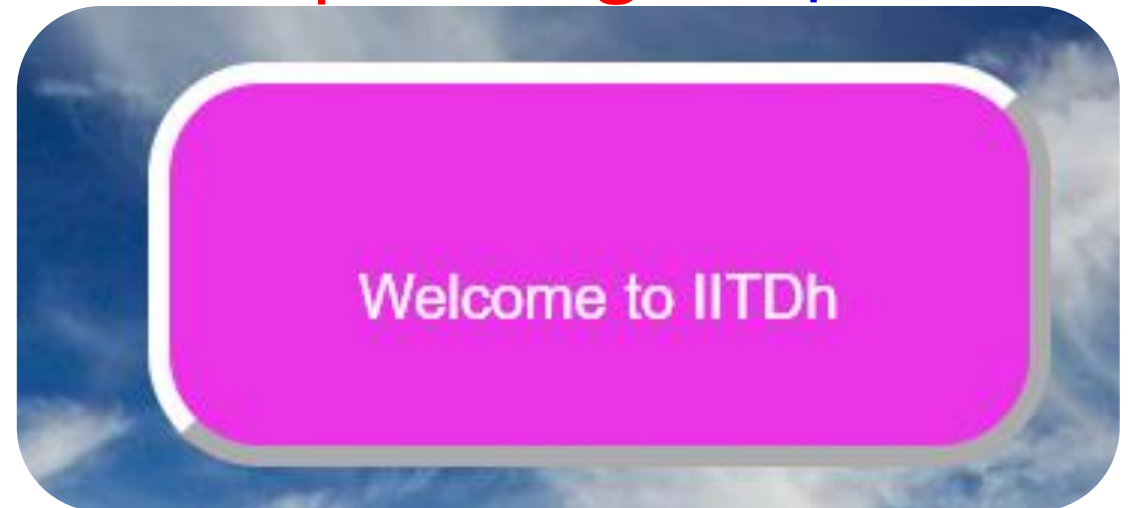
```
.button{  
    background-color: #eb34e8;  
    color: white;  
    height: 40px;  
    width: 200px;  
    border-radius: 25px;  
    border-color: white;  
    border-width: 5px;  
    padding: 5px;  
}
```



padding: 5px;



padding: 40px;



CSS Background

```
<!Doctype html>
```

```
<html>
```

```
<body>
```

```
<div class="backgroundimage">
```

```
<h1 class="header"> Welcome to CS213 CSS Class </h1>
```

```
<button class="button"> Welcome to IITDh </button>
```

```
<button class="button"> Welcome to CS213 </button>
```

```
</div>
```

```
</body>
```

```
</html>
```



CSS Button: Reusability



```
<body>
  <div class="backgroundimage">
    <h1 class="header"> Welcome to CS213 CSS Class </h1>
    <button class="button button-yellow"> Welcome to IITDh </button>
    <button class="button button-red"> Welcome to CS213 </button>
  </div>
</body>
```

```
.button{
  color: white;
  height: 40px;
  width: 200px;
  border-radius: 25px;
  border-color: white;
  border-width: 5px;
  padding: 5px; }
```

```
.button-yellow{
  background-color: yellow;
}

.button-red{
  background-color: red;
}
```

CSS Bootstrap



- Bootstrap is an Open-source front-end framework
- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins
- Bootstrap also gives you the ability to easily create responsive designs
- <https://getbootstrap.com/>
- Current version v5.3
- <https://getbootstrap.com/docs/5.3/getting-started/intro>



The world's most popular framework for building responsive, mobile-first sites, with jsDelivr and a template starter page



Spotify



Twitter



Udemy



Robinhood



LinkedIn



Postman



Lyft



StackShare



Snapchat

CSS Bootstrap: Buttons

```
<!Doctype html>
```

```
<html>
```

```
<head>
```

Primary

Secondary

Success

Danger

Warning

```
<link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/5.0.0-alpha1/css/bootstrap.min.css"
integrity= "sha384-
r4NypP46KrjDleawBgD5tp8Y7UzmLA05oM1iAEQ17CSuDqnUK2+k9luXQ0fXJCJ4I"
crossorigin="anonymous">
```

```
</head>
```

```
<body>
```

```
<button class= "btn btn-primary" > Primary </button>
```

```
<button class= "btn btn-secondary" > Secondary </button>
```

```
<button class= "btn btn-success" > Success </button>
```

```
<button class= "btn btn-danger" > Danger </button>
```

```
<button class= "btn btn-warning" > Warning </button>
```

```
</body>
```

```
</html>
```

CSS Bootstrap: Text

```
<!Doctype html>
```

```
<html>
```

```
<head>
```

```
<link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/5.0.0-alpha1/css/bootstrap.min.css"
integrity= "sha384-
r4NyP46KrjDleawBgD5tp8Y7UzmLA05oM1iAEQ17CSuDqnUK2+k9luXQ0fXJCJ4I"
crossorigin="anonymous">
```

```
</head>
```

```
<body>
```

```
<p class="text-uppercase"> Welcome to CS 213.</p>
```

```
<p class="text-capitalize"> Welcome to CS 213.</p>
```

```
<p class="text-lowercase"> Welcome to CS 213 </p>
```

```
</body>
```

```
</html>
```

WELCOME TO CS 213.

Welcome To CS 213.

welcome to cs 213

CSS Bootstrap: Flexbox

Layouts

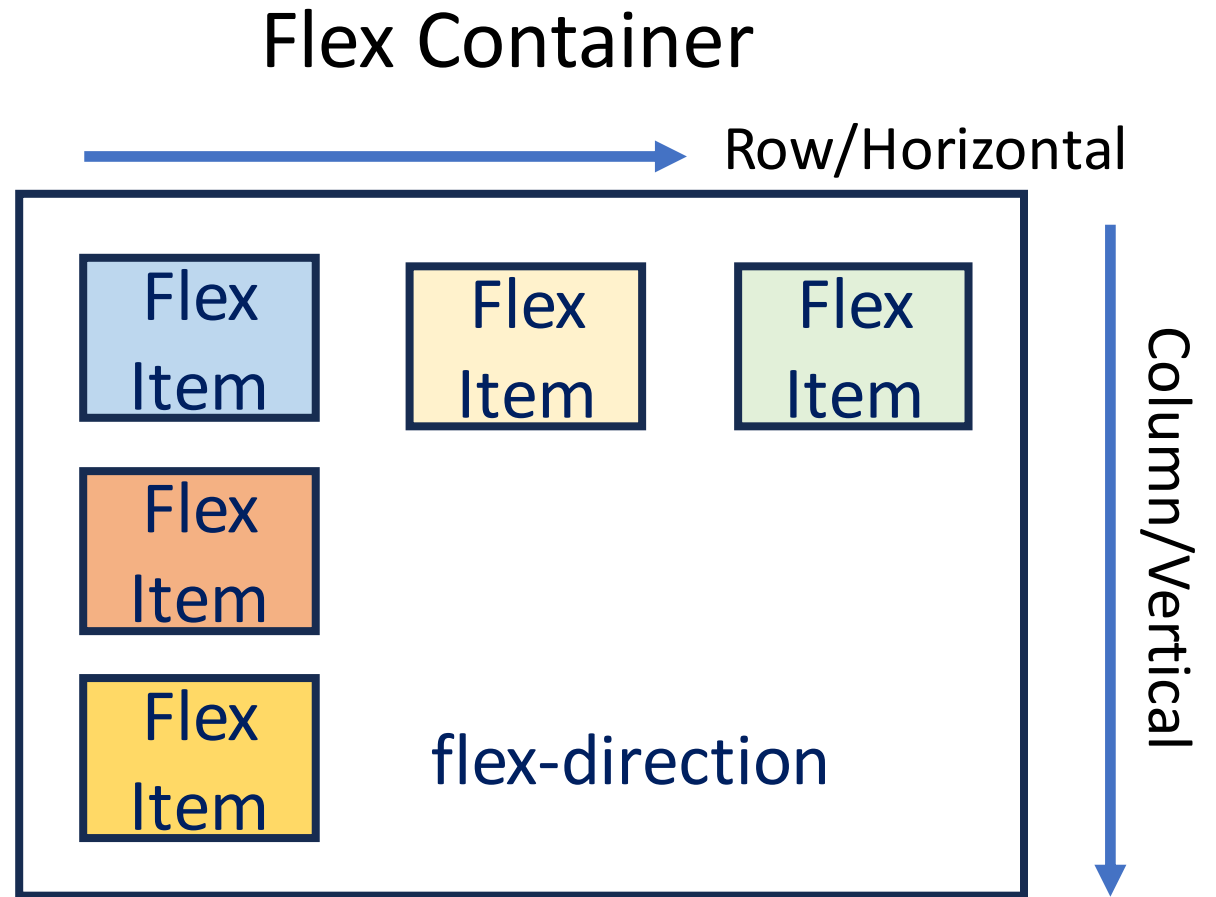


- Flexbox → Layout method helps to arrange HTML elements in horizontal or vertical;
 - CSS Grid
 - Advanced and growing
- Quickly manage the layout, alignment, and sizing of grid columns, navigation, components, and more with a full suite of responsive flexbox utilities

<https://getbootstrap.com/docs/4.0/utilities/flex/>

CSS Bootstrap: Flexbox Properties

- flex-direction
- flex-wrap
- flex-flow
- justify-content
- align-items
- align-content
-
-
-

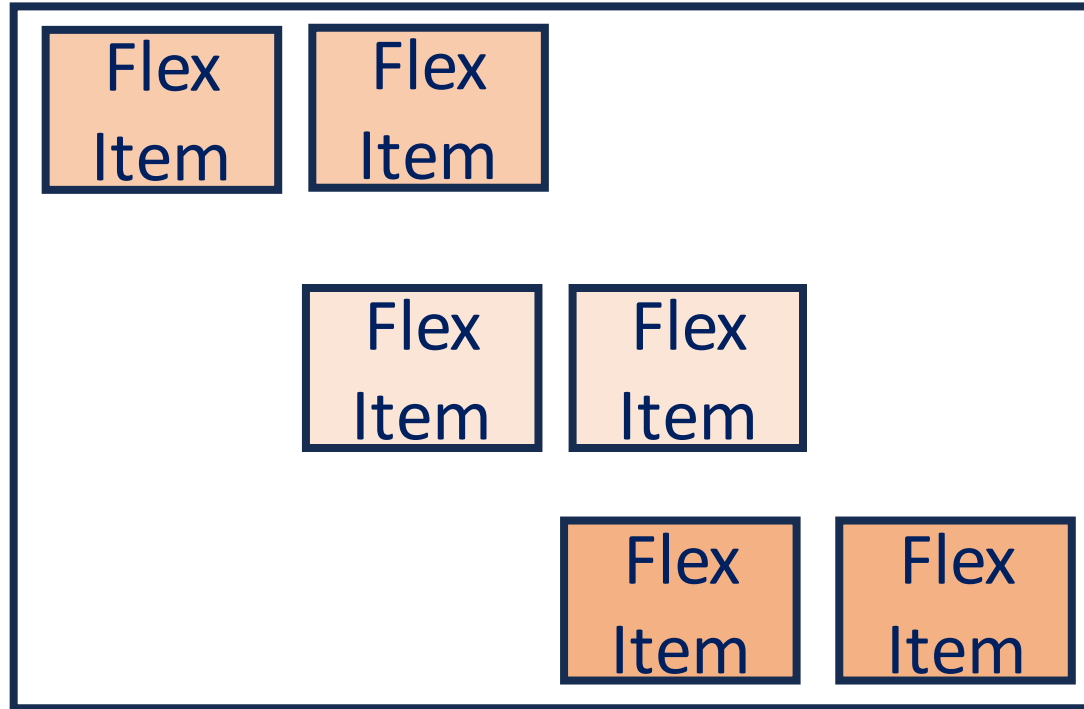


<https://getbootstrap.com/docs/4.0/utilities/flex/>

CSS Bootstrap: Flexbox Properties

Flex Container

- justify-content



- Justify-content-start
- Justify-content-center
- Justify-content-end

<https://getbootstrap.com/docs/4.0/utilities/flex/>

CSS Bootstrap: Flex container

Welcome to IIT Dharwad

This class introduces different features of Bootstrap flex container

CS213

```
<div class="bg-container d-flex flex-column justify-content-end">
  <div class="card">
    <h1 class="card-title">Welcome to IIT Dharwad</h1>
    <p class="card-text">This class introduces different features of
Bootstrap flex container</p>
    <button class="btn btn-success">CS213</button>
  </div>
```

thank you!

email:

k.kondepu@iitdh.ac.in