



- Open your app in chrome to get access to chrome dev tools
- Chrome Developer Tools are useful to debug or stylize any website, not just shiny apps

The image shows a web browser window displaying a 'Movie explorer' application. The application has a sidebar with filters for 'Minimum number of reviews on Rotten Tomatoes', 'Year released', 'Minimum number of Oscar wins', 'Dollars at Box Office', and 'Genre'. The main area contains a scatter plot of 'Number of reviews' (y-axis, 80-300) versus 'Tomato Meter' (x-axis, 0-100). A legend indicates 'With Oscar' with 'Yes' (orange) and 'No' (grey) categories. Below the plot, it says 'Number of movies selected: 2557'. The browser's developer tools are open on the right, showing the HTML structure with a 'body' element selected, the CSS styles for the body, and the console.

HTML →

CSS →

Console →

- **Cmd-I (Mac), Alt-I (Windows), or View->Developer->Developer Tools**
- **Top we see HTML selector, middle is CSS, and bottom is javascript console**

The screenshot displays a web browser window titled 'Movie explorer' at the address 127.0.0.1:5032. The application features a sidebar with five interactive filters: 'Minimum number of reviews on Rotten Tomatoes' (range 10-300, value 80), 'Year released' (range 1,840-2,014, value 1,970), 'Minimum number of Oscar wins (all categories)' (range 0-4, value 0), 'Dollars at Box Office (millions)' (range 0-800, value 0), and 'Genre (a movie can have multiple genres)' (dropdown set to 'All'). The main area contains a scatter plot of 'Number of reviews' (y-axis, 80-300) versus 'Tomato Meter' (x-axis, 0-100). Data points are categorized by 'Won Oscar' status: orange circles for 'Yes' and grey circles for 'No'. A legend in the top right of the plot area shows 'Won Oscar' with 'Yes' as an orange circle and 'No' as a grey circle. A text box at the bottom of the plot area indicates 'Number of movies selected: 2557'. On the right side, the browser's developer tools are open, showing the 'Elements' panel with the HTML structure of the page, the 'Styles' panel with various CSS rules applied to the body, and the 'Console' panel at the bottom.

- We can edit any of the HTML or CSS and the website will change live in the browser
- Refreshing the page undoes all changes
- Much more convenient than making small changes to the server code (instead, make one change when satisfied)

The screenshot displays a web browser window with the URL `127.0.0.1:5032`. The page title is "My Fabulous Movie Explorer". The application features a sidebar with filters: "Minimum number of reviews on Rotten Tomatoes" (range 10-300), "Year released" (range 1,840-2,014), "Minimum number of Oscar wins (all categories)" (range 0-4), "Dollars at Box Office (millions)" (range 0-800), and "Genre" (set to "All"). The main area is a scatter plot of "Number of reviews" (y-axis, 80-300) vs "Tomato Meter" (x-axis, 0-100). Points are colored by "Won Oscar" status: orange for "Yes" and grey for "No". A legend indicates "Won Oscar" with "Yes" (orange circle) and "No" (grey circle). A status box at the bottom left of the plot area shows "Number of movies selected: 2557".

The browser's developer tools are open on the right, showing the "Elements" panel with the following HTML structure:

```
<body style=>
  <div class="container-fluid">
    <h2>My Fabulous Movie Explorer</h2>
    <div class="row">
      <div class="col-sm-3">
      <div class="col-sm-9">
```

The "Styles" panel shows the following CSS rules for the selected `h2` element:

```
.h2, h2 {
  font-size: 38px;
}
.h1, .h2, .h3, h1, h2, h3 {
  margin-top: 20px;
  margin-bottom: 10px;
}
.h1, .h2, .h3, .h4, .h5, .h6, h1, h2, h3, h4, h5, h6 {
  font-family: inherit;
  font-weight: 500;
  line-height: 1.1;
  color: inherit;
}
```

The "Properties" panel shows the following style rules for the selected `h2` element:

```
Filter
border: 1px solid #ccc;
padding: 5px;
margin: 10px;
border: 1px solid #ccc;
padding: 5px;
margin: 10px;
```

- Here we change the title by double-clicking on the html on the left
- The mouse icon on the top left of the HTML panel allows you to select an element in the DOM and the corresponding HTML will be highlighted

The screenshot shows a web browser window with the URL `127.0.0.1:5032`. The page title is "My Fabulous Movie Explorer". The application features a filter sidebar on the left with four sliders: "Minimum number of reviews on Rotten Tomatoes" (set to 80), "Year released" (set to 1,970), "Minimum number of Oscar wins (all categories)" (set to 0), and "Dollars at Box Office (millions)" (set to 800). A dropdown menu for "Genre" is set to "All". The main content area is a scatter plot with "Tomato Meter" on the x-axis (0-100) and "Number of reviews" on the y-axis (80-300). A legend indicates "Won Oscar" with orange circles for "Yes" and grey circles for "No". A box at the bottom of the plot states "Number of movies selected: 2557". On the right, the browser's developer tools are open, showing the "Elements" panel with a selected `label` element and the "Styles" panel with a color picker dropdown menu.

- **CSS can also be changed. Valid entries appear next as you type**

The screenshot displays a web browser window titled 'Movie explorer' at the address '127.0.0.1:5032'. The application features a scatter plot with 'Tomato Meter' on the x-axis (0-100) and 'Number of movies' on the y-axis (90-180). On the left, there are two sliders: 'Minimum number of Oscar wins (all categories)' (0-4) and 'Dollars at Box Office (millions)' (0-800). Below these are input fields for 'Genre (a movie can have multiple genres)' (set to 'All'), 'Director name contains (e.g., Miyazaki)', and 'Cast names contains (e.g. Tom Hanks)'. A text box at the bottom left shows 'Number of movies selected: 2657'. On the right, the developer console is open, showing the 'Elements' panel with a selected label element and its corresponding CSS styles. The console also shows a log message 'ello World!' and the status 'document.body.contentEditable = true'.

- The console allows you to type javascript
- The mouse icon on the top left of the HTML panel allows you to select an element in the DOM and the corresponding HTML will be highlighted