

COM S/SE 319 : Construction of User Interfaces

Spring 2021

Homework 4: React

[Total Points: 25]

Assignment Due: Wednesday, March 17, 2021, 11:59 PM

Required frameworks: **React**

The focus of this part of the homework is on React. Implementing the following parts using plain JavaScript is not accepted.

In the sample code, we already provide an array of cars owned by a certain dealership. Your task will be to display the cars in an html table and apply filtering techniques to the results.

1. Show the list of cars in a table with columns “Manufacturer, Model, Year, Stock, Price, Option”. Prices should be shown in the right format like \$7800.00. **[10 points]**.
2. In the “option” column, each row should have a button with the text “increment” that whenever it is clicked, it will increase the stock number of that specific car on that row by one. **[5 points]**.
3. Make the header of column “Year” clickable, such that it lists the cars in ascending order. Click it again and it must reverse the list (descending order) **[5 points]**.

Please find the attached HW 4 zip files [HW4-React-SampleCodes.zip](#) on Canvas.

Once the HW4-React-SampleCodes.zip is downloaded, extract it.

Open Terminal and go to the folder ‘React_Homework’ inside the extracted folder (there should be a file there named ‘package.json’).

Run the following command in the terminal to install react dependencies.

(following the last lab activity, it is assumed that you already have *node* and *npm* installed)

>> *npm install*

You will see an output similar to this:

```
added 394 packages from 175 contributors and audited 398 packages in 4.071s
```

Now run the following command in terminal and leave terminal open:

>> *npm run build*

That’s all. You may now start coding in ‘*React_Homework\src\homework.js*’ and open ‘*React_Homework\public\index.html*’ in a browser to see the results.

Submit requirement [5 points]

Submit via Canvas a **compressed file (.zip)** [rename it with your LAST NAME] containing the following folders and files:

- **src** folder: Attaching all files of your implementation
- **README** file explaining how to compile and run your program & a
- **Report** (.docx or .pdf) file describing your solution approach and **screenshots** of every required output.

You should have the final output like this:

manufacturer	model	year	stock	price	Option
Toyota	Rav4	2008	3	\$8500.00	<input type="button" value="Increment"/>
Toyota	Camry	2009	2	\$6500.00	<input type="button" value="Increment"/>
Toyota	Tacoma	2016	1	\$22000.00	<input type="button" value="Increment"/>
BMW	i3	2012	5	\$12000.00	<input type="button" value="Increment"/>
Chevy	Malibu	2015	2	\$10000.00	<input type="button" value="Increment"/>
Honda	Accord	2013	1	\$9000.00	<input type="button" value="Increment"/>
Hyundai	Elantra	2013	2	\$7000.00	<input type="button" value="Increment"/>
Chevy	Cruze	2012	2	\$5500.00	<input type="button" value="Increment"/>
Dodge	Charger	2013	2	\$16000.00	<input type="button" value="Increment"/>
Ford	Mustang	2009	1	\$8000.00	<input type="button" value="Increment"/>

After a click on 'Year' head title.

manufacturer	model	year	stock	price	Option
Toyota	Tacoma	2016	1	\$22000.00	<input type="button" value="Increment"/>
Chevy	Malibu	2015	2	\$10000.00	<input type="button" value="Increment"/>
Honda	Accord	2013	1	\$9000.00	<input type="button" value="Increment"/>
Hyundai	Elantra	2013	2	\$7000.00	<input type="button" value="Increment"/>
Dodge	Charger	2013	2	\$16000.00	<input type="button" value="Increment"/>
BMW	i3	2012	5	\$12000.00	<input type="button" value="Increment"/>
Chevy	Cruze	2012	2	\$5500.00	<input type="button" value="Increment"/>
Toyota	Camry	2009	2	\$6500.00	<input type="button" value="Increment"/>
Ford	Mustang	2009	1	\$8000.00	<input type="button" value="Increment"/>
Toyota	Rav4	2008	3	\$8500.00	<input type="button" value="Increment"/>

Another click on 'Year' head title

manufacturer	model	year	stock	price	Option
Toyota	Rav4	2008	3	\$8500.00	<input type="button" value="Increment"/>
Toyota	Camry	2009	2	\$6500.00	<input type="button" value="Increment"/>
Ford	Mustang	2009	1	\$8000.00	<input type="button" value="Increment"/>
BMW	i3	2012	5	\$12000.00	<input type="button" value="Increment"/>
Chevy	Cruze	2012	2	\$5500.00	<input type="button" value="Increment"/>
Honda	Accord	2013	1	\$9000.00	<input type="button" value="Increment"/>
Hyundai	Elantra	2013	2	\$7000.00	<input type="button" value="Increment"/>
Dodge	Charger	2013	2	\$16000.00	<input type="button" value="Increment"/>
Chevy	Malibu	2015	2	\$10000.00	<input type="button" value="Increment"/>
Toyota	Tacoma	2016	1	\$22000.00	<input type="button" value="Increment"/>

After a click on the first "Increment" button:

manufacturer	model	year	stock	price	Option
Toyota	Rav4	2008	4	\$8500.00	<input type="button" value="Increment"/>
Toyota	Camry	2009	2	\$6500.00	<input type="button" value="Increment"/>
Toyota	Tacoma	2016	1	\$22000.00	<input type="button" value="Increment"/>
BMW	i3	2012	5	\$12000.00	<input type="button" value="Increment"/>
Chevy	Malibu	2015	2	\$10000.00	<input type="button" value="Increment"/>
Honda	Accord	2013	1	\$9000.00	<input type="button" value="Increment"/>
Hyundai	Elantra	2013	2	\$7000.00	<input type="button" value="Increment"/>
Chevy	Cruze	2012	2	\$5500.00	<input type="button" value="Increment"/>
Dodge	Charger	2013	2	\$16000.00	<input type="button" value="Increment"/>
Ford	Mustang	2009	1	\$8000.00	<input type="button" value="Increment"/>