

JavaScript and DOM API exercise — Solutions

1. Lesson

Create a web application which can generate a random number between 0 and 10, and it should display an input field where the user can guess that random number. After the guessing it should display if the user wins. Also display a button where the user can generate a new random number.

HTML:

```
<html>
  <head>
    <meta charset="UTF-8">
    <script src="script.js"></script>
  </head>
  <body>
    <h1>Hello there!</h1>
    <input type="number" id="input">
    <button id="reset">Generate random number</button>
  </body>
</html>
```

JS:

```
const random = () => Math.floor(Math.random() * 10);

let randomNumber = random();

document.addEventListener('DOMContentLoaded', () => {
  document.getElementById('input').addEventListener('change', event => {
    const guess = Number(event.target.value);

    if (guess === randomNumber) {
      alert('Guessed');
    } else {
      alert('Missed');
    }
  });

  document.getElementById('reset').addEventListener('click', () => {
    randomNumber = random();
  });
});
```

2. Lesson

FizzBuzz is a well known programmer exercise:

- if a number is divisible by 3, then print "Fizz"
- if a number is divisible by 5, then print "Buzz"
- if a number is divisible by 3 and 5, then print "FizzBuzz"

Create a FizzBuzz game web application which waits a number input in an input field, and display the texts above based on the input.

HTML:

```
<html>
  <head>
    <meta charset="UTF-8">
    <script src="script.js"></script>
  </head>
  <body>
    <h1>Hello there!</h1>
    <input type="number" id="input">
  </body>
</html>
```

JS:

```
document.addEventListener('DOMContentLoaded', () => {
  document.getElementById('input').addEventListener('change', event => {
    const num = Number(event.target.value);

    if (num % 3 === 0 && num % 5 === 0) {
      alert('FizzBuzz');
    } else if (num % 3 === 0) {
      alert('Fizz');
    } else if (num % 5 === 0) {
      alert('Buzz');
    }
  });
});
```