



## Intro to JavaScript Week 5 Coding Assignment

**Points possible:** 70

Category	Criteria	% of Grade
Functionality	Does the code work?	25
Organization	Is the code clean and organized? Proper use of white space, syntax, and consistency are utilized. Names and comments are concise and clear.	25
Creativity	Student solved the problems presented in the assignment using creativity and out of the box thinking.	25
Completeness	All requirements of the assignment are complete.	25

**Instructions:** In VS Code, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed. Take screenshots of the code and of the running program (make sure to get screenshots of all required functionality) and paste them in this document where instructed below. Create a new repository on GitHub for this week's assignments and push this document, with your JavaScript project code, to the repository. Add the URL for this week's repository to this document where instructed and submit this document to your instructor when complete.

### Coding Steps:

1. Create a menu app as seen in this week's video. What you create is up to you as long as it meets the following requirements.
  - a. Use at least one array.
  - b. Use at least two classes.
  - c. Your menu should have the options to create, view, and delete elements.

### Screenshots of Code:



# PROMINEO TECH

```
JS AH-Week-5.js > Menu > deleteCharacter
1  class Ability { // A character's abilities and scores
2      constructor(ability, score){
3          this.ability = ability;
4          this.score = score;
5      }
6
7      describe(){
8          return `${this.ability} score is ${score}.`;
9      }
10 }
11
12
13
14 class Characteristics { // A character's race and class
15     constructor(race, rpgClass){
16         this.race = race;
17         this.rpgClass = rpgClass;
18     }
19
20     describe(){
21         return `This character is a ${this.race} ${this.rpgClass}.`;
22     }
23 }
24
25
26
27 class Character { // A character that can have a race, class, and abilities with scores
28     constructor(name){
29         this.name = name;
30         this.characteristics = [];
31         this.abilities = [];
32     }
33
34     addAbility(ability){ // Allows an ability to be added
35         if (ability instanceof Ability){
36             this.abilities.push(ability);
37         } else {
38             throw new Error(`You can only add an instance of Ability. Argument is not an Ability: ${ability}`);
39         }
40     }
41
42     addRaceAndClass(race, rpgClass){ // Allows race and class to be added
43         if (race, rpgClass instanceof Characteristics){
44             this.characteristics.push(race, rpgClass);
45         } else {
46             throw new Error(`You can only add an instance of Race and Class. Argument is not a Race or Class: ${race} ${rpgClass}`);
47         }
48     }
49 }
```



# PROMINEO TECH

```
49
50     describe(){
51         return `${this.name} is a ${race} ${rpgClass} and has the following abilities: ${this.abilities.join('\n')}`;
52     }
53 }
54
55
56 class Menu {
57     constructor(){
58         this.characters = [];
59         this.selectedCharacter = null;
60     }
61
62     start(){
63         let selection = this.showMainMenuOptions(); // A main menu to start from where you can create, view,
64                                                     // or delete characters, or display all characters made
65         while (selection != 0){
66             switch (selection){
67                 case '1':
68                     this.createCharacter();
69                     break;
70                 case '2':
71                     this.viewCharacter();
72                     break;
73                 case '3':
74                     this.deleteCharacter();
75                     break;
76                 case '4':
77                     this.displayCharacters();
78                     break;
79                 default:
80                     selection = 0;
81             }
82             selection = this.showMainMenuOptions();
83         }
84         alert("Good-bye!")
85     }
86
87     showMainMenuOptions(){ // Shows the main menu options
88         return prompt(`
89             0) Exit
90             1) Create New Character
91             2) View Character
92             3) Delete Character
93             4) Display All Characters
94         `);
95     }
96
97     showCharacterMenuOptions(characterInfo){ // Shows the character menu options
```



# PROMINEO TECH

```
90
97 | showCharacterMenuOptions(characterInfo) {           // Shows the character menu options
98 |     return prompt(`
99 |         0) Back
100 |         1) View Characteristics
101 |         2) View Abilities
102 |         -----
103 |         ${characterInfo}
104 |     `);
105 | }
106
107 | showCharacteristicsMenuOptions(characterInfo){       // Shows the race and class menu options
108 |     return prompt(`
109 |         0) Back
110 |         1) Enter Race and Class
111 |         2) Change Race and Class
112 |         3) Delete Race and Class
113 |         -----
114 |         // ${characterInfo}
115 |     `);
116 | }
117
118 | showAbilityMenuOptions(characterInfo){              // Shows the ability menu options
119 |     return prompt(`
120 |         0) Back
121 |         1) Create Ability
122 |         2) Change Ability
123 |         3) Delete Ability
124 |         -----
125 |         ${characterInfo}
126 |     `);
127 | }
128
129 | joinCharacteristics(){                             // Joins the characteristics of a character into a string so that
130 |     var description1 = '';                          // you can see it in later code without having to reuse code
131 |     for (let i = 0; i < this.selectedCharacter.characteristics.length; i++){
132 |         description1 += i + ' ' + this.selectedCharacter.characteristics[i].race + ' '
133 |         + this.selectedCharacter.characteristics[i].rpgClass + '\n';
134 |     }
135 |     return description1;
136 | }
137
138 | joinAbilities(){                                   // Joins the abilities of a character into a string so that
139 |     var description2 = '';                          // you can see it in later code without having to reuse code
140 |     for (let i = 0; i < this.selectedCharacter.abilities.length; i++){
141 |         description2 += i + ' ' + this.selectedCharacter.abilities[i].ability
142 |         + ' - ' + this.selectedCharacter.abilities[i].score + '\n';
143 |     }
144 |     return description2;
```



# PROMINEO TECH

```
143     /
144     return description2;
145 }
146
147
148 displayCharacters(){
149     // Joins all the characters made by the user in one string in
150     let characterString = ''; // order to display them together
151     for (let i = 0; i < this.characters.length; i++){
152         characterString += i + ' ' + this.characters[i].name + '\n';
153     }
154     alert(characterString);
155 }
156
157 isItUndefined(){
158     // Tests to see if either of the race/class or abilities are undefined
159     // so that they don't show up on the various menus if they are
160     let x = this.joinCharacteristics();
161     let y = this.joinAbilities();
162     let description = ''
163     if(x == undefined && y == undefined){
164         description = "Character Name: " + this.selectedCharacter.name + '\n' ;
165     }else if(x == undefined){
166         description = "Character Name: " + this.selectedCharacter.name + '\n' + y + '\n' ;
167     }else if(y == undefined){
168         description = "Character Name: " + this.selectedCharacter.name + '\n' + x + '\n' ;
169     }else{
170         description = "Character Name: " + this.selectedCharacter.name + '\n' + x + '\n' + y + '\n' ;
171     }
172     return description;
173 }
174
175 createCharacter(){
176     // Creates a character based on the name entered by the user
177     let name = prompt('Enter name for new character: ');
178     this.characters.push(new Character(name));
179 }
180
181 viewCharacteristics(){
182     // Allows the user to see the characteristics menu to then create, change,
183     // or delete a character's race/class
184     let index = prompt('Enter the index of the character you wish to edit:');
185     if (index > -1 && index < this.characters.length){
186         this.selectedCharacter = this.characters[index];
187         var description1 = this.isItUndefined();
188
189         let selection = this.showCharacteristicsMenuOptions(description1);
190         switch (selection){
191             case '1':
192                 this.createRaceAndClass();
193                 break;
194             case '2':
195                 this.changeRaceAndClass();
196                 break;
197             case '3':
198                 this.deleteRaceAndClass();
199         }
200     }
201 }
```



# PROMINEO TECH

```
191         case '3':
192             this.deleteRaceAndClass();
193         }
194     }
195 }
196 }
197
198 viewAbilities(){
199     let index = prompt('Enter the index of the character you wish to edit:'); // Allows the user to see the abilities menu to then create, change,
200     if (index > -1 && index < this.characters.length){ // or delete a character's abilities
201         this.selectedCharacter = this.characters[index];
202         var description2 = this.isItUndefined();
203
204         let selection = this.showAbilityMenuOptions(description2);
205         switch (selection){
206             case '1':
207                 this.createAbility();
208                 break;
209             case '2':
210                 this.changeAbility();
211                 break;
212             case '3':
213                 this.deleteAbility();
214             }
215     }
216 }
217
218 }
219
220 viewCharacter(){
221     let index = prompt('Enter the index of the character you wish to view:'); // Allows the user to see the character menu to choose if they want to
222     if (index > -1 && index < this.characters.length){ // or edit a character's race/class or abilities
223         this.selectedCharacter = this.characters[index];
224         let description = this.isItUndefined();
225
226         let selection = this.showCharacterMenuOptions(description);
227         switch (selection){
228             case '1':
229                 this.viewCharacteristics();
230                 break;
231             case '2':
232                 this.viewAbilities();
233             }
234     }
235 }
236
237 deleteCharacter(){ // Deletes a created character
238     let index = prompt('Enter the index of the character you wish to delete:');
239     let index2 = prompt('Enter the index of the character you wish to delete:');
240     if (index > -1 && index < this.characters.length) {
241         this.characters.splice(index, 1);
242     }
243 }
244
245 createAbility(){ // Creates an ability with a score based on user input
246     let ability = prompt('Enter ability: ');
247     let score = prompt('Enter ability score: ');
248     this.selectedCharacter.abilities.push(new Ability(ability, score));
249 }
250
251 changeAbility(){ // Changes the ability score of a chosen ability that's already been created by the user
252     let index = prompt('Enter the index of the ability you wish to change: ');
253     let changedScore = prompt('Enter the new score: ');
254     if (index > -1 && index < this.selectedCharacter.abilities.length){
255         this.selectedCharacter.abilities[index].score = changedScore;
256     }
257 }
258
259 deleteAbility(){ // Deletes an ability and its score from a character
260     let index = prompt('Enter the index of the ability you wish to delete: ');
261     if (index > -1 && index < this.selectedCharacter.abilities.length){
262         this.selectedCharacter.abilities.splice(index, 1);
263     }
264 }
265
266 createRaceAndClass(){ // Creates a race and class based on user input, and only allows one to exist at a time
267     if(this.selectedCharacter.characteristics.length === 0){
268         let race = prompt('Enter race: ');
269         let rpgClass = prompt('Enter class: ');
270         this.selectedCharacter.characteristics.push(new Characteristics(race, rpgClass));
271     }else{
272         alert("You can only have one race and class!");
273     }
274 }
275
276 changeRaceAndClass(){ // Changes the selected character's race and class based on new user input
277     let changedRace = prompt('Enter new race: ');
278     let changedClass = prompt('Enter new class: ');
279     this.selectedCharacter.characteristics[0].race = changedRace;
280     this.selectedCharacter.characteristics[0].rpgClass = changedClass;
281 }
```

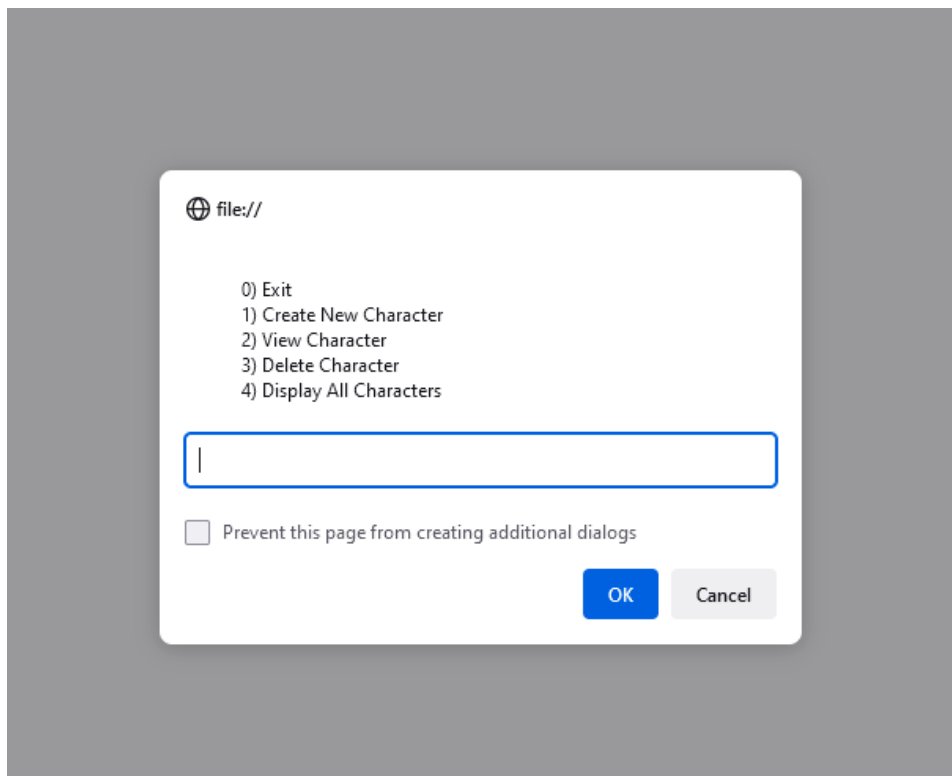


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```
281
282 |     deleteRaceAndClass(){                                // Deletes the selected character's race and class
283 |         this.selectedCharacter.characteristics.pop();
284 |     }
285 | }
286
287 let menu = new Menu();
288 menu.start();
289
290
```

## Screenshots of Running Application:

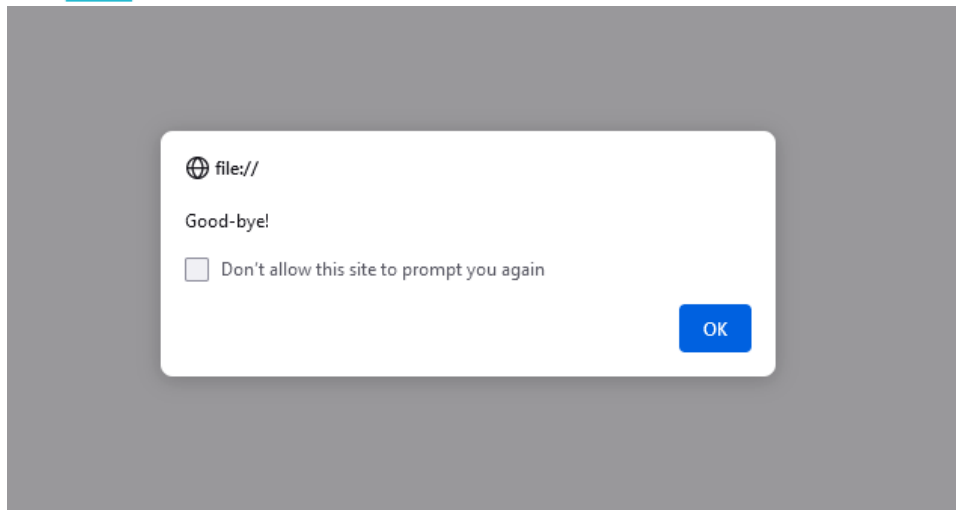
### Main Menu:



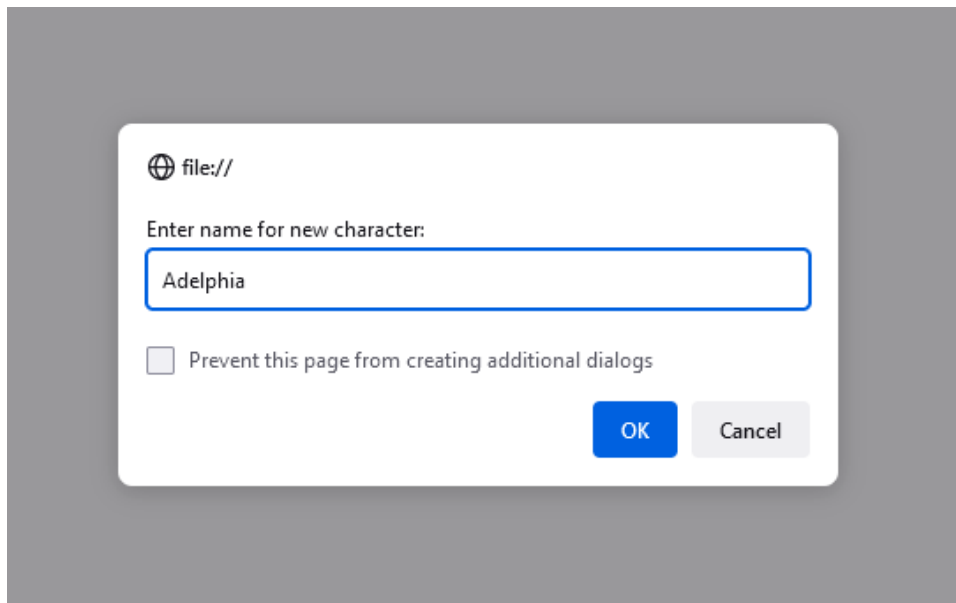
### Exit:



# PROMINEO TECH



## Create a New Character:



## Choose Character Prompt:





A dialog box with a title bar containing a globe icon and the text "file://". The main content area contains the text "Enter the index of the character you wish to view:" followed by a text input field. Below the input field is a checkbox labeled "Prevent this page from creating additional dialogs". At the bottom right are two buttons: "OK" (blue) and "Cancel" (grey).

## View Character Menu:

A dialog box with a title bar containing a globe icon and the text "file://". The main content area contains a menu list: "0) Back", "1) View Characteristics", and "2) View Abilities", followed by a dashed line and the text "Character Name: Adelpia". Below the menu is a text input field with a vertical cursor. At the bottom is a checkbox labeled "Prevent this page from creating additional dialogs". At the bottom right are two buttons: "OK" (blue) and "Cancel" (grey).

## Characteristics Menu:



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file://

0) Back  
1) Enter Race and Class  
2) Change Race and Class  
3) Delete Race and Class  
-----  
// Character Name: Adelphia

☐ Prevent this page from creating additional dialogs

OK Cancel

## Enter Race and Class:

file://

Enter race:

☐ Prevent this page from creating additional dialogs

OK Cancel



# PROMINEO TECH

file://

Enter class:

Bard

☐ Prevent this page from creating additional dialogs

OK Cancel

## Ability Menu:

file://

0) Back  
1) Create Ability  
2) Change Ability  
3) Delete Ability  
-----  
Character Name: Adelpia  
0) Tabaxi Bard

|

☐ Prevent this page from creating additional dialogs

OK Cancel

## Create an Ability:



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A screenshot of a web application interface. At the top, there is a logo consisting of a blue square with a white border containing the code symbols `</>`. To the right of the logo is the text "PROMINEO TECH" in a large, bold, blue, sans-serif font. Below the logo and text is a large gray rectangular area. In the center of this gray area is a white rounded rectangular dialog box. The dialog box has a title bar with a globe icon and the text "file://". Below the title bar, the text "Enter ability:" is displayed. Underneath this text is a text input field with a blue border containing the word "Charisma". Below the input field is a checkbox with the text "Prevent this page from creating additional dialogs". At the bottom right of the dialog box are two buttons: a blue "OK" button and a gray "Cancel" button.

A screenshot of a web application interface, similar to the one above. It features the same logo and "PROMINEO TECH" header. The gray area contains a white rounded rectangular dialog box. The title bar shows a globe icon and "file://". The text "Enter ability score:" is displayed above a text input field with a blue border containing the number "18". Below the input field is a checkbox with the text "Prevent this page from creating additional dialogs". At the bottom right of the dialog box are two buttons: a blue "OK" button and a gray "Cancel" button.

**A Character with several abilities and a race and class showing:**



# PROMINEO TECH

file://

- 0) Back
- 1) View Characteristics
- 2) View Abilities

-----

Character Name: Adelpia

- 0) Tabaxi Bard

- 0) Charisma - 18
- 1) Strength - 12
- 2) Constitution - 10

  
  
  
☐ Prevent this page from creating additional dialogs  
  
 

## Changing an ability score:

file://

Enter the index of the ability you wish to change:

  
  
☐ Prevent this page from creating additional dialogs



file://

Enter the new score:

☐ Prevent this page from creating additional dialogs

OK Cancel

file://

0) Back  
1) View Characteristics  
2) View Abilities  
-----  
Character Name: Adelpia  
0) Tabaxi Bard

0) Charisma - 18  
1) Strength - 12  
2) Constitution - 15

☐ Prevent this page from creating additional dialogs

OK Cancel

**After deleting an ability:**



A screenshot of a web application interface showing a dialog box. The dialog box has a title bar with a globe icon and the text "file://". Inside the dialog, there is a list of options: "0) Back", "1) View Characteristics", and "2) View Abilities". Below this list is a dashed line, followed by the text "Character Name: Adelpia". Below that is another list of options: "0) Tabaxi Bard", "0) Charisma - 18", and "1) Constitution - 15". At the bottom of the dialog is a text input field with a blue border and a cursor. Below the input field is a checkbox labeled "Prevent this page from creating additional dialogs". At the bottom right of the dialog are two buttons: "OK" (blue) and "Cancel" (gray).

**Only one race/class allowed warning:**

A screenshot of a web application interface showing a warning dialog box. The dialog box has a title bar with a globe icon and the text "file://". Inside the dialog, there is a message: "You can only have one race and class!". Below the message is a checkbox labeled "Don't allow this site to prompt you again". At the bottom right of the dialog is a blue button labeled "OK".

**Change Race and Class:**



# PROMINEO TECH

file://

Enter new race:

Satyr

☐ Prevent this page from creating additional dialogs

OK Cancel

file://

Enter new class:

Paladin

☐ Prevent this page from creating additional dialogs

OK Cancel





# PROMINEO TECH

file://

0) Back  
1) View Characteristics  
2) View Abilities  
-----  
Character Name: Adelpia  
0) Satyr Paladin  
  
0) Charisma - 18  
1) Constitution - 15

☐ Prevent this page from creating additional dialogs

OK Cancel

**After deleting race and class:**



file://

- 0) Back
- 1) View Characteristics
- 2) View Abilities

-----

Character Name: Adelphia

- 0) Charisma - 18
- 1) Constitution - 15

  
  
  
☐ Prevent this page from creating additional dialogs  
  
 

## Display Characters:

file://

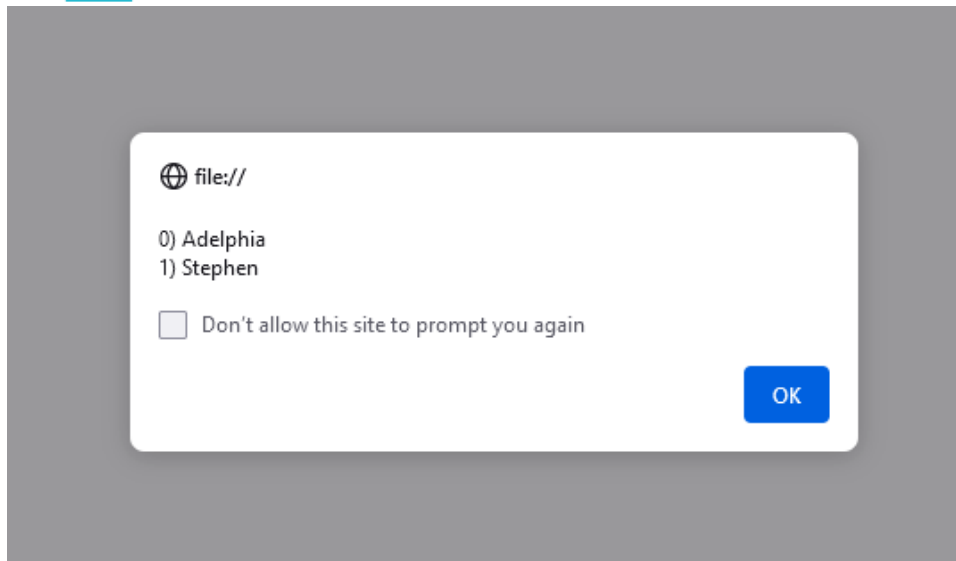
- 0) Adelphia
- 1) Jement
- 2) Stephen

  
☐ Don't allow this site to prompt you again  
  

## Delete Character



# PROMINEO TECH



**URL to GitHub Repository:**

<https://github.com/aheiser2/Week-5-Menu-App.git>