

Course Name: O Level (1st Sem)

Topic: W3.CSS – Grid (Part 9)

Subject Web Designing & Publishing (WDP)

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W3.CSS – Grid

W3.CSS provides an efficient way to arrange elements properly in different size of screen display. It is very important to handle elements to make it looks better because websites are supposed to be accessed using different devices like mobiles/tablets/desktop and the screen size of these devices are vary from one another.

W3.CSS grid is combination of rows and columns. Grids are responsive, columns are arranged itself automatically on different screen size. On larger screen contents are organized into columns but on smaller screen the contents are stacked on the top of each other.

- + **w3-row** is container class used to define row. [**w3-row-padding** is used to define row with 08px left and right padding.]
- + **w3-col** is container class used to define each column in the row. Each row can have maximum 12 columns.
- + The **subclasses** are also used with **w3-col** class to define column width and number of column to be appeared on different screen size.
 - **For small screen (Mobile phones)**
s1, s2, s3, s4,, s12 sub classes are for defining column width and number of column on smaller screen [s1 means 8.33% width of display screen, s2 means 16.66% width of display screen and so on].
 - **For medium screen (Tablets)**
m1, m2, m3, m4,, m12 sub classes are for defining column width and number of

column on medium screen. [m1 means 8.33% width of display screen, m2 means 16.66% width of display screen and so on].

- **For large screen (PC/Laptop)**

l1, l2, l3, l4,, l12 sub classes are for defining column width and number of column on large screen [l1 means 8.33% width of display screen, l2 means 16.66% width of display screen and so on].

Important

- ✓ If the same column width is need to be set for all screen size (small/medium/large), use s1, s2,, s12 subclass.
- ✓ If same column width is need to be set for medium/large screen, use m1, m2,, m12. On small screen, columns will be stacked on the top of each other with 100% width.
- ✓ If column width is need to be set only for large screen, use l1, l2,, l12. On small/medium screen, columns will be staked on the top of each other with 100% width.

For example:

```
<div class="w3-row">  
<div class="w3-col s6"> Column Content </div>  
<div class="w3-col s6"> Column Content </div>  
</div>
```

-- On small/medium/large screen, there will be two columns (6+6=12), each will have 50% width of display screen.

```
<div class="w3-row">  
<div class="w3-col s4"> Column Content </div>  
<div class="w3-col s8"> Column Content </div>  
</div>
```

-- On small/medium/large screen, there will be two columns (4+8=12), first will have 33% width, second will have 67% width of display screen.

```

<div class="w3-row">
<div class="w3-col s4"> Column Content </div>
<div class="w3-col s3"> Column Content </div>
<div class="w3-col s5"> Column Content </div>
</div>

```

-- On small/medium/large screen, there will be three columns ($4+3+5=12$), first will have 33% width, second will have 25% width, second will have 42% width of display screen

```

<div class="w3-row">
<div class="w3-col m9"> Column Content
</div>
<div class="w3-col m3"> Column Content
</div>
</div>

```

-- On medium/large screen, there will be two columns ($9+3=12$), first will have 75% width, second will have 25% width of display screen. On small screen, columns will be stacked on the top of each other.

```

<div class="w3-row">
<div class="w3-col l8"> Column Content
</div>
<div class="w3-col l4"> Column Content
</div>
</div>

```

-- On large screen, there will be two columns ($8+4=12$), first will have 67% width, second will have 33% width of display screen. On small/medium screen, columns will be stacked on the top of each other.

```

<div class="w3-row">
<div class="w3-col s6 m4 l3"> Column Content
</div>
<div class="w3-col s6 m8 l9"> Column Content
</div>
</div>

```

On small screen, there will be two columns ($6+6=12$) having 50% width each column.

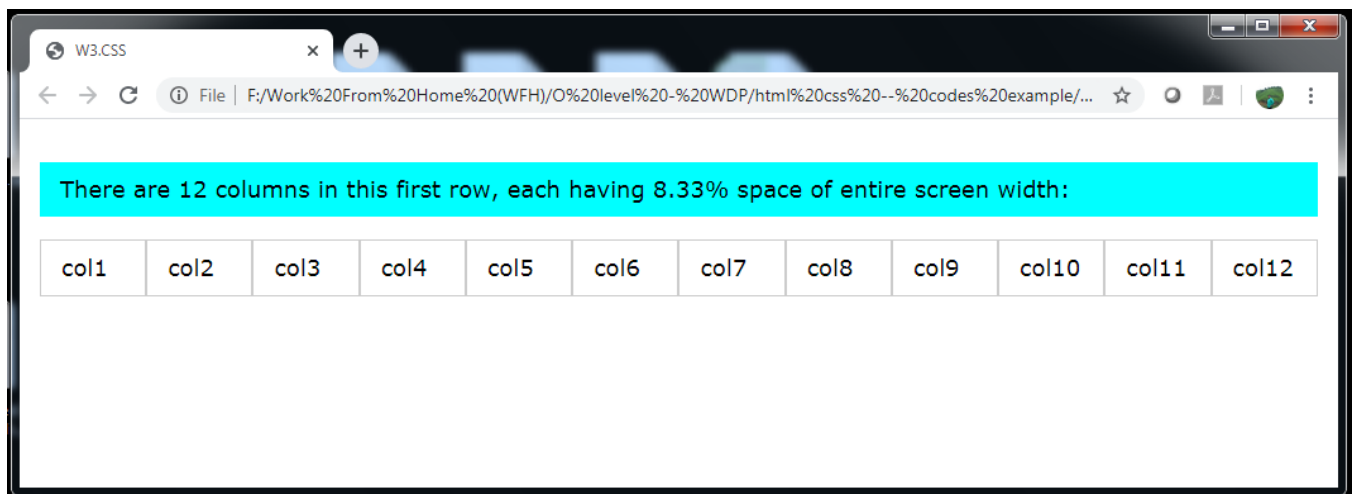
On medium screen, there will be two columns ($4+8=12$) of 33%, 67% width respectively.

On large screen, there will be two columns ($3+9=12$) of 25%, 75% width respectively.

Code: W3CSS Grid [12 columns of 8.33% width of screen]

```
<!DOCTYPE html>
<html>
  <title>W3.CSS</title>
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
<body>
<div class="w3-row w3-panel w3-large">
<p class="w3-aqua w3-padding"> There are 12 columns in this row, each having 8.33%
space of entire screen width:</p>
  <div class="w3-col 11 w3-border w3-padding">col1 </div>
  <div class="w3-col 11 w3-border w3-padding ">col2 </div>
  <div class="w3-col 11 w3-border w3-padding ">col3 </div>
  <div class="w3-col 11 w3-border w3-padding ">col4 </div>
  <div class="w3-col 11 w3-border w3-padding ">col5 </div>
  <div class="w3-col 11 w3-border w3-padding ">col6 </div>
  <div class="w3-col 11 w3-border w3-padding ">col7 </div>
  <div class="w3-col 11 w3-border w3-padding ">col8 </div>
  <div class="w3-col 11 w3-border w3-padding ">col9 </div>
  <div class="w3-col 11 w3-border w3-padding ">col10 </div>
  <div class="w3-col 11 w3-border w3-padding ">col11 </div>
  <div class="w3-col 11 w3-border w3-padding ">col12 </div>
</div></body></html>
```

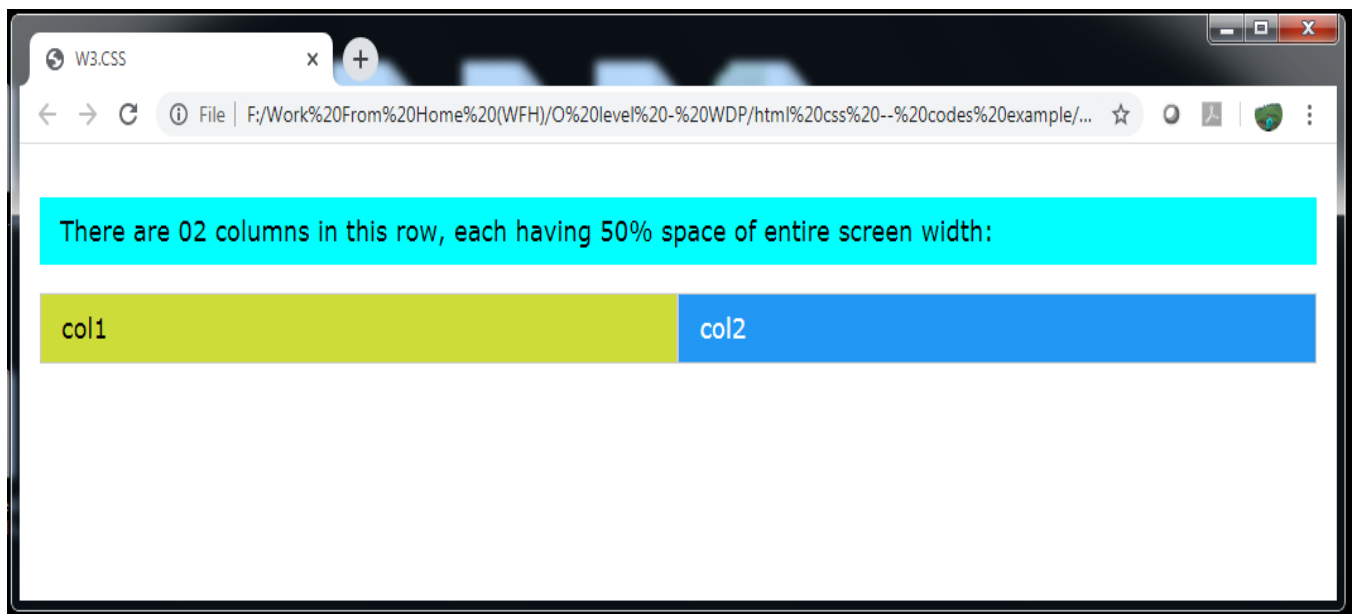
Output [12 columns of 8.33% width of screen]:



Code: W3CSS Grid [02 columns of equal width – each 50% of entire screen]

```
<!DOCTYPE html>
<html>
<title>W3.CSS</title>
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
<body>
<div class="w3-row w3-panel w3-large">
<p class="w3-aqua w3-padding"> There are 02 columns in this row, each having
50% space of entire screen width:<p>
    <div class="w3-col l6 w3-border w3-padding w3-lime">col1 </div>
    <div class="w3-col l6 w3-border w3-padding w3-blue">col2 </div>
</div>
</body>
</html>
```

Output [02 columns of equal width – each 50% of entire screen]:

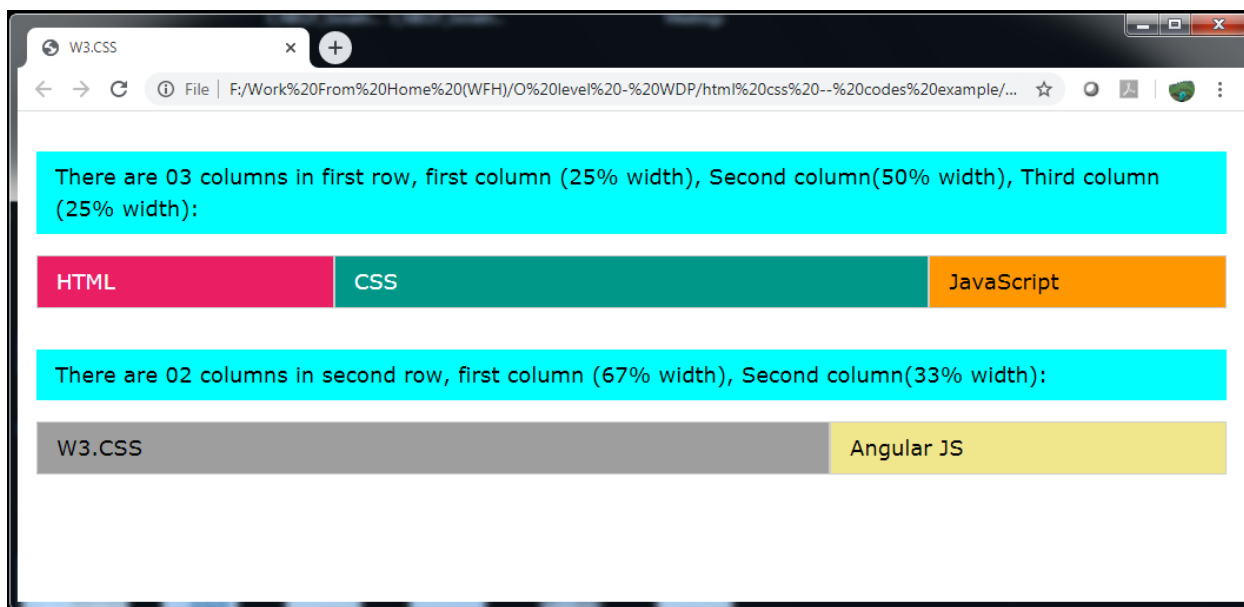


Code: W3CSS Grid [Unequal columns width]

```
<!DOCTYPE html>
<html>
<title>W3.CSS</title>
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
<body>

<div class="w3-row w3-panel w3-large" >
<p class="w3-aqua w3-padding"> There are 03 columns in first row, first column (25%
width), Second column(50% width), Third column (25% width): <p>
  <div class="w3-col l3 w3-border w3-padding w3-pink ">HTML </div>
  <div class="w3-col l6 w3-border w3-padding w3-pink ">CSS</div>
  <div class="w3-col l3 w3-border w3-padding w3-pink ">JavaScript </div>
</div>
<div class="w3-row w3-panel w3-large">
<p class="w3-aqua w3-padding"> There are 02 columns in second row, first column
(67% width), Second column(33% width):<p>
  <div class="w3-col l8 w3-border w3-padding w3-gray">W3.CSS </div>
  <div class="w3-col l4 w3-border w3-padding w3-khaki ">Angular JS</div>
</div></body></html>
```

Output [Unequal columns width]:



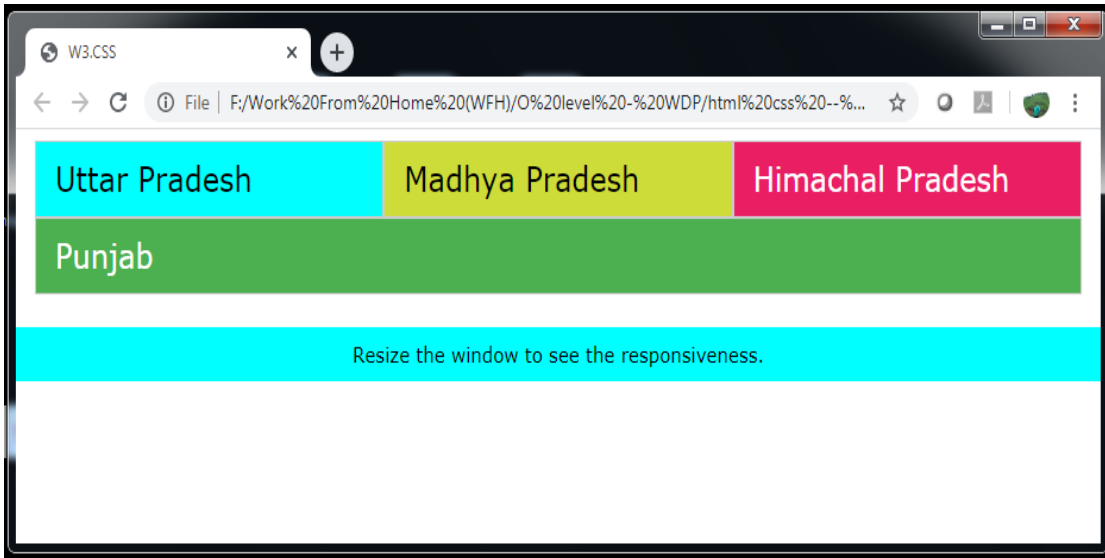
Code: W3CSS Grid [Mixed Responsive Column for Laptop, Tablet, Mobile]

```
<!DOCTYPE html>
<html>
<title>W3.CSS</title>
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
<body>
<div class="w3-row w3-padding w3-xlarge">
  <div class="w3-col s6 m4 l3 w3-border w3-aqua w3-padding w3-hover-blue">
    Uttar Pradesh</div>
  <div class="w3-col s6 m4 l3 w3-border w3-lime w3-padding w3-hover-blue" >
    Madhya Pradesh</div>
  <div class="w3-col m4 l3 w3-border w3-pink w3-padding w3-hover-blue" >
    Himachal Pradesh</div>
  <div class="w3-col l3 w3-border w3-green w3-padding w3-hover-blue" >
    Punjab</div>
</div>
<p class="w3-aqua w3-padding w3-center"> Resize the window to see the
responsiveness.</p>
</body></html>
```

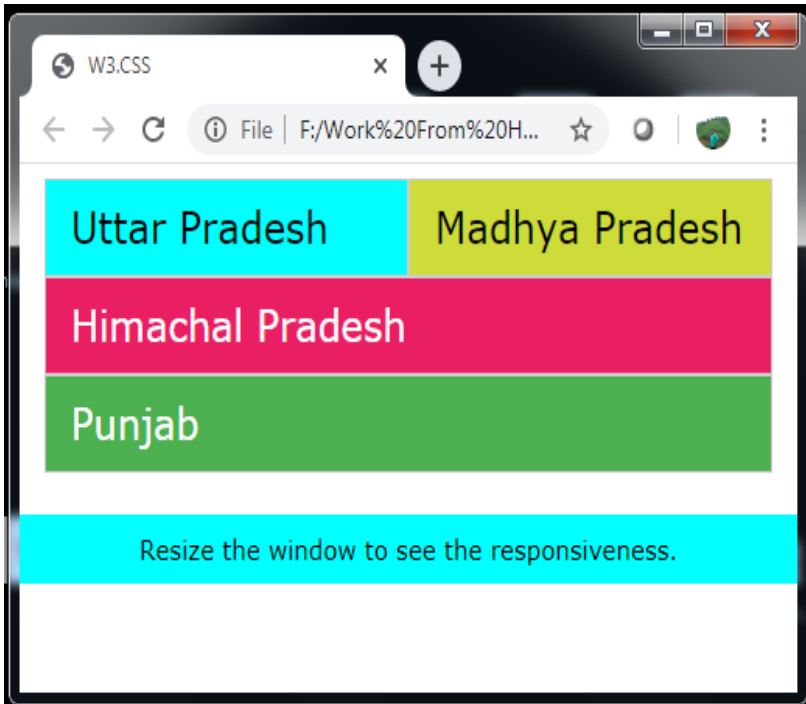
Output [On large screen – Laptop/Desktop]:



Output [On medium screen - Tablet]:



Output [On small screen – Mobile Phone]:



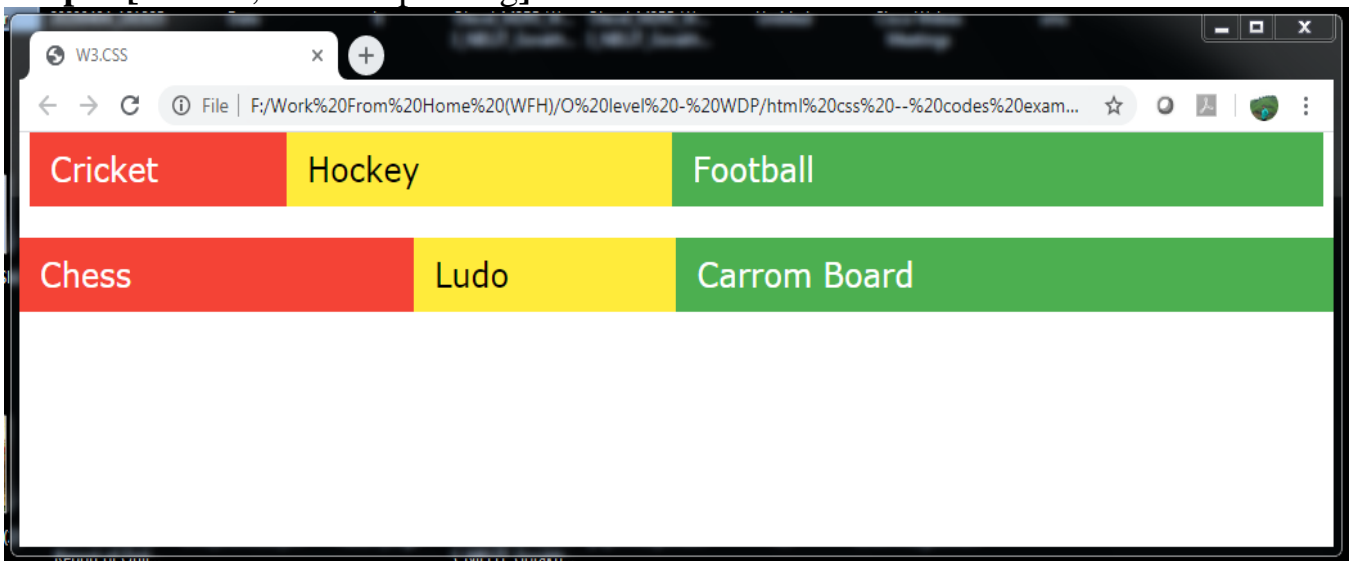
w3-rest

The **w3-rest** class is used to create rest of column separately if width of w3-col is set manually using percentage/pixels values.

Code: W3CSS Grid [w3-rest, w3-row-padding]

```
<!DOCTYPE html>
<html>
<title>W3.CSS</title>
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
<body>
<div class="w3-row-padding w3-xlarge">
<div class="w3-col w3-red w3-padding" style="width:200px;"> Cricket </div>
<div class="w3-col w3-yellow w3-padding" style="width:300px;"> Hockey</div>
<div class="w3-rest w3-green w3-padding"> Football</div>
</div>
<div class="w3-row w3-xlarge">
<div class="w3-col w3-red w3-padding" style="width:30%;"> Chess</div>
<div class="w3-col w3-yellow w3-padding" style="width:20%;"> Ludo</div>
<div class="w3-rest w3-green w3-padding"> Carrom Board</div>
</div>
</body></html>
```

Output [w3-rest, w3-row-padding]:



Exercise:

1. Create a responsive grid, it should be arranged like:
 - a. On smaller screen 2 columns.
 - b. On medium screen 3 columns
 - c. On large screen 4 columns
2. Create a responsive grid, it should be arranged like:
 - a. On large screen 4 columns.
 - b. On medium/large screen, columns should be stacked on top of each other.

