

Third part Activity08 in-class

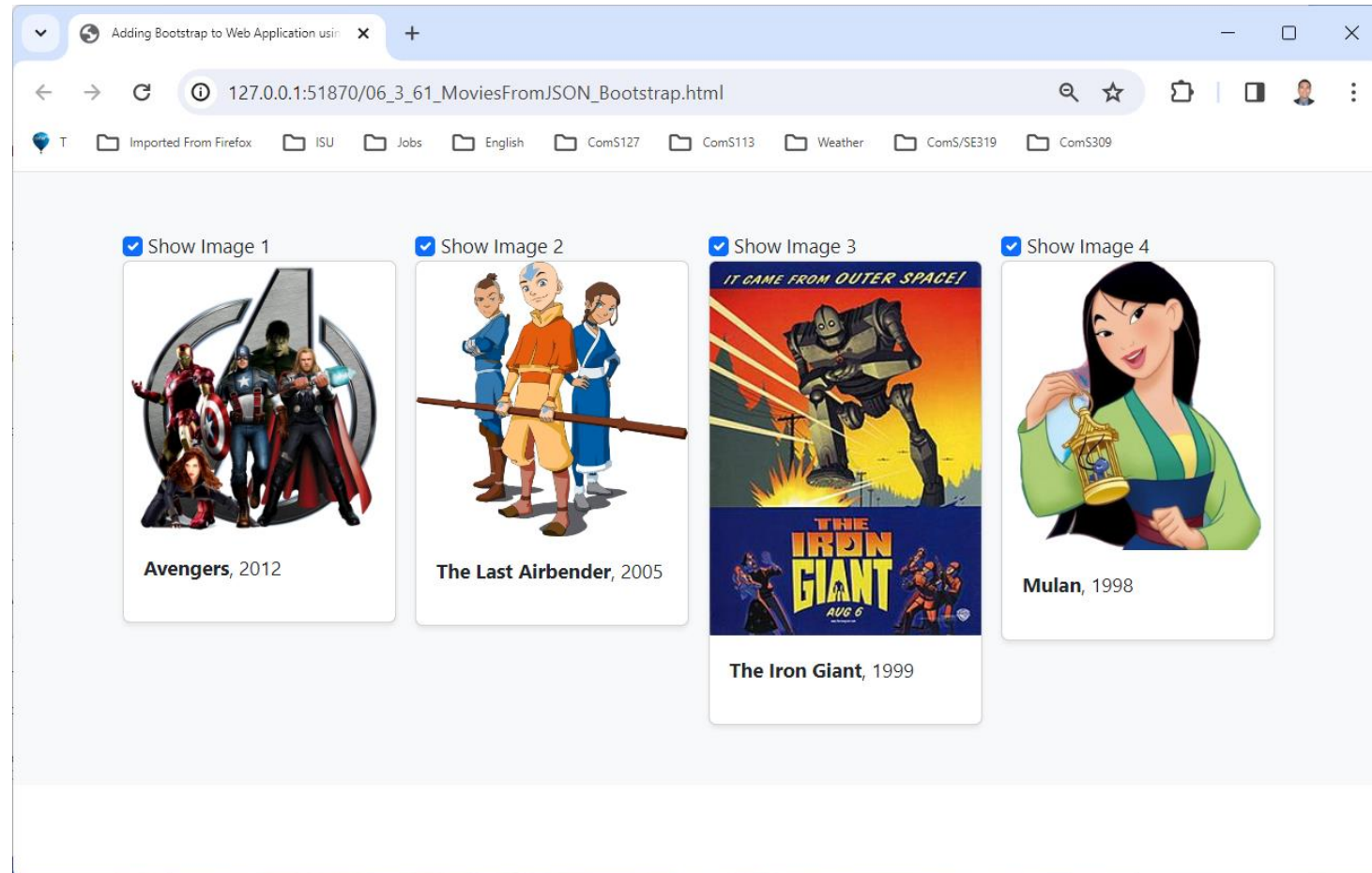
Bootstrap

Adding Bootstrap to Web Application using DOM and Javascript

Adding Bootstrap to Web Application using DOM and Javascript



<https://getbootstrap.com/>



Create two files :

`netId_Activity08_MoviesFromJSON_Bootstrap.html`

`netId_Activity08_MoviesFromJSON_Bootstrap.js`

Use JSON file with Movies :

`MoviesFromJSON.json`

HTML file

`netId_Activity08_MoviesFromJSON_Bootstrap.html`

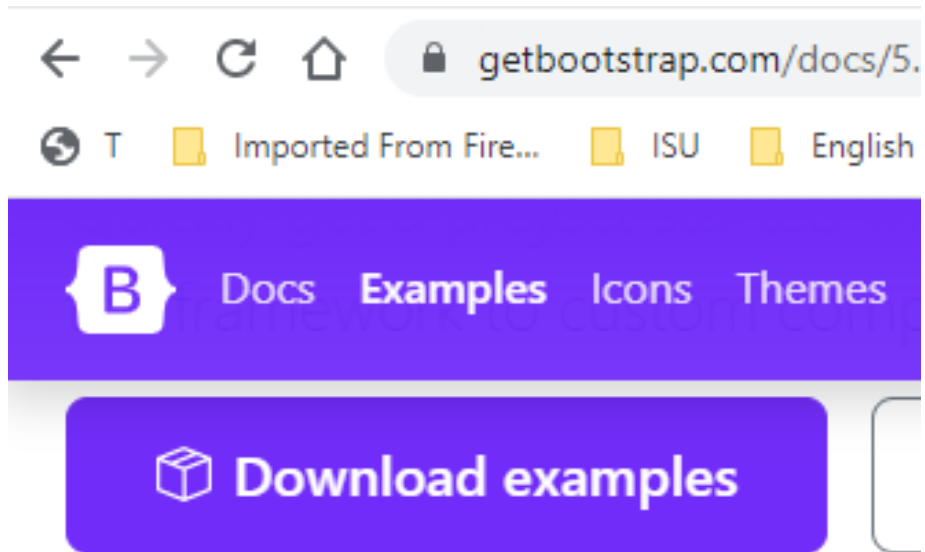
Prepare new HTML to insert Bootstrap code in `<body></body>`

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Activity08 dding Bootstrap to Web Application using DOM and Javascript</title>
</head>
<body>

  <!-- Insert Album here -->

</body>
</html>
```

<https://getbootstrap.com/docs/5.3/examples/>



➡ Open **Album** to VSC

Copy only **ONE CARD** to your **Javascript** program

netId_Activity08_MoviesFromJSON_Bootstrap.js :

Be careful to
perfectly
copy the
beginning and
the end

`<div> ...`
`</div>`

```
204 <div class="row row-cols-1 row-cols-sm-2 row-cols-md-3 g-3">
205   <div class="col">
206     <div class="card shadow-sm">
207       <svg class="bd-placeholder-img card-img-top" width="100%" height="225" xmlns="http://
208       <div class="card-body">
209         <p class="card-text">This is a wider card with supporting text below as a natural l
210         <div class="d-flex justify-content-between align-items-center">
211           <div class="btn-group">
212             <button type="button" class="btn btn-sm btn-outline-secondary">View</button>
213             <button type="button" class="btn btn-sm btn-outline-secondary">Edit</button>
214           </div>
215           <small class="text-body-secondary">9 mins</small>
216         </div>
217       </div>
218     </div>
219   </div>
220   <div class="col">
```

The code that you select is
going to be copied to your
Javascript file.

Remove all `<div class="col">` and keep the remaining code as shown in the next figure and copy it to your **HTML** :

netId_Activity08_MoviesFromJSON_Bootstrap.html :

```
201 <div class="album py-5 bg-body-tertiary">
202   <div class="container">
203     <div class="row row-cols-1 row-cols-sm-2 row-cols-md-3 g-3">
205 >     <div class="col"> ...
219   </div>
220 >     <div class="col"> ...
234   </div>
235 >     <div class="col"> ...
249   </div>
250
251 >     <div class="col"> ...
265   </div>
266 >     <div class="col"> ...
280   </div>
281 >     <div class="col"> ...
295   </div>
296
297 >     <div class="col"> ...
311   </div>
312 >     <div class="col"> ...
326   </div>
327 >     <div class="col"> ...
341   </div>
342   </div>
343 </div>
344 </div>
345
```

Be careful to perfectly delete the beginning and the end
`<div> ...`
`</div>`

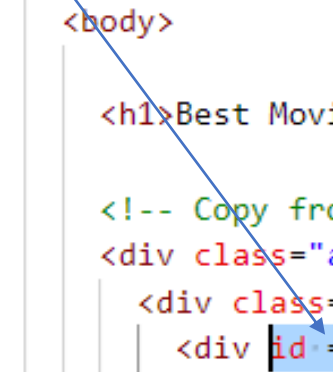
```
201 <div class="album py-5 bg-body-tertiary">
202   <div class="container">
203
204     <div class="row row-cols-1 row-cols-sm-2 row-cols-md-3 g-3">|
205     </div>
206   </div>
207 </div>
...
```

The code remaining is going to be copied to your HTML file.

Add **id = "col"** to the division as indicated in the figure :

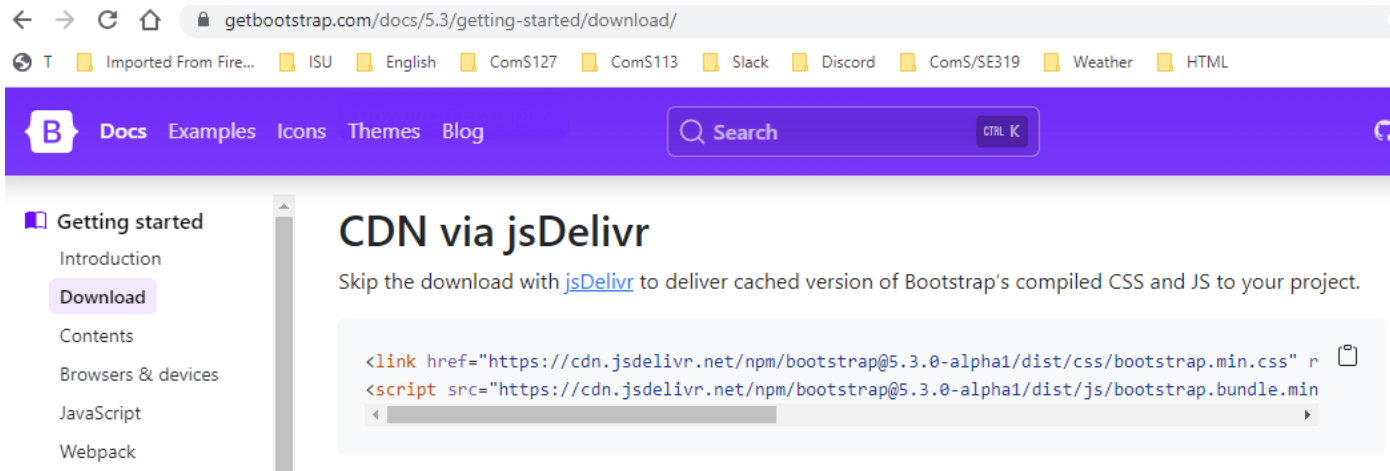
netId_Activity08_MoviesFromJSON_Bootstrap.html :

```
10  <body>
11
12  <h1>Best Movies</h1>
13
14  <!-- Copy from Album - Bootstrap -->
15  <div class="album py-5 bg-body-tertiary">
16    <div class="container">
17      <div id="col" class="row row-cols-1 row-cols-sm-2 row-cols-md-3 row-cols-lg-4 g-3">
18
19      </div>
20    </div>
21  </div>
22
23  </body>
```



Add Bootstrap CDN to HTML

Add CDN **bootstrap.min.css** and **bootstrap.bundle.min.js** :



Bootstrap's CSS

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1
6      <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/l
7      <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/b
8      <title>Activity08 Movies From JSON - Bootstrap</title>
9  </head>
10 <body>
```

Bootstrap's JS

```
82  </div>
83
84  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootst
85  </body>
86  </html>
```

Add the Javascript code to the HTML
before the title

```
<script src="./netId_Activity08_MoviesFromJSON_Bootstrap.js "></script>
```

Modify the `class="row..."` to make possible have the **four** movies in a row.

```
<div class="row row-cols-1 row-cols-sm-2 row-cols-md-3 g-3">
```



```
<div class="row row-cols-1 row-cols-sm-2 row-cols-md-3 row-cols-lg-4 g-3">
```

Javascript file

`netId_Activity08_MoviesFromJSON_Bootstrap.js`

```
// Read the file with movies :
```

```
fetch("./net_id_Activity08_MoviesFromJSON.json")  
  .then(response => response.json())  
  .then(myMovies => loadMovies(myMovies));
```



```
// Function loadMovies :
```

```
function loadMovies(myMovies) {
```

```
    // Find the element “col” in HTML
```

```
    var CardMovie = document.getElementById("col");
```

```
    // Read every movie from the array
```

```
    for (var i = 0; i < myMovies.movies.length; i++){
```

```
        let title = myMovies.movies[i].title;
```

```
        let year = myMovies.movies[i].year;
```

```
        let url = myMovies.movies[i].url;
```

```
    continues . . .
```

Let's add the **Javascript** code to insert the images and their corresponding text from the JSON file.

Remember that we copied only the card section to the Javascript file ?

```
204     <div class="row row-cols-1 row-cols-sm-2 row-cols-md-3 g-3">
205         <div class="col">
206             <div class="card shadow-sm">
207                 <svg class="bd-placeholder-img card-img-top" width="100%" height="225" xmlns="http://
208                 <div class="card-body">
209                     <p class="card-text">This is a wider card with supporting text below as a natural l
210                     <div class="d-flex justify-content-between align-items-center">
211                         <div class="btn-group">
212                             <button type="button" class="btn btn-sm btn-outline-secondary">View</button>
213                             <button type="button" class="btn btn-sm btn-outline-secondary">Edit</button>
214                         </div>
215                         <small class="text-body-secondary">9 mins</small>
216                     </div>
217                 </div>
218             </div>
219         </div>
220         <div class="col">
```

Find the original **image** in the card and replace it by our **MOVIE image** :

```
204 <div class="row row-cols-1 row-cols-sm-2 row-cols-md-3 g-3">
205   <div class="col">
206     <div class="card shadow-sm">
207       <svg class="bd-placeholder-img card-img-top" width="100%" height="225" xmlns="http://
208       <div class="card-body">
209         <p class="card-text">This is a wider card with supporting text below as a natural l
210         <div class="d-flex justify-content-between align-items-center">
211           <div class="btn-group">
212             <button type="button" class="btn btn-sm btn-outline-secondary">View</button>
213             <button type="button" class="btn btn-sm btn-outline-secondary">Edit</button>
214           </div>
215           <small class="text-body-secondary">9 mins</small>
216         </div>
217       </div>
218     </div>
219   </div>
220 </div>
```

→ ``

Let's keep the
Bootstrap
class

Find the original **text** in the card and replace it by our **MOVIE title and year** :

```
204 <div class="row row-cols-1 row-cols-sm-2 row-cols-md-3 g-3">
205   <div class="col">
206     <div class="card shadow-sm">
207       <svg class="bd-placeholder-img card-img-top" width="100%" height="225" xmlns="http://
208       <div class="card-body">
209         <p class="card-text">This is a wider card with supporting text below as a natural l
210       <div class="d-flex justify-content-between align-items-center">
211         <div class="btn-group">
212           <button type="button" class="btn btn-sm btn-outline-secondary">View</button>
213           <button type="button" class="btn btn-sm btn-outline-secondary">Edit</button>
214         </div>
215         <small class="text-body-secondary">9 mins</small>
216       </div>
217     </div>
218   </div>
219 </div>
220 <div class="col">
```

→ `<p class="card-text"> ${title}, ${year}</p>`

Let's keep the
Bootstrap
class

```
// create a new HTML div division
let AddCardMovie = document.createElement("div");
```

```
// add class = "col" to new division for Bootstrap
AddCardMovie.classList.add("col");
```

```
// create Bootstrap card
```

```
AddCardMovie.innerHTML = `
```

```
  <div class="card shadow-sm">
```

```
    <img src=${url} class="card-img-top" alt="..."></img>
```

```
    <div class="card-body">
```

```
      <p class="card-text"> <strong>${title}</strong>, ${year}</p>
```

```
      <div class="d-flex justify-content-between align-items-center">
```

```
        <div class="btn-group">
```

```
          <button type="button" class="btn btn-sm btn-outline-secondary">View</button>
```

```
          <button type="button" class="btn btn-sm btn-outline-secondary">Edit</button>
```

```
        </div>
```

```
        <small class="text-body-secondary">9 mins</small>
```

```
      </div>
```

```
    </div>
```

```
  </div>
```

```
`;
```

```
// append new division
```

```
CardMovie.appendChild(AddCardMovie);
```

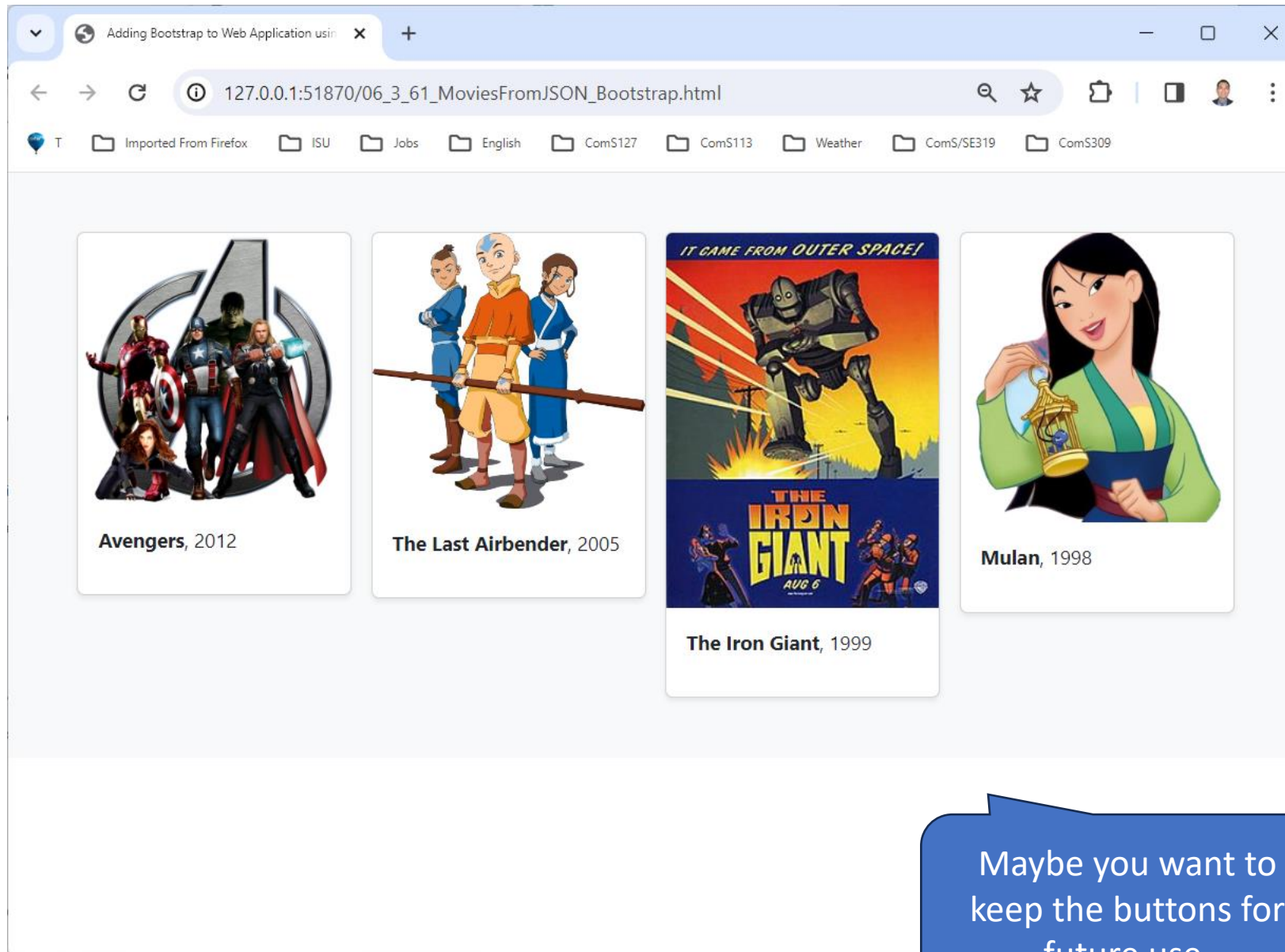
```
} // end of for
```

```
} // end of function
```

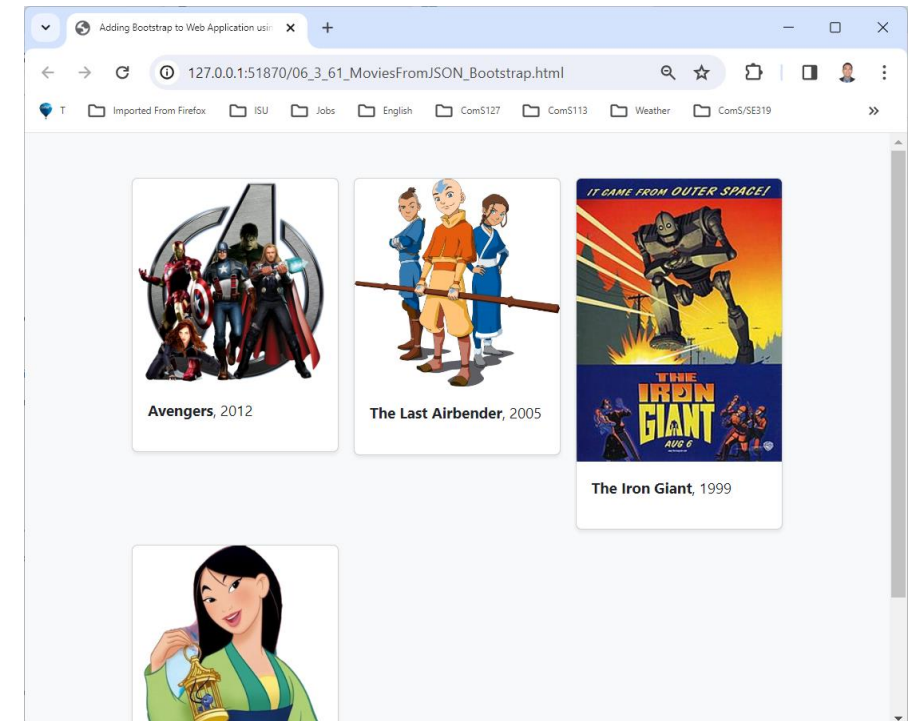
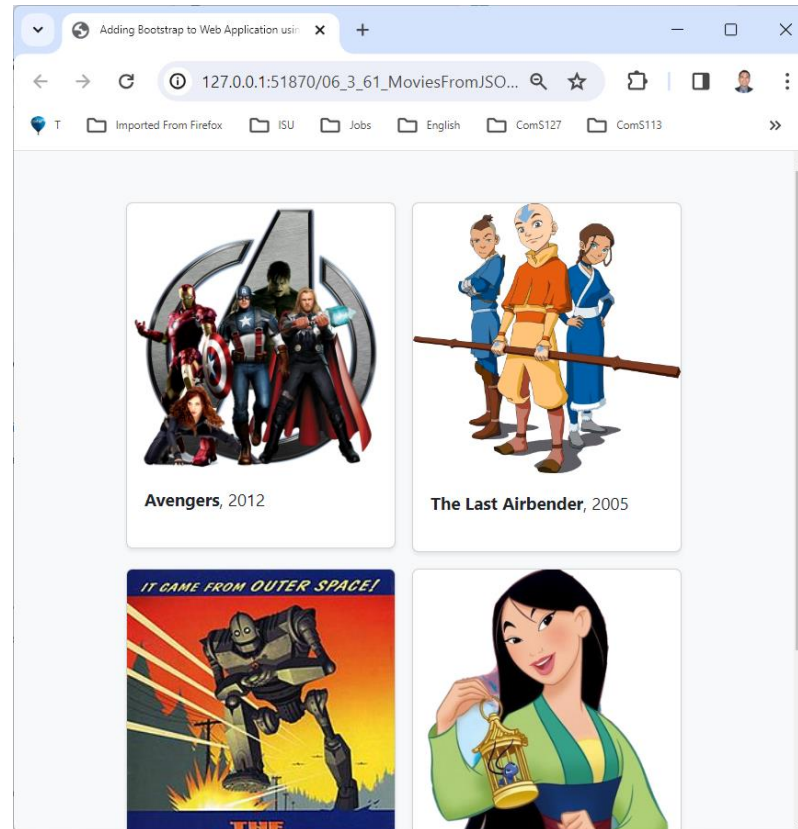
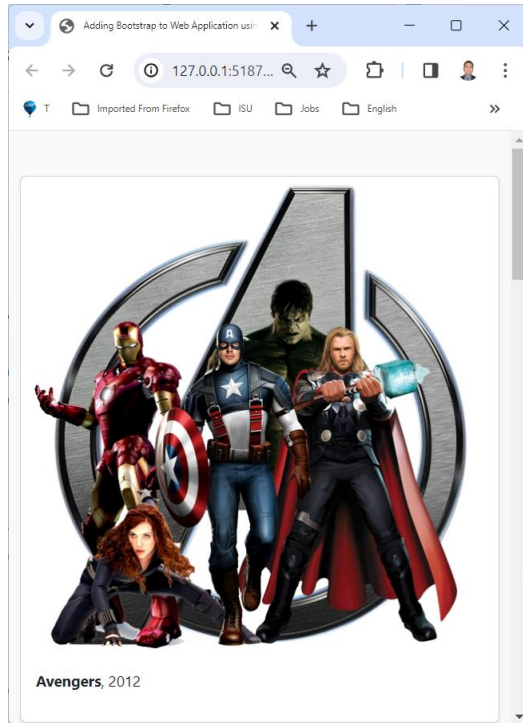
Observe how insert MOVIE

insert TITLE and YEAR

Our web page so far including Bootstrap



Responsive 1,2,3,4



Responsive 1,2,3,4

Check Box
To select **Block** / **Display** card

`netId_Activity08_MoviesFromJSON_Bootstrap.js`

Let's create `<input type="checkbox">` for each card :

Add the next arrays to the `function loadMovies(. . .`

```
function loadMovies(myMovies) {  
    var CardMovie = document.getElementById("col");  
  
    var checkboxes = [];  
    var cards = [];
```

Form the words checkbox **and** card **as follows:**

checkbox0
checkbox1
checkbox2
checkbox3

card0
card1
card2
card3

Observe, that
`i.toString()` is
using the `i` variable
from for loop

Inside the for loop do the next :

```
let checkbox = "checkbox" + i.toString();  
let card = "card" + i.toString();
```

Add the checkbox in the innerHTML :

AddCardMovie.innerHTML = `

```
<input type="checkbox" id=${checkbox} class="form-check-input" checked>  
<label for=${checkbox} class="form-check-label">Show Image ${i}</label>
```

```
<div id=${card} class="card shadow-sm">
```

Add the checkbox in the innerHTML :

AddCardMovie.innerHTML = `

```
<input type="checkbox" id=${checkbox} class="form-check-input" checked>  
<label for=${checkbox} class="form-check-label">Show Image ${i}</label>
```

```
<div id=${card} class="card shadow-sm">
```

Make sure you add
`id=${card}` to
the `<div`

Add `document.getElementById()` **to arrays :**

Do this inside the for after `CardMovie.appendChild(AddCardMovie)`:

```
CardMovie.appendChild(AddCardMovie);
```

```
let cbox = document.getElementById(checkbox);  
checkboxes.push(cbox);
```

```
let ccard = document.getElementById(card);  
cards.push(ccard);
```

```
} // end of for
```

Explore the values of checkbox and card:

```
// explore console  
console.log(checkbox);  
console.log(card);
```

```
} // end of for
```

```
console.log(checkboxes);  
console.log(cards);
```

Do this inside the
for

Do this after the for

Add event listener to checkboxes to toggle card visibility :

```
// Add event listeners to checkboxes to toggle card visibility
checkboxes.forEach((checkboxParam, index) => {
  console.log(index);
  checkboxParam.addEventListener('change', () => {
    if (checkboxParam.checked) {
      cards[index].style.display = 'block'; // Show the card
    } else {
      cards[index].style.display = 'none'; // Hide the card
    }
  });
});
});

} // end of function
```

this routine reads the arrays
checkboxes and cards

if the checkbox is "checked"
block
else
display


Final View

Adding Bootstrap to Web Application using... x +

127.0.0.1:51870/06_3_61_MoviesFromJSON_Bootstrap.html


Imported From Firefox | ISU | Jobs | English | ComS127 | ComS113 | Weather | ComS/SE319 | ComS309

☒ Show Image 1




Avengers, 2012

☒ Show Image 2




The Last Airbender, 2005

☒ Show Image 3



The Iron Giant, 1999

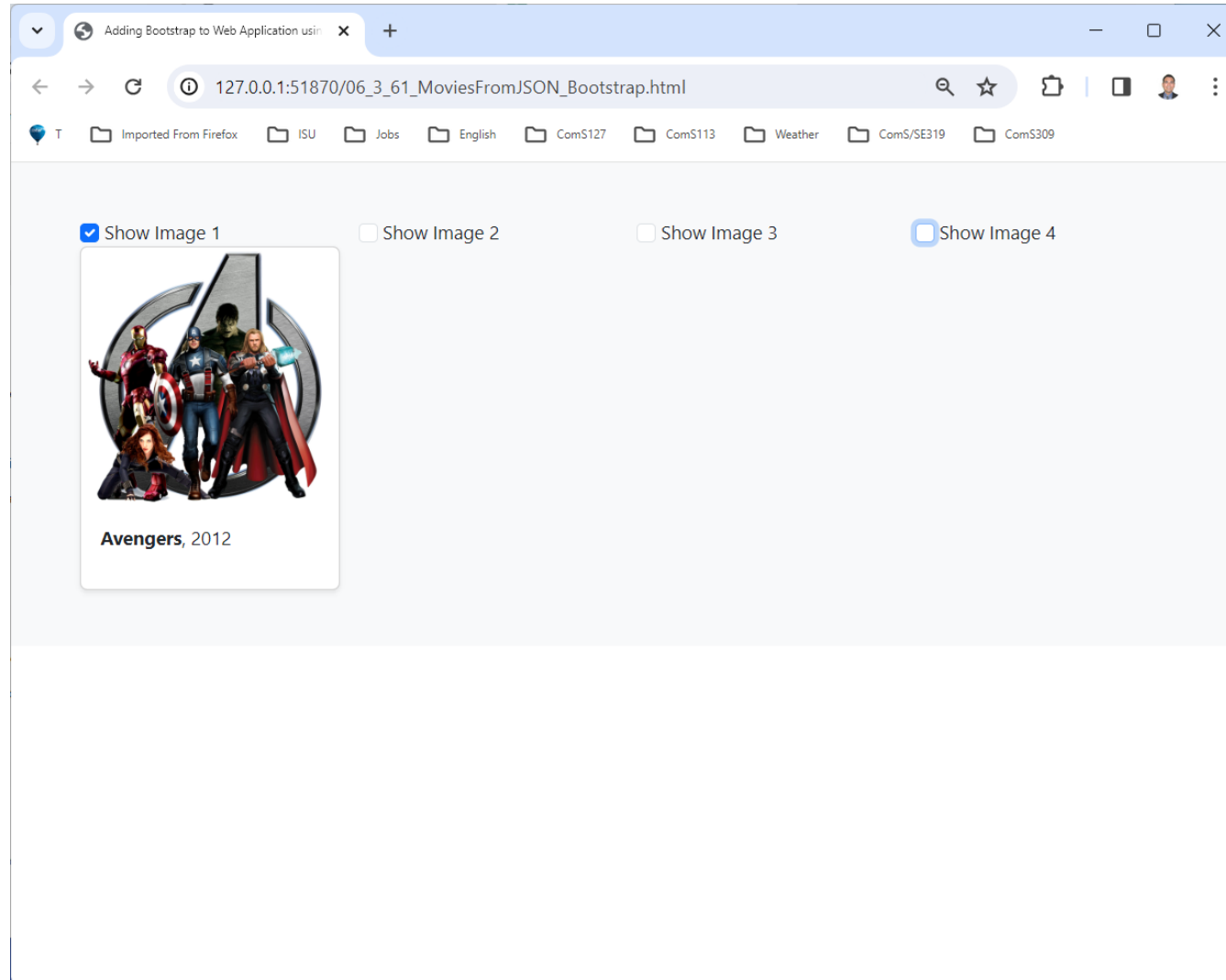
☒ Show Image 4



Mulan, 1998

Maybe you want to keep the buttons for future use.

Click the checkbox to Block / Display movies:



Click the checkbox to Block / Display movies:

