

# CS5002 Assignment 4

Matriculation Number: 210003557

Firefox version: 94.0.2

## Introduction

In this assignment, we were asked to use fetch API from a JSON file and display the data on a table we created, while adding some functions to make the table more interactive.

In the report, I will show the results using movie-small.JSON file since it is easier for the web browser to run. Change the file name to movies.JSON simply accesses the full database.

## Specific Requirement

### Question 1 Solution

In this question, I used fetch API codes that were already given in the file and modified them with some functions I wanted to display within .then() scope because it was one of the easiest ways to access the 'data' argument. I also added .catch() method in case any errors occur because it does happen sometimes, although not quite often, but still a possibility. The codes are as displayed in Picture 1.1

```
fetch(["movies.json"])
  .then(response => response.json())
  .then(data => {
    listMovies(data); //Utilise functions within .then scope
    sDropdown();
    eDropdown();
    let trigger = document.getElementById("search");
    trigger.onclick = function() {
      searchButton(data);
    }
    let refresh = document.getElementById("refresh"); //Additional function 1
    refresh.onclick = function() {
      listMovies(data);
      document.getElementById('selectGenre').value = 'All';
      document.getElementById("selectYearStart").value = 1900;
      document.getElementById("selectYearEnd").value = 2021;
      document.getElementById('searchBar').value = '';
      //Alternative: window.location.reload(); reloads the webpage
    }
    let searching = document.getElementById("searchBar");
    searching.onkeyup = function() {
      castSearch(data);
    }
    console.log(data[1].cast.length); //AF2 testing
    console.log(data[1].cast); //AF2 testing
  })
  .catch(error => console.log(error)); //alert error when error occurs
```

## Question 1 Difficulty

At first, I had troubles accessing data outside of `.then()` scope because I did not know the argument could only be accessed within `.then()`. After I found out this fact, I then had troubles making the codes look tidy because I thought I had to put them all inside `.then()`. However, after the Q&A session, I realised all I had to do was to create functions outside the scope, assign a parameter to the functions then call the functions within the scope using 'data' parameter to input all the objects from JSON file. As the codes were already shown in Picture 1.1, I will not post a screenshot again.

## Question 2 Solution

This question asked us to import the data we fetched from JSON file into a table that can be displayed on html webpage. The method I used was to create a loop that ran through the length of the JSON file; In the loop, I assigned a string to the variable created earlier, the string was the codes that generate a table in html webpage. As I did not download JQuery, I used `document.querySelector('#movieTable').innerHTML` to populate the table with id 'movieTable'.

One thing worth noticing was `.innerText` should not be used in this case because it would give you pure texts only while `.innerHTML` renders the string into html format (<https://www.javatpoint.com/innertext-vs-innerhtml>). The reason I chose to create a loop over inserting the data one by one was because of the amount of data given in the JSON file. If there had been less than five data sets needed to be displayed, I would have typed the data sets under the table tags directly; However, in this practical, creating a loop would be a lot more efficient. The codes of how I built the table are in Picture 2.1

```
//List all movies
function listMovies (x) {
  let allMovies = '';
  for (let i = 0; i < x.length; i++) {
    allMovies += `
    <tr>
      <td>${x[i].year}</td>
      <td>${x[i].title}</td>
      <td>${x[i].cast}</td>
      <td>${x[i].genres}</td>
    </tr>
    `;
    //`${}` to omit + (Ex: let abc = 'a' + x[i].year + 'c'; = let abc = `a${x[i].year}c`;)
    //`` to create multi-line strings
  }
  document.querySelector('#movieTable').innerHTML = allMovies;
  //innerHTML transfers the text to DOM while innerText is text only
  //document.querySelector works the same as JQuery $('#... ..')
  //('#movieTable tbody') means to find tbody within element id:movieTable
}
```

Picture 2.2 shows the function of creating dropdown lists for start year and end year.

```
//Create start year dropdown list
var sDropdown = function() {
    let sYear = '';
    for (i=1900; i<=2021; i++){
        sYear += '<option>' + i + '</option>';
    }
    document.getElementById('selectYearStart').innerHTML = sYear;
}

//Create end year dropdown list
var eDropdown = function() {
    let eYear = '';
    for(i=2021; i>=1900; i--) {
        eYear += '<option>' + i + '</option>';
    }
    document.getElementById('selectYearEnd').innerHTML = eYear;
}
```

Picture 2.3 is the table displayed in my Firefox browser.

## American Movies

### A database of American movies released since 1900

Please select a start year:  Please select an end year:  Please select a genre:

Year	Title	Cast	Genres
1900	After Dark in Central Park		
1900	Boarding School Girls' Pajama Parade		
1900	Buffalo Bill's Wild West Parad		
1900	Caught		
1900	Clowns Spinning Hats		
1900	Capture of Boer Battery by British		Short,Documentary
1900	The Enchanted Drawing		
1900	Feeding Sea Lions	Paul Boyton	
1900	How to Make a Fat Wife Out of Two Lean Ones		Comedy
1900	New Life Rescue		
1900	New Morning Bath		
1900	Searching Ruins on Broadway, Galveston, for Dead Bodies		

Picture 2.4 displays the dropdown lists for start year and end year.

Please select a start year: 1900 ▾ Please select an end year: 2021 ▾

Year	Title
1900	After Dark in Ce
1980	Airplane
1990	The Adventures of I
1990	Sibling Riv

1900 1901 1902 1903 1904 1905 1906

2021 2020 2019 2018 2017 2016

## Question 2 Difficulty

The main problem for me was to figure out the ‘efficient’ way to populate the table. As soon as I saw the question, I immediately tried to create a loop but all the data was listed in the first column. I spent two days looking for answers but a lot of information I found online was too advanced and complicated to me at this state. Eventually, I consulted someone with web developing background for advice and he taught me some codes like `document.querySelector("#movieTable").innerHTML, ``` for creating multi-line strings, and `${}` for concatenating strings in ````, which all helped me in solving other problems in this assignment, giving me some more efficient tools to utilise.

## Question 3&4 Solution

In this question, we were asked to use the dropdown lists as a filter and return the values so they can be displayed according to the users’ need. The simplest way I could think of was to create functions that returned the value of each list using `let (variable) = 'document.getElementById('tagID').value'`. One thing I would like to point out was for start year and end year I created a loop (see Picture 2.2) because the years were numbers in a numeric sequence, but for genres I had to insert the values one by one since personally I found this way more efficient. The codes for options for genres are as follows in Picture 3.1 and the list in html is shown on Picture 3.2.

```
<select id="selectGenre" onchange = "selectGenre()">
  <!-- Insert genres as options here -->
  <option value="All">All</option>
  <option value="None">No Genres</option>
  <option value="Comedy">Comedy</option>
  <option value="Action">Action</option>
  <option value="Drama">Drama</option>
  <option value="Romance">Romance</option>
  <option value="Teen">Teen</option>
  <option value="Animated">Animated</option>
  <option value="Family">Family</option>
  <option value="Fantasy">Fantasy</option>
  <option value="Political">Political</option>
  <option value="Thriller">Thriller</option>
  <option value="Science Fiction">Science Fiction</option>
  <option value="Documentary">Documentary</option>
  <option value="Crime">Crime</option>
  <option value="Superhero">Superhero</option>
  <option value="Spy">Spy</option>
  <option value="Adventure">Adventure</option>
  <option value="Historical">Historical</option>
  <option value="Western">Western</option>
  <option value="Horror">Horror</option>
  <option value="Supernatural">Supernatural</option>
  <option value="Dance">Dance</option>
  <option value="Performance">Performance</option>
  <option value="Live Action">Live Action</option>
  <option value="Teen">Teen</option>
  <option value="Short">Short</option>
</select>
```

After having all the dropdown lists I needed, I created a button ‘search’ to trigger the process of filtering the data by using the method ‘.filter’. The method would run through every element in the array and returned the ones that were true according to the condition. Once I got the array of objects I needed, I applied the ‘efficient’ way that listed out all the movies in Picture 2.1 again. The codes of the function are displayed in Picture 3.3:

```
//Create search button
function searchButton(x) {
  let temp = x.filter(element => {
    if (selectGenre() == 'All') {
      return element.year >= startYear() && element.year <= endYear();
    } else if (selectGenre() == 'None') {
      return element.year >= startYear() && element.year <= endYear() && element.genres.length == 0
      // "element.genres.length == 0" to represent empty genres objects
    } else {
      return element.year >= startYear() && element.year <= endYear() && element.genres.indexOf(selectGenre())>=0;
    }
  }); //Simple .filter example: data.filter(d => d.year >= 2010);
  if (endYear() < startYear()) {
    alert('Error! End year should be greater than start year!'); //Additional function 3
  }
  let result = '';
  for (i=0; i<temp.length; i++){
    result += `
    <tr>
      <td>${temp[i].year}</td>
      <td>${temp[i].title}</td>
      <td>${temp[i].cast}</td>
      <td>${temp[i].genres}</td>
    </tr>
    `;
  }
  document.querySelector('#movieTable').innerHTML = result;
}
```

The results of using dropdown lists as filters and search button are as follows.  
Picture 3.4 (Year: 2011-2021, Genre: All)

American Movies			
A database of American movies released since 1900			
Please select a start year: 2011 Please select an end year: 2021 Please select a genre: All Search Resume Search cast names...			
Year	Title	Cast	Genres
2011	The Art of Getting By	Freddie Highmore, Emma Roberts, Michael Angarano, Elizabeth Reaser, Sam Robards, Alicia Silverstone, Rita Wilson, Blair Underwood	Romance, Comedy, Teen
2011	Arthur	Russell Brand, Helen Mirren, Greta Gerwig, Jennifer Garner, Nick Nolte, Luis Guzmán	Comedy
2011	Arthur Christmas	James McAvoy, Hugh Laurie, Bill Nighy, Jim Broadbent, Imelda Staunton, Ashley Jensen, Will Sasso, Ramona Marquez, Iain McKee, Joan Cusack, Robbie Coltrane, Michael Palin, Dominic West, Andy Serkis	Animated, Family, Fantasy
2011	Atlas Shrugged: Part I	Taylor Schilling, Grant Bowler, Matthew Marsden, Edi Gathegi, Graham Beckel, Jsu Garcia, Jon Polito, Michael Lerner	Drama, Political, Thriller
2011	Bad Teacher	Cameron Diaz, Jason Segel, Justin Timberlake, Lucy Punch, John Michael Higgins	Comedy
2011	Battle: Los Angeles	Aaron Eckhart, Michelle Rodriguez, Ramón Rodríguez, Bridget Moynahan, Ne-Yo, and Michael Peña, Lucas Till, Joey King, Will Rothhaar, Nzinga Blake, Jim Parrack, Aisha Tyler, Tisha Campbell-Martin, Noel Fisher, Taylor Handley, Cory Hardrict	Action, Science Fiction
2011	Beastly	Vanessa Hudgens, Alex Pettyfer, Mary-Kate Olsen, Peter Krause, Lisa Gay Hamilton, Neil Patrick Harris	Fantasy, Romance
2011	Beats, Rhymes & Life: The Travels of a Tribe Called Quest	The life and legacy of A Tribe Called Quest, one of the most influential and groundbreaking musical groups in hip-hop history.	Documentary
2011	The Beaver	Mel Gibson, Jodie Foster, Anton Yelchin, Jennifer Lawrence	Comedy



Picture 3.5 (Year:1900-2021, Genre: No genre (Genres column is empty))

**American Movies**

**A database of American movies released since 1900**

Please select a start year:  Please select an end year:  Please select a genre:

Year	Title	Cast	Genres
1900	After Dark in Central Park		

Picture 3.6 (Year: 1990-2019, Genre: Action)

**American Movies**

**A database of American movies released since 1900**

Please select a start year:  Please select an end year:  Please select a genre:

Year	Title	Cast	Genres
1991	The Last Boy Scout	Bruce Willis,Damon Wayans,Chelsea Field,Noble Willingham,Taylor Negron,Danielle Harris,Halle Berry	Action
2011	Battle: Los Angeles	Aaron Eckhart,Michelle Rodriguez,Ramón Rodríguez,Bridget Moynahan,Ne-Yo,and,Michael Peña,Lucas Till,Joey King,Will Rothhaar,Nzinga Blake,Jim Parrack,Aisha Tyler,Tisha Campbell-Martin,Noel Fisher,Taylor Handley,Cory Hardrict	Action,Science Fiction
2011	Colombiana	Zoe Saldana,Jordi Mollà,Lennie James,Michael Vartan,Cliff Curtis	Action
2011	Conan the Barbarian	Jason Momoa,Rachel Nichols,Stephen Lang,Rose McGowan,Said Taghmaoui,Leo Howard,Bob Sapp,Ron Perlman,Steven O'Donnell,Nonso Anozie	Action,Adventure,Fantasy
2011	Contagion	Marion Cotillard,Matt Damon,Laurence Fishburne,Jude Law,Gwyneth Paltrow,Kate Winslet,Bryan Cranston,Jennifer Ehle,Sanaa Lathan,Amr Waked,John Hawkes,Demetri Martin	Action,Thriller
2011	The Darkest Hour	Emile Hirsch,Olivia Thirlby,Max Minghella,Rachael Taylor,Joel Kinnaman	Action,Thriller,Horror
2011	The Devil's Double	Dominic Cooper,Phillip Quast,Ludivine Sagnier,Mimoun Oaïssa,Mehmet Ferda	Action,Drama
2011	Drive	Ryan Gosling,Carey Mulligan,Bryan Cranston,Christina Hendricks,Ron Perlman,Oscar Isaac,Albert Brooks	Action,Drama
2011	Drive Angry	Nicolas Cage,Amber Heard,William Fichtner,Billy Burke,Charlotte Ross,Christa Campbell,Tom Atkins,Katy Mixon,Todd Farmer,David Morse	Action,Thriller
2011	Dylan Dog: Dead of Night	Brandon Routh,Sam Huntington,Anita Briem,Peter Stormare,Taye Diggs	Action,Horror,Comedy

## Question 3&4 Difficulty

There were not too many difficulties in this question as the hardest part had already been solved in the previous question. However, the function did not work at first

```
let trigger = document.getElementById("search");
trigger.onclick = function() {
    searchButton(data);
}
```

because I did not know the code should look like

instead of `trigger.onclick = searchButton(data);`. Once I found the correct way to call the function, everything worked perfectly.

## Modification of the Table

As I have displayed all the required functions, I decided to modify the format of the table using CSS to make it look better. First, I changed the font size, font family, and position of the headings by having them align to the centre as shown in Picture 4.1.

# American Movies

## A database of American movies released since 1900

From: 1900 ▾ Please select an end year: 2021 ▾ Please select a genre: All ▾ Search Resume Search cast name

Year	Title	Cast	Genres
1900	After Dark in Central Park		
1980	Airplane!	Robert Hays, Julie Hagerty, Leslie Nielsen, Peter Graves, Robert Stack, Lloyd Bridges, Kareem Abdul-Jabbar	Comedy
1990	The Adventures of Ford Fairlane	Andrew Dice Clay, Wayne Newton, Priscilla Presley, Lauren Holly, Maddie Corman, Ed O'Neill, Morris Day, Tone Loc, Gilbert Gottfried, Robert Englund	Comedy

Picture 4.2 is the codes of my modification:

```
h1{
  text-align: center;
  font-family: 'Franklin Gothic Medium', 'Arial Narrow', Arial, sans-serif;
  font-size: 30px;
}
h2{
  text-align: center;
  font-family: 'Franklin Gothic Medium', 'Arial Narrow', Arial, sans-serif;
}
```

I have also changed the font family of the labels next to the dropdown lists using the

codes `label {font-family: fantasy;}`, results were displayed in Picture 4.1 already.

The biggest modification I have made was the table, the font size and font family were changed, as well as the background color of the even columns, which I had them in blue. One minor modification might not be noticed was I had also added box shadow to the table to make it look like a 3D table. The result is in Picture 4.3.

Year	Title	Cast	Genres
1900	After Dark in Central Park		
1980	Airplane!	Robert Hays, Julie Hagerty, Leslie Nielsen, Peter Graves, Robert Stack, Lloyd Bridges, Kareem Abdul-Jabbar	Comedy
1990	The Adventures of Ford Fairlane	Andrew Dice Clay, Wayne Newton, Priscilla Presley, Lauren Holly, Maddie Corman, Ed O'Neill, Morris Day, Tone Loc, Gilbert Gottfried, Robert Englund	Comedy
1990	Sibling Rivalry	Kirstie Alley, Scott Bakula, Bill Pullman, Jami Gertz, Sam Elliott, Carrie Fisher	Comedy
1991	The Last Boy Scout	Bruce Willis, Damon Wayans, Chelsea Field, Noble Willingham, Taylor Negron, Danielle Harris, Halle Berry	Action
1991	Liebestraum	Bill Pullman, Kevin Anderson, Kim Novak	Drama
2011	The Art of Getting By	Freddie Highmore, Emma Roberts, Michael Angarano, Elizabeth Reaser, Sam Robards, Alicia Silverstone, Rita Wilson, Blair Underwood	Romance, Comedy, Teen
2011	Arthur	Russell Brand, Helen Mirren, Greta Gerwig, Jennifer Garner, Nick Nolte, Luis Guzmán	Comedy



The codes are as follows in Picture 4.4:

```
table{
  border-collapse:collapse;
  width:100%;
  text-align: center;
  margin-right:10%;
  margin-top: 1%;
  margin-bottom: 1%;
  box-shadow: 0 0 25px rgba(59, 59, 59, 0.404);
}
thead{
  border-bottom:2px solid #17202a;
  background-color:rgb(154, 243, 255);
  font-size:23px;
  color:rgb(0, 0, 0);
  font-family:'Franklin Gothic Medium', 'Arial Narrow', Arial, sans-serif;
}
td{
  border-bottom:2px solid #17202a;
  border-left:2px solid;
  border-right:2px solid;
  font-family: sans-serif;
}
tr:nth-child(even){
  background-color:rgb(212, 250, 255);
}
```

## Additional Functionality

As I had managed to display the specific requirement, I decided to implement some additional features into my table.

### Additional 1

Since it is more user-friendly for the users to select every detail they want before the table refreshes, my table does not filter the data unless the users hit the search button. Due to that fact, the select all function would work similarly in my program hence I decided to create a refresh button so the users could clear all the filters they chose and restart. By pressing the refresh button, the table would display all the data again (which was also like select all) and the dropdown lists returned to their default options. Result is displayed in Picture 5.1 and Picture 5.2 respectively.

In Picture 5.1, the year was between 1996-2011 and the genre was animated.

Please select a start year:  Please select an end year:  Please select a genre:

Year	Title	Cast	Genres
2011	Arthur Christmas	James McAvoy,Hugh Laurie,Bill Nighy,Jim Broadbent,Imelda Staunton,Ashley Jensen,Will Sasso,Ramona Marquez,Iain McKee,Joan Cusack,Robbie Coltrane,Michael Palin,Dominic West,Andy Serkis	Animated,Family,Fantasy
2011	Cars 2	Owen Wilson,Larry the Cable Guy,Michael Caine,Emily Mortimer,Eddie Izzard,Jason Isaacs,Thomas Kretschmann,Joe Mantegna,Peter Jacobson,Tony Shalhoub,Guido Quaroni,Paul Dooley,John Ratzenberger,John Turturro,Jeff Gordon,Lewis Hamilton,Darrell Waltrip,Brent Musburger,David Hobbs,Bruce Campbell,John Lasseter,Franco Nero,Vanessa Redgrave,Michel Michelis,Bonnie Hunt,Cheech Marin,Jenifer Lewis,Michael Wallis,Lloyd Sherr,Sig Hansen,Jeff Garlin,Katherine Helmond	Animated,Family,Spy
2011	Gnomeo and Juliet	James McAvoy,Emily Blunt,Michael Caine,Maggie Smith,Jason Statham,Patrick Stewart,Ashley Jensen,Stephen Merchant,Matt Lucas,Jim Cummings,Julie Walters,Richard Wilson,Ozzy Osbourne,Dolly Parton,Hulk Hogan	Animated,Family

Picture 5.2 is the result after pressing resume button.

Please select a start year:  Please select an end year:  Please select a genre:

Year	Title	Cast	Genres
1900	After Dark in Central Park		
1980	Airplane!	Robert Hays,Julie Hagerty,Leslie Nielsen,Peter Graves,Robert Stack,Lloyd Bridges,Kareem Abdul-Jabbar	Comedy
1990	The Adventures of Ford Fairlane	Andrew Dice Clay,Wayne Newton,Priscilla Presley,Lauren Holly,Maddie Corman,Ed O'Neill,Morris Day,Tone Loc,Gilbert Gottfried,Robert Englund	Comedy
1990	Sibling Rivalry	Kirstie Alley,Scott Bakula,Bill Pullman,Jami Gertz,Sam Elliott,Carrie Fisher	Comedy
1991	The Last Boy Scout	Bruce Willis,Damon Wayans,Chelsea Field,Noble Willingham,Taylor Negron,Danielle Harris,Halle Berry	Action
1991	Liebestraum	Bill Pullman,Kevin Anderson,Kim Novak	Drama
2011	The Art of Getting By	Freddie Highmore,Emma Roberts,Michael Angarano,Elizabeth Reaser,Sam Robards,Alicia Silverstone,Rita Wilson,Blair Underwood	Romance,Comedy,Teen
2011	Arthur	Russell Brand,Helen Mirren,Greta Gerwig,Jennifer Garner,Nick Nolte,Luis Guzmán	Comedy

The codes are in Picture 5.3. An alternative was to reload the page but my function would just re-call the other functions which was the difference.

```
let refresh = document.getElementById("refresh"); //Additional function 1
refresh.onclick = function() {
    listMovies(data);
    document.getElementById('selectGenre').value = 'All';
    document.getElementById("selectYearStart").value = 1900;
    document.getElementById("selectYearEnd").value = 2021;
    document.getElementById('searchBar').value = '';
    //Alternative: window.location.reload(); reloads the webpage
}
```

## Additional 2

This function allows the users to input cast names into the search bar and list out the movies that played by the actor/actress. I also used CSS for the search bar to make it look nicer in the webpage. Check the search result in Picture 5.4 and 5.5, the result was done letter by letter.

### A database of American movies released since 1900

Please select a start year:  Please select an end year:  Please select a genre:

Year	Title	Cast	Genres
2011	Captain America: The First Avenger	Chris Evans,Tommy Lee Jones,Hugo Weaving,Dominic Cooper,Neal McDonough,Derek Luke,Stanley Tucci,Haley Atwell,Sebastian Stan,Kenneth Choi,Toby Jones,Richard Armitage,J. J. Feild,Samuel L. Jackson	Superhero
2011	The Eagle	Channing Tatum,Jamie Bell,Donald Sutherland,Mark Strong	Adventure,Historical,Drama
2011	The Help	Jessica Chastain,Viola Davis,Bryce Dallas Howard,Allison Janney,Octavia Spencer,Emma Stone,Anna Camp,Dana Ivey,Leslie Jordan,Brian Kerwin,Chris Lowell,David Oyelowo,Sissy Spacek,Cicely Tyson,Mike Vogel	Comedy,Drama

Please select a start year:  Please select an end year:  Please select a genre:

Chris

Year	Title	Cast	Genres
2011	Captain America: The First Avenger	Chris Evans, Tommy Lee Jones, Hugo Weaving, Dominic Cooper, Neal McDonough, Derek Luke, Stanley Tucci, Hayley Atwell, Sebastian Stan, Kenneth Choi, Toby Jones, Richard Armitage, J. J. Feild, Samuel L. Jackson	Superhero

The search bar filtered the data using similar principle as Picture 3.3, the difference was the values were returned by `<input>` tag, not `<select>` tag. Tags and CSS for research bar please refer to Picture 5.6 while the codes of the function can be found in Picture 5.7.

Picture 5.6

```
#searchBar {
  width:18%;
  position:absolute;
  right:1%;
  background-color: floralwhite;
}
<input type="search" id="searchBar" placeholder="Search cast names...">
```

Picture 5.7

```
// Additional function 2 - Search bar for casts (Kind of works)
function castSearch(x) {
  let name = document.getElementById('searchBar').value; //Again, why in function?
  let temp = x.filter(element => {
    for (i=0; i<element.cast.length; i++) {
      return element.cast[i].indexOf(name) >-1;
    }
  })
  let html = '';
  for (i=0; i<temp.length; i++) {
    html += `
    <tr>
      <td>${temp[i].year}</td>
      <td>${temp[i].title}</td>
      <td>${temp[i].cast}</td>
      <td>${temp[i].genres}</td>
    </tr>
  `;
  }
  document.querySelector('#movieTable').innerHTML = html;
}
```

### Additional 3

The function in this feature was to check if the end year was greater than the start year. If not, an alert box would pop up to inform the users to check the years. The result can be found in Picture 5.8.

Please select a start year: 2021 Please select an end year: 1900 Please select a genre: All Search Resume

Year	Title	Cast
1900	After Dark in Central Park	
1980	Airplane!	Robert Hays, Julie Haggerty, Leslie Nielsen, Peter Graves, Robert Stack, Lloyd Bridges, Karen
1990	The Adventures of Ford Fairlane	Andrew Dice Clay
1990	Sibling Rivalry	Kirstie
1991	The Last Boy Scout	Bruce Willis, Damon

file://  
 Error! End year should be greater than start year!  
 OK

Picture 5.9 is the codes of this function. It was embedded under searchButton(x) function, the function was triggered by the search button.

```

if (endYear() < startYear()) {
  alert('Error! End year should be greater than start year!'); //Additional function 3
}

```

## Conclusion

Overall, this is a quite interesting assignment as the results are more responsive than the previous assignments. Although some parts were quite challenging, once I had fixed the problems, the coding parts became interesting as I could ‘manipulate’ the table in any format I wanted to. Also, the result looked more like the content we see in an actual webpage, which made the sense of accomplishment greater.