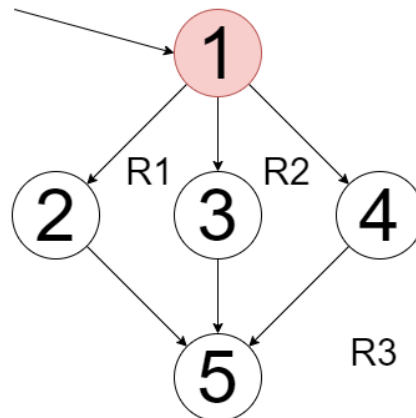


Independent Path Test 1

```
setRepCount(goal) {  
  ① switch (goal) {  
    ② case "Strength":  
      this.#repCount = "1 to 5 reps each";  
      break;  
  
    ③ case "Hypertrophy":  
      this.#repCount = "8 to 12 reps each";  
      break;  
  
    ④ case "Endurance":  
      this.#repCount = "12 to 20+ reps each";  
      break;  
  } ⑤  
}
```

Predicate nodes



Cyclomatic Complexity

$$V(G) = 3$$

Paths

Path 1: 1-2-5

Path 2: 1-3-5

Path 3: 1-4-5

Path 1

Input: "Strength"

Expected output: this.#repCount = "1 to 5 reps each"



Path 2

Input: "Hypertrophy"

Expected output: this.#repCount = "8 to 12 reps each"



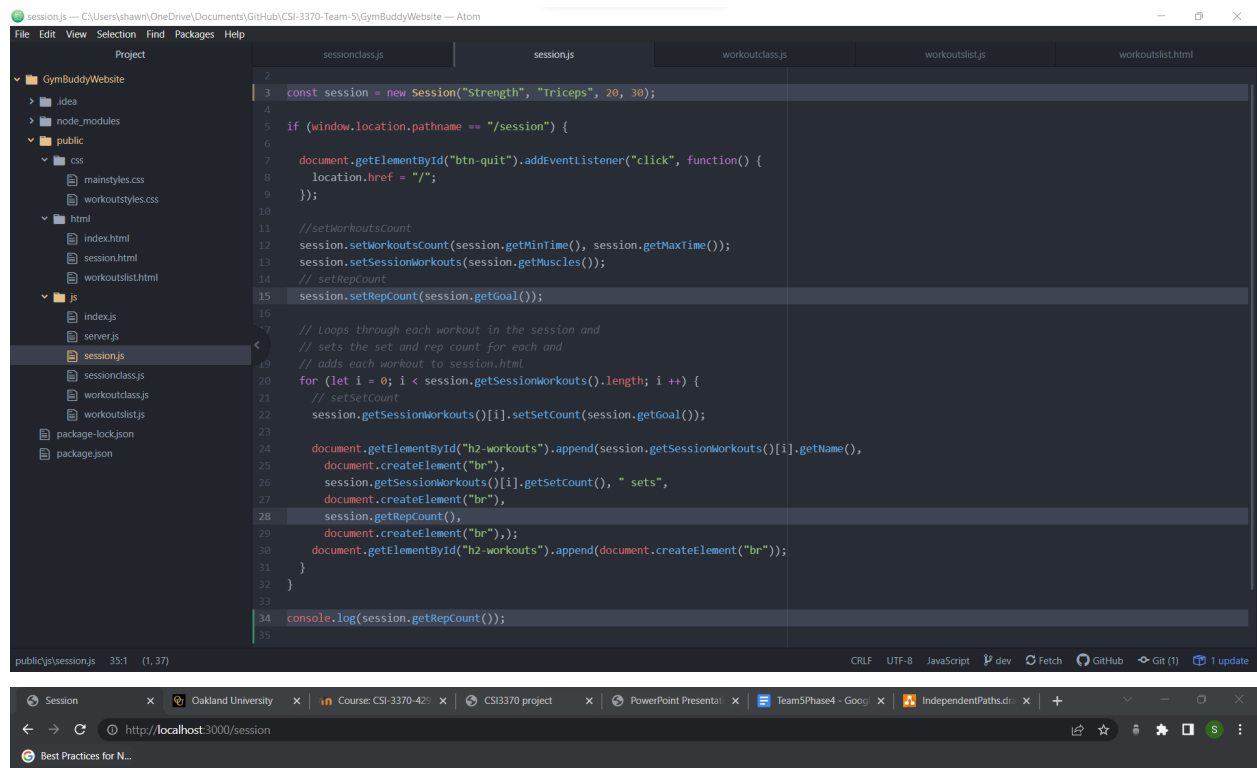
Path 3

Input: "Endurance"

Expected output: this.#repCount = "12 to 20+ reps each"



setRepCount() path 1 input/output



Your workouts

Push-ups

5 sets

1 to 5 reps each

Tricep extensions

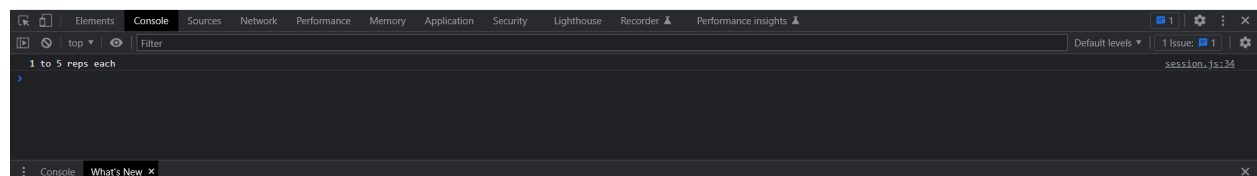
5 sets

1 to 5 reps each

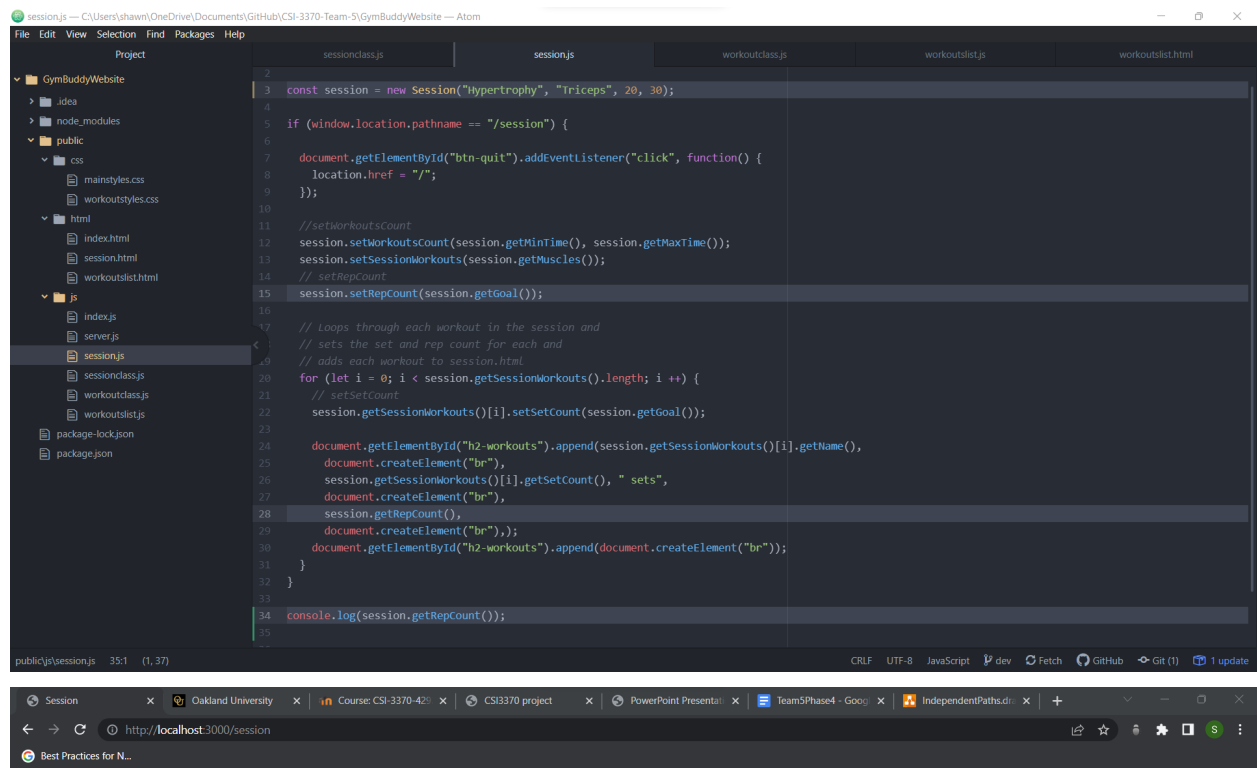
Bench press

4 sets

1 to 5 reps each



setRepCount() path 2 input/output



Your workouts

Tricep extensions

4 sets

8 to 12 reps each

Bench press

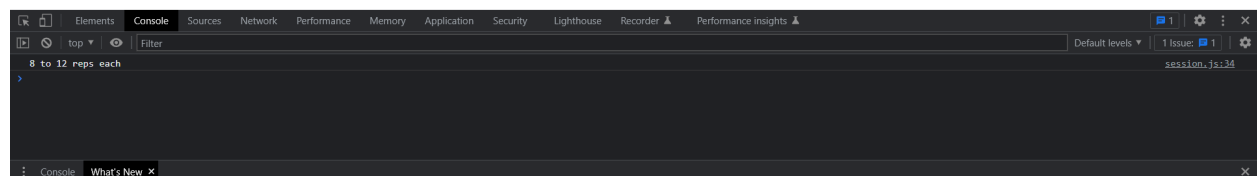
3 sets

8 to 12 reps each

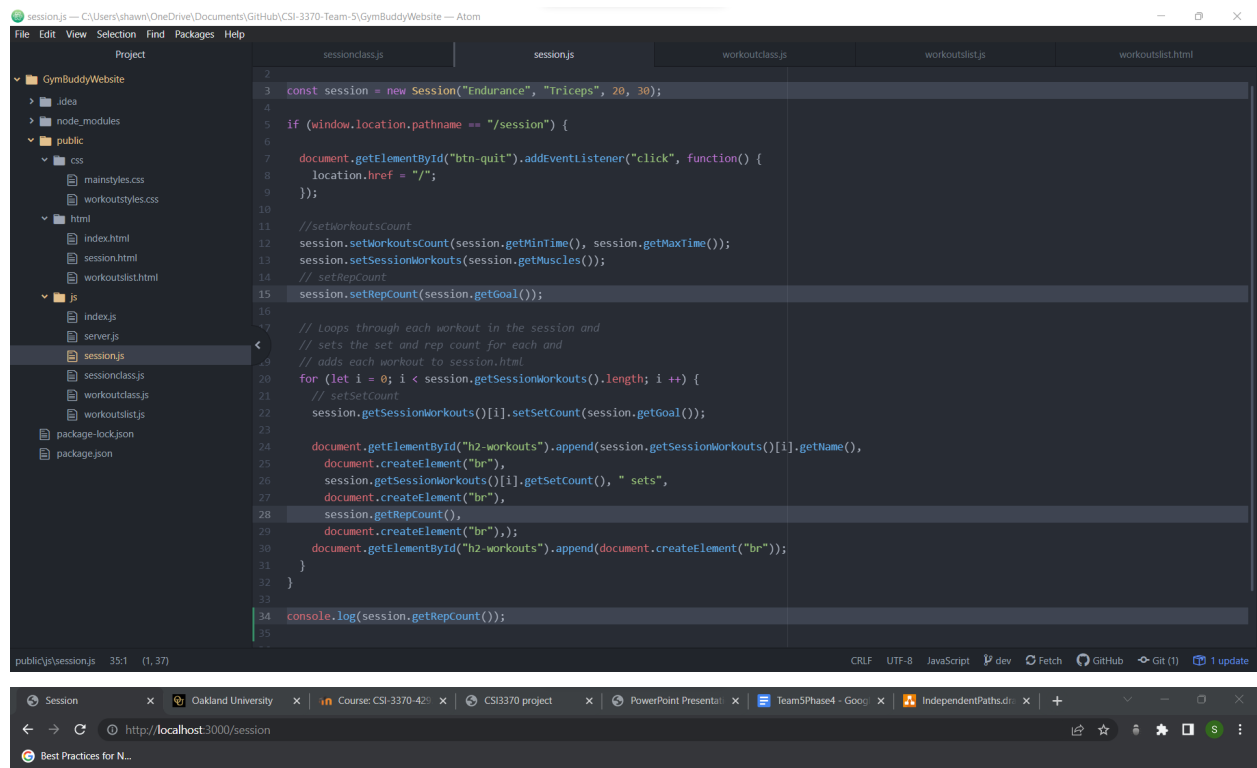
Push-ups

5 sets

8 to 12 reps each



setRepCount() path 3 input/output



Your workouts

Push-ups

3 sets

12 to 20+ reps each

Tricep extensions

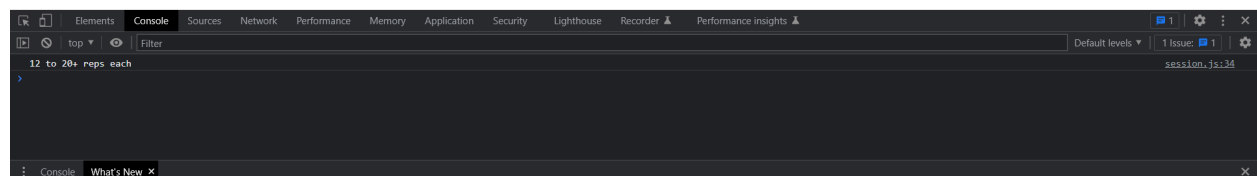
2 sets

12 to 20+ reps each

Bench press

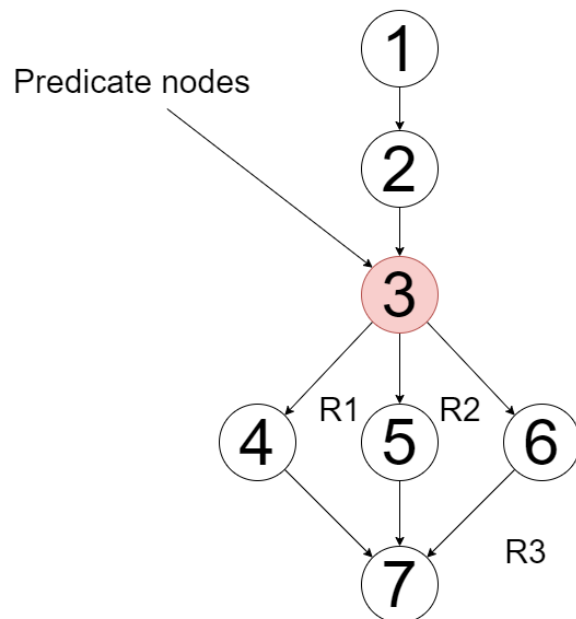
2 sets

12 to 20+ reps each



Independent Path Test 2 (Disclaimer: not fully implemented)

```
setSessionWorkouts(muscles) {  
  ① this.setWorkoutsCount(this.#minTime, this.#maxTime);  
    const tempArray = arrayTricepsWorkout;  
  
  ② for (let i = 0; i < this.#workoutsCount; i++) {  
    ③ switch (muscles.toLowerCase()) {  
      ④ case "biceps":  
        //  
        break;  
  
      ⑤ case "triceps":  
        const randomTricepsWorkout = tempArray[Math.floor(Math.random() * arrayTricepsWorkouts.length)];  
        this.#sessionWorkouts.push(randomTricepsWorkout);  
        tempArray.splice(tempArray.indexOf(randomTricepsWorkout), 1);  
        break;  
  
      ⑥ case "chest":  
        //  
        break;  
    }  
  }  
  ⑦ }  
}
```



Cyclomatic Complexity

$$V(G) = 3$$

Paths

Path 1: 1-2-3-4-7

Path 2: 1-2-3-5-7

Path 3: 1-2-3-6-7

Path 1

Input 1: this.#minTime = 0, this.#maxTime = 0, muscles = "triceps"

Expected output: this.#workoutsCount = 1,
this.#sessionWorkouts = [1 workout object]



Input 2: this.#minTime = 0, this.#maxTime = 30, muscles = "triceps"

Expected output: this.#workoutsCount = random from 1 to 3,
this.#sessionWorkouts = [1 to 3 workout objects]



Input 3: this.#minTime = 30, this.#maxTime = 30, muscles = "triceps"

Expected output: this.#workoutsCount = 3,
this.#sessionWorkouts = [3 workout objects]

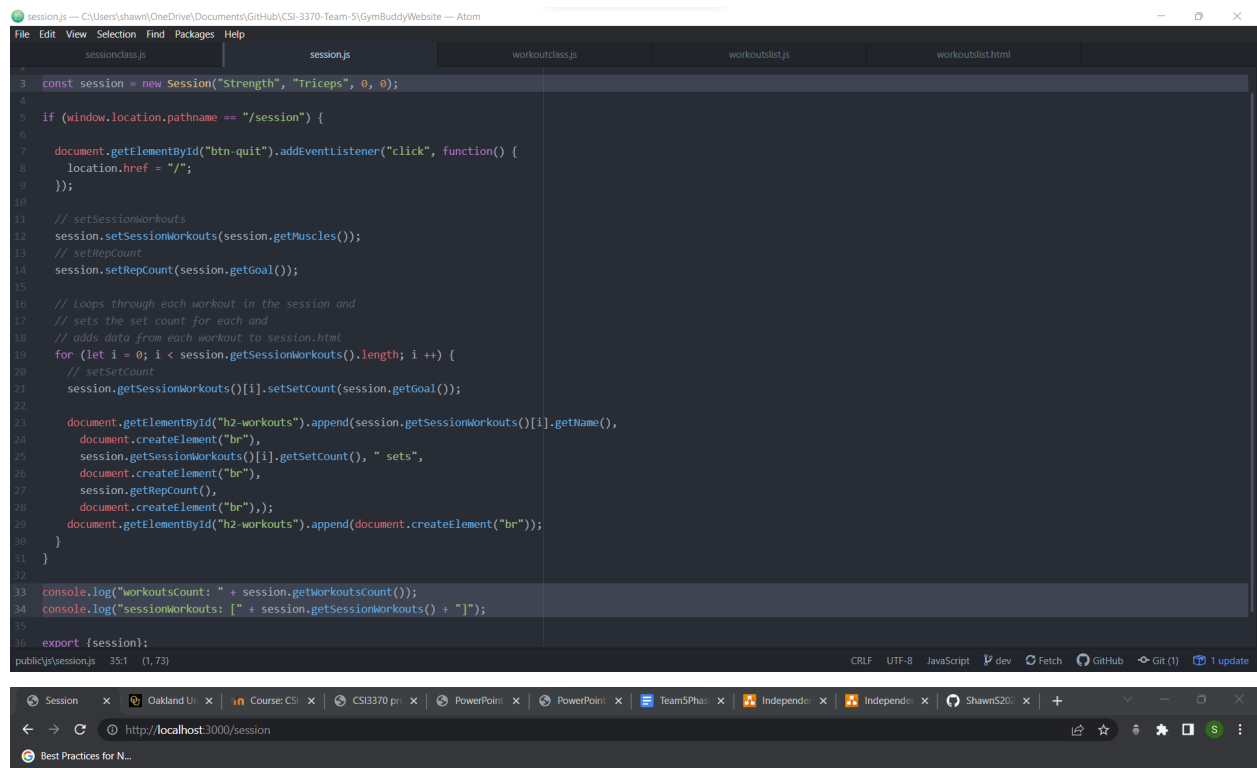


Path 2...

Workout objects for other muscles not yet implemented



setSessionWorkouts() path 1 input/output 1



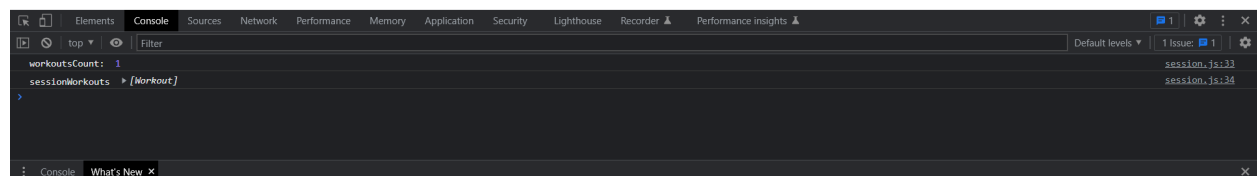
```
3 const session = new Session("Strength", "Triceps", 0, 0);
4
5 if (window.location.pathname == "/session") {
6
7   document.getElementById("btn-quit").addEventListener("click", function() {
8     location.href = "/";
9   });
10
11   // setSessionWorkouts
12   session.setSessionWorkouts(session.getMuscles());
13   // setRepCount
14   session.setRepCount(session.getGoal());
15
16   // Loops through each workout in the session and
17   // sets the set count for each and
18   // adds data from each workout to session.html
19   for (let i = 0; i < session.getSessionWorkouts().length; i++) {
20     // setSetCount
21     session.getSessionWorkouts()[i].setSetCount(session.getGoal());
22
23     document.getElementById("h2-workouts").append(session.getSessionWorkouts()[i].getName(),
24       document.createElement("br"),
25       session.getSessionWorkouts()[i].getSetCount(), " sets",
26       document.createElement("br"),
27       session.getRepCount(),
28       document.createElement("br"),);
29     document.getElementById("h2-workouts").append(document.createElement("br"));
30   }
31 }
32
33 console.log("workoutsCount: " + session.getWorkoutsCount());
34 console.log("sessionWorkouts: [" + session.getSessionWorkouts() + "]");
35
36 export {session};
```

Your workouts

Push-ups

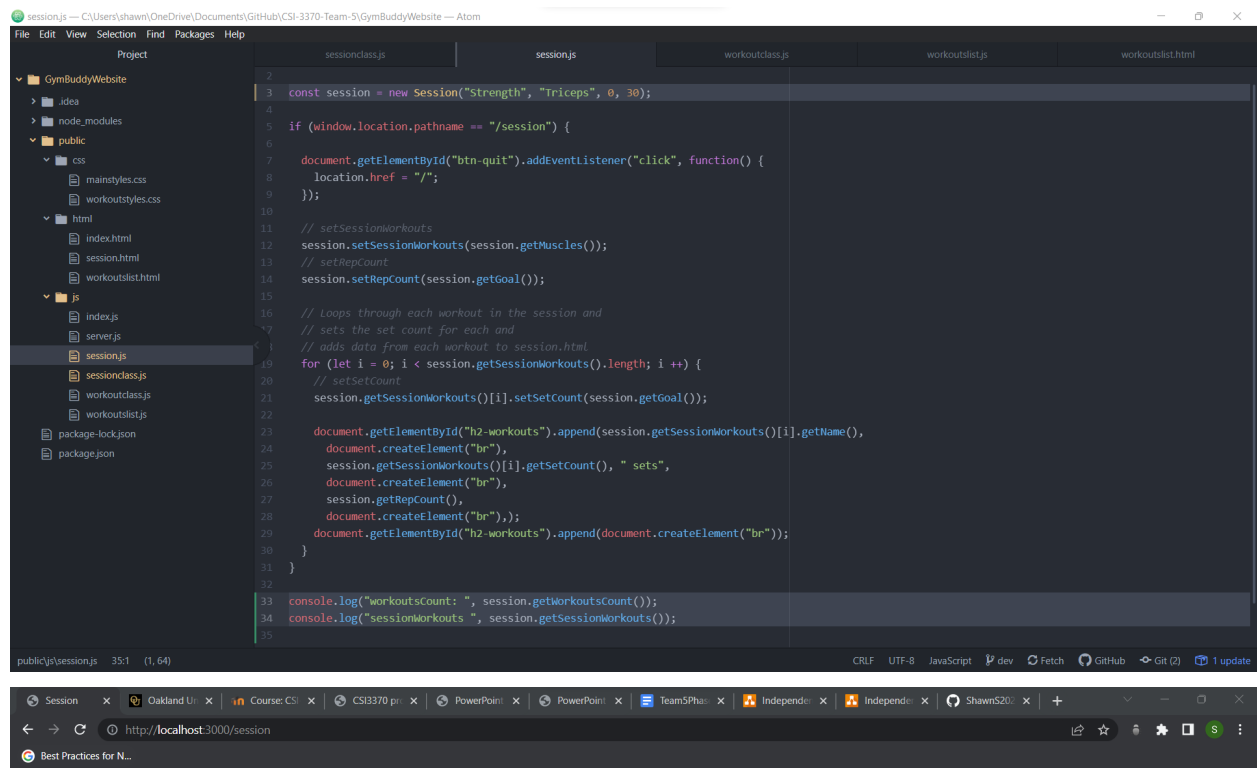
5 sets

1 to 5 reps each



```
workoutsCount: 1
sessionWorkouts: [Workout]
```

setSessionWorkouts() path 1 input/output 2



Your workouts

Tricep extensions

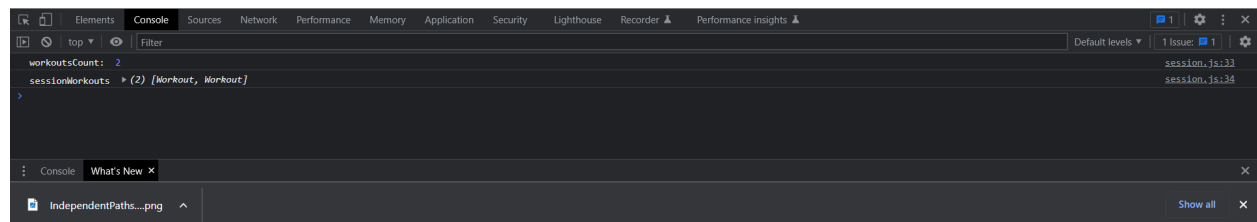
6 sets

1 to 5 reps each

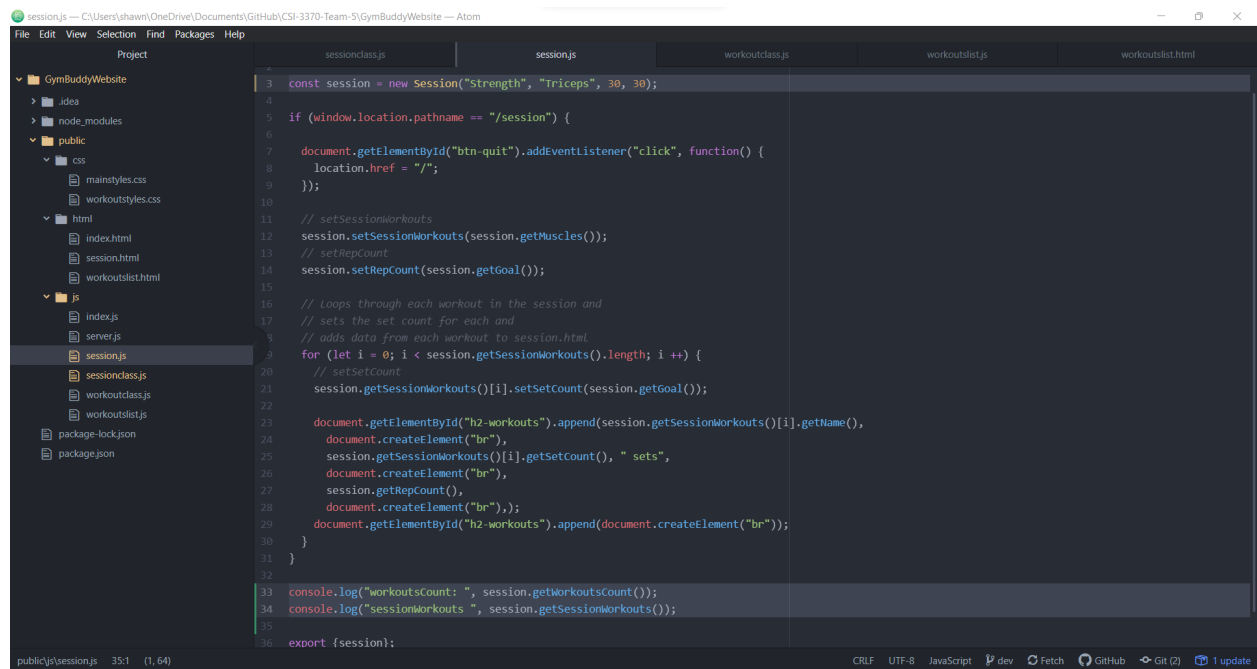
Push-ups

6 sets

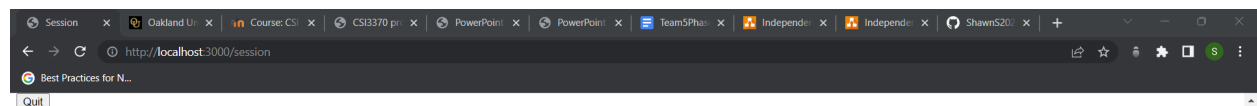
1 to 5 reps each



setSessionWorkouts() path 1 input/output 3



```
3 const session = new Session("Strength", "Triceps", 30, 30);
4
5 if (window.location.pathname == "/session") {
6
7   document.getElementById("btn-quit").addEventListener("click", function() {
8     location.href = "/";
9   });
10
11   // setSessionWorkouts
12   session.setSessionWorkouts(session.getMuscles());
13   // setRepCount
14   session.setRepCount(session.getGoal());
15
16   // Loops through each workout in the session and
17   // sets the set count for each and
18   // adds data from each workout to session.html
19   for (let i = 0; i < session.getSessionWorkouts().length; i++) {
20     // setSetCount
21     session.getSessionWorkouts()[i].setSetCount(session.getGoal());
22
23     document.getElementById("h2-workouts").append(session.getSessionWorkouts()[i].getName(),
24       document.createElement("br"),
25       session.getSessionWorkouts()[i].getSetCount(), " sets",
26       document.createElement("br"),
27       session.getRepCount(),
28       document.createElement("br"),);
29     document.getElementById("h2-workouts").append(document.createElement("br"));
30   }
31 }
32
33 console.log("workoutsCount: ", session.getWorkoutsCount());
34 console.log("sessionWorkouts ", session.getSessionWorkouts());
35
36 export {session};
```



Your workouts

Tricep extensions

4 sets

1 to 5 reps each

Bench press

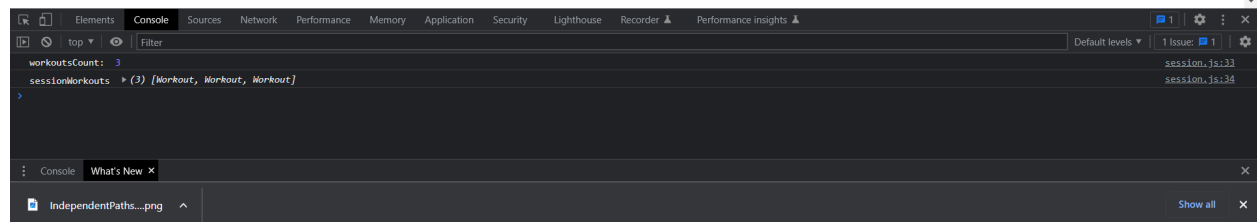
5 sets

1 to 5 reps each

Push-ups

6 sets

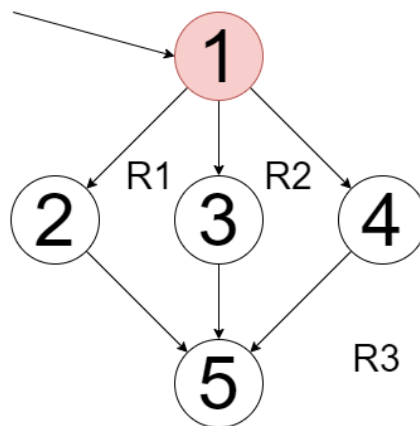
1 to 5 reps each



Independent Path Test 3

```
setSetCount(goal) {  
  ① switch (goal) {  
    ② case "Strength":  
      this.#setCount = Math.floor((Math.random() * (6 - 4 + 1)) + 4);  
      break;  
  
    ③ case "Hypertrophy":  
      this.#setCount = Math.floor((Math.random() * (5 - 3 + 1)) + 3);  
      break;  
  
    ④ case "Endurance":  
      this.#setCount = Math.floor((Math.random() * (3 - 2 + 1)) + 2);  
      break;  
  }  
  ⑤  
}
```

Predicate nodes



Cyclomatic Complexity

$$V(G) = 3$$

Paths

Path 1: 1-2-5

Path 2: 1-3-5

Path 3: 1-4-5

Path 1

Input: "Strength"

Expected output: this.#setCount = random number from 4 to 6



Path 2

Input: "Hypertrophy"

Expected output: this.#setCount = random number from 3 to 5



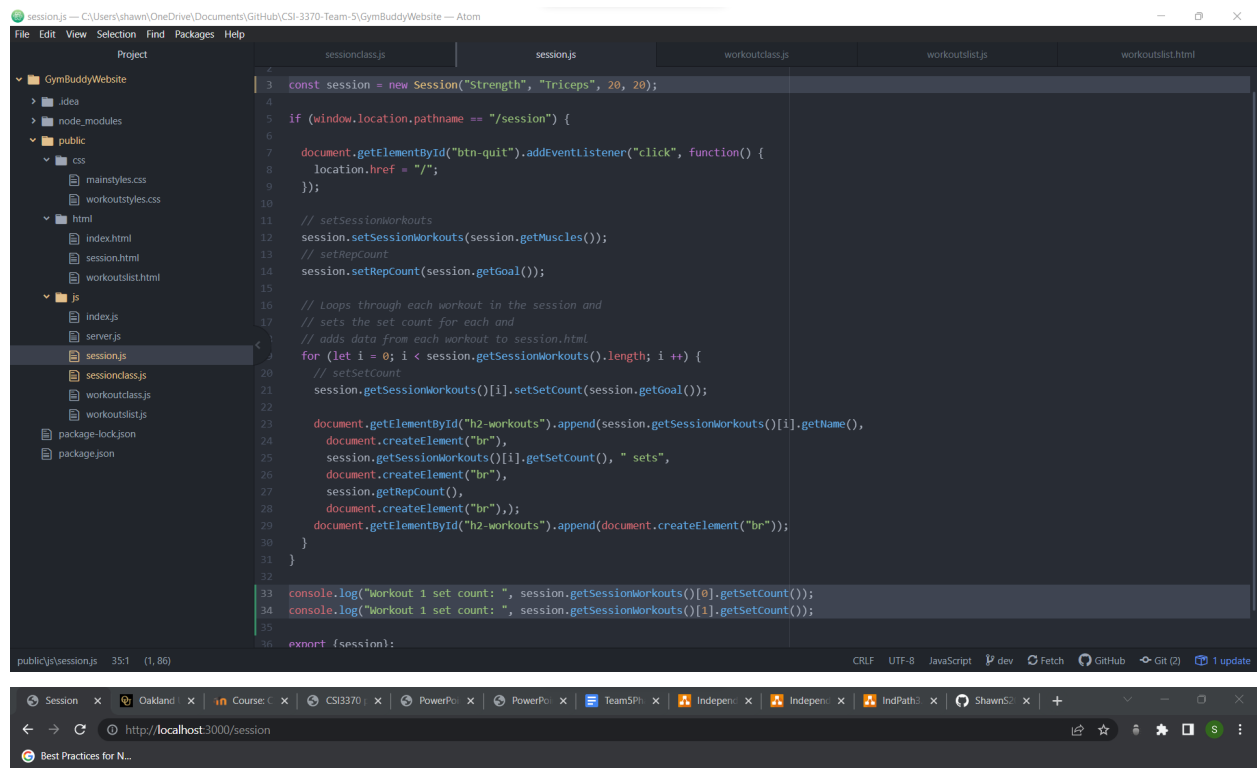
Path 3

Input: "Endurance"

Expected output: this.#setCount = random number from 2 to 3



setSetCount() path 1 input/output



Your workouts

Bench press

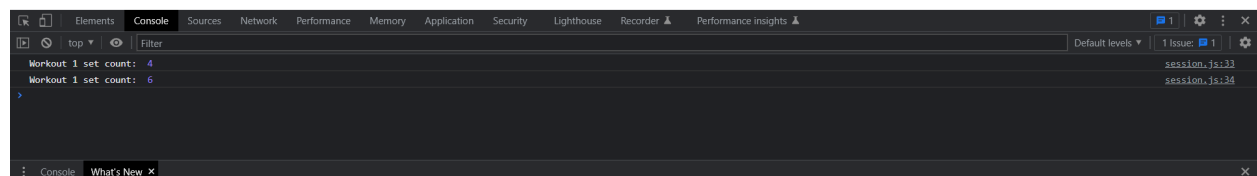
4 sets

1 to 5 reps each

Tricep extensions

6 sets

1 to 5 reps each



setSetCount() path 2 input/output

The screenshot shows the VS Code editor with the `session.js` file open. The code defines a `Session` class and a `setSetCount` function. The `setSetCount` function is called for each workout in the session. The browser window shows the URL `http://localhost:3000/session` and the page title `Best Practices for N...`. The console shows the output of the `setSetCount` function.

```
2
3 const session = new Session("Hypertrophy", "Triceps", 20, 20);
4
5 if (window.location.pathname == "/session") {
6
7     document.getElementById("btn-quit").addEventListener("click", function() {
8         location.href = "/";
9     });
10
11     // setSessionWorkouts
12     session.setSessionWorkouts(session.getMuscles());
13     // setRepCount
14     session.setRepCount(session.getGoal());
15
16     // Loops through each workout in the session and
17     // sets the set count for each and
18     // adds data from each workout to session.html
19     for (let i = 0; i < session.getSessionWorkouts().length; i++) {
20         // setSetCount
21         session.getSessionWorkouts()[i].setSetCount(session.getGoal());
22
23         document.getElementById("h2-workouts").append(session.getSessionWorkouts()[i].getName(),
24             document.createElement("br"),
25             session.getSessionWorkouts()[i].getSetCount(), " sets",
26             document.createElement("br"),
27             session.getRepCount(),
28             document.createElement("br"),);
29         document.getElementById("h2-workouts").append(document.createElement("br"));
30     }
31 }
32
33 console.log("Workout 1 set count: ", session.getSessionWorkouts()[0].getSetCount());
34 console.log("Workout 1 set count: ", session.getSessionWorkouts()[1].getSetCount());
35
```

Your workouts

Push-ups

3 sets

8 to 12 reps each

Tricep extensions

4 sets

8 to 12 reps each

The screenshot shows the Chrome DevTools Console with the following log output:

```
Workout 1 set count: 3
Workout 1 set count: 4
```

The log output is from `session.js:33` and `session.js:34`.

setSetCount() path 3 input/output

```
3 const session = new Session("Endurance", "Triceps", 20, 20);
4
5 if (window.location.pathname == "/session") {
6
7   document.getElementById("btn-quit").addEventListener("click", function() {
8     location.href = "/";
9   });
10
11   // setSessionWorkouts
12   session.setSessionWorkouts(session.getMuscles());
13   // setRepCount
14   session.setRepCount(session.getGoal());
15
16   // Loops through each workout in the session and
17   // sets the set count for each and
18   // adds data from each workout to session.html
19   for (let i = 0; i < session.getSessionWorkouts().length; i++) {
20     // setSetCount
21     session.getSessionWorkouts()[i].setSetCount(session.getGoal());
22
23     document.getElementById("h2-workouts").append(session.getSessionWorkouts()[i].getName(),
24       document.createElement("br"),
25       session.getSessionWorkouts()[i].getSetCount(), " sets",
26       document.createElement("br"),
27       session.getRepCount(),
28       document.createElement("br"),);
29     document.getElementById("h2-workouts").append(document.createElement("br"));
30   }
31 }
32
33 console.log("Workout 1 set count: ", session.getSessionWorkouts()[0].getSetCount());
34 console.log("Workout 1 set count: ", session.getSessionWorkouts()[1].getSetCount());
35
36 export {session};
```

Your workouts

Tricep extensions

2 sets

12 to 20+ reps each

Push-ups

2 sets

12 to 20+ reps each

```
Workout 1 set count: 2
Workout 1 set count: 2
```