Lab: Intro to DOM

Problems for in-class lab for the "JS Fundamentals Course @SoftUni". Submit your solutions in the SoftUni judge system at https://judge.softuni.bg/Contests/Practice/Index/1425

1. Articles List

In this problem, you should create a JS functionality which creates articles and appends them into some article section.

The programs in this language are called **scripts**. They can be written right in the HTML and **executed automatically** as the page loads.

Scripts are provided and executed as a **plain text**. They don't need a special preparation or a compilation to run.

In this aspect, JavaScript is very **different** from another language called Java.

Constraints:

- **Title value** from the **title input** should be a **heading 3 element <h3>**
- **Content text** from the **textarea element** should be a **paragraph <p>**
- Both new created elements (**h3** and **p**) should be appended to a new **article element <article>**
- **The current article element** should be **appended** to the section which has an id articles (**#articles**)
- You should create new **article element** only if **title** and **content are not empty**
- After the button is pressed you must **clear** the **title value** and **text value**

```
<html lang="en">
▶ <head>…</head>
▼ <body>
  ▼ <div id="container">
    ▶ <nav id="navigation">…</nav>
    ▼ <main id="main">
      ▼ <div id="exercise">
        ▼ <div id="createArticle">
            <label for="createTitle">Title</label>
            <input id="createTitle">
            <br>
            <label for="createContent">Content</label>
            <br>
            <textarea id="createContent"></textarea>
            <br>
            <button>Create it</button>
          </div>
        ▼ <section id="articles">
            <h1>Articles List</h1>
          </section>
        </div>
        <img id="softUni-person-img" src="images/wizard.png" alt=
        "softUni-person">
        ::after
```

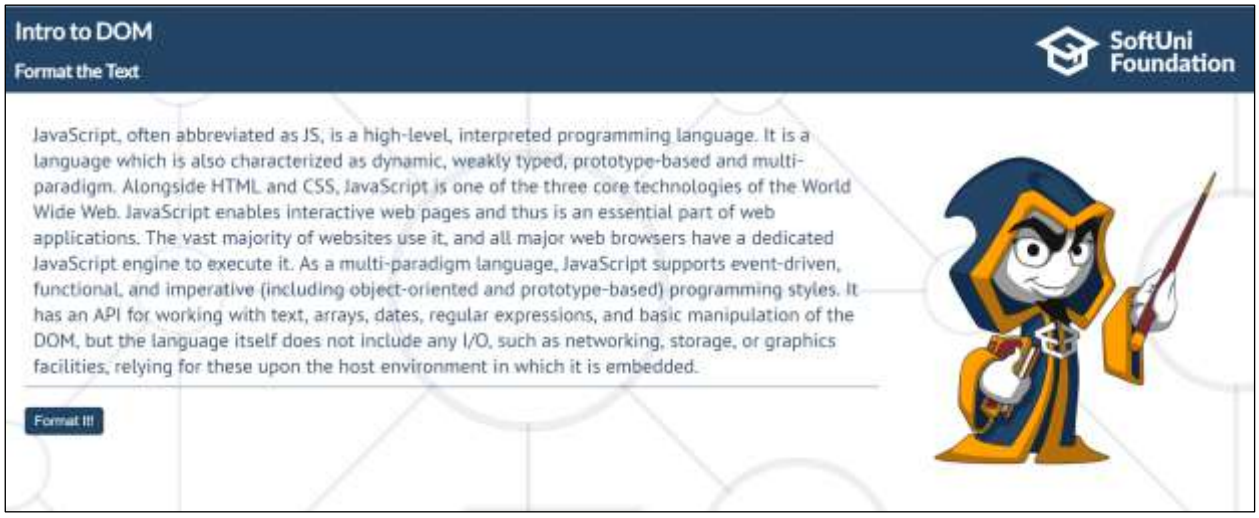
Input:

Output:


```
▶ <head>…</head>
▼ <body>
  ▼ <div id="container">
    ▶ <nav id="navigation">…</nav>
    ▼ <main id="main">
      ▼ <div id="exercise">
        ▶ <div id="createArticle">…</div>
        ▼ <section id="articles">
            <h1>Articles List</h1>
          ▼ <article>
              <h3>JavaScript</h3>
            ▼ <p>
                "JavaScript is a programming language that adds
                interactivity to your website (for example games,
                responses when buttons are pressed or data is entered
                in forms, dynamic styling, animation). This article
                helps you get started with this exciting language and
                gives you an idea of what is possible."
              </p>
            </article>
          </section>
        </div>
        <img id="softUni-person-img" src="images/wizard.png" alt=
        "softUni-person">
        ::after
      </main>
    </div>
```

2. Format the Text

In this problem, you should **create a JS functionality** which **formats the given text into paragraphs.**




```
▼<div id="container">
  ▼<nav id="navigation">
    ▶<div id="navigation-text">…</div>
     <img id="logo-img" src="images/logo.png" alt="logo">
   </nav>
  ▼<main id="main">
    ▼<div id="exercise">
      ▼<p id="input">
          "JavaScript, often abbreviated as JS, is a high-level, interpreted programming
          language. It is a language which is also characterized as dynamic, weakly typed,
          prototype-based and multi-paradigm. Alongside HTML and CSS, JavaScript is one of
          the three core technologies of the World Wide Web. JavaScript enables interactive
          web pages and thus is an essential part of web applications. The vast majority of
          websites use it, and all major web browsers have a dedicated JavaScript engine to
          execute it. As a multi-paradigm language, JavaScript supports event-driven,
          functional, and imperative (including object-oriented and prototype-based)
          programming styles. It has an API for working with text, arrays, dates, regular
          expressions, and basic manipulation of the DOM, but the language itself does not
          include any I/O, such as networking, storage, or graphics facilities, relying for
          these upon the host environment in which it is embedded."
        </p>
        <button type="button" id="formatItBtn">Format It!</button>
        <div id="output"></div>
     </div>
     <img id="softUni-person-img" src="images/wizard.png" alt="softUni-person">
     ::after
   </main>
 </div>
```

When the [**Format it!**] button is **clicked**, you need to **format the text inside** the **paragraph** with an **id** "**input**". The formatting is **done** as **follows:**

- You need to **create a new paragraph element which holds no more than 3 sentences from the given input.**
- If the given input contains **less** or **3 sentences**, you need to create only 1 paragraph, fill it with these sentences and append this paragraph to the div with an **id** "**output**".

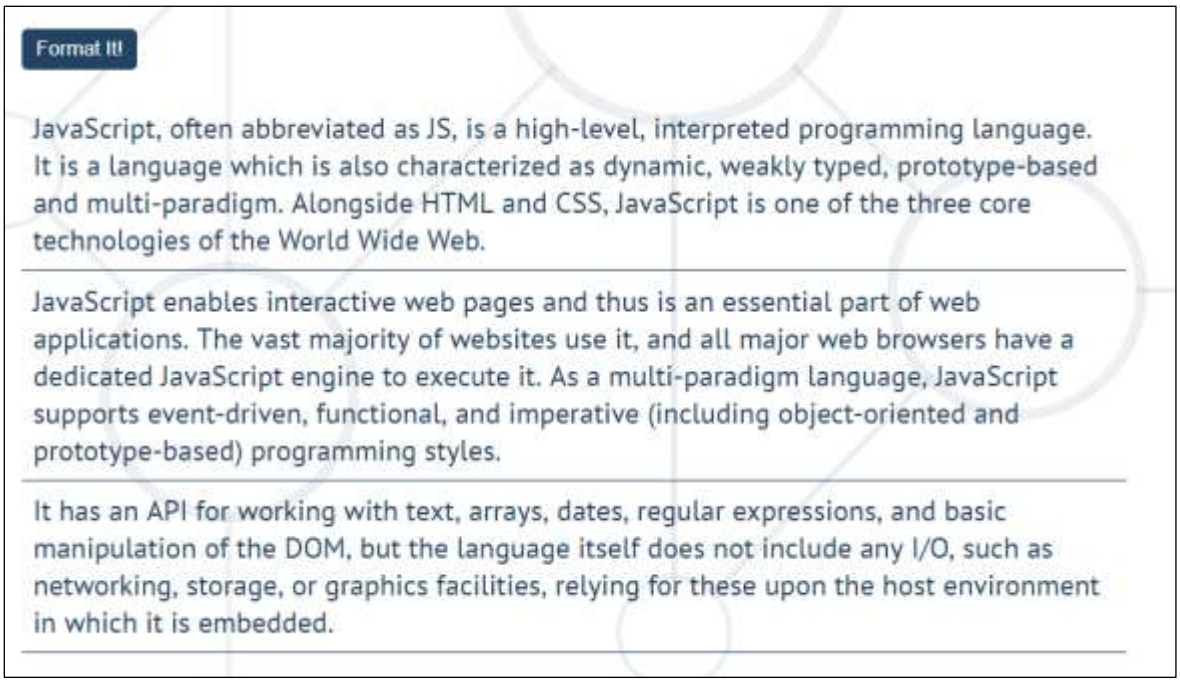
Otherwise, when you have more than 3 sentences in that **input paragraph,** you need to create enough paragraphs to get all sentences from the **input text.**

Just remember to **restrict** the **sentences** in **each paragraph to 3.**

Example:

- If the input paragraph **contains 2 sentences**, you need to create only **1 paragraph** with these 2 sentences
- If the input paragraph **contains 7 sentences,** you need to create **3 paragraphs**
  - The **first paragraph** must contain **the first 3 sentences**
  - The **second paragraph** must contain **the other three sentences of the whole text**
  - The **third paragraph** will contain **only the last sentence**, because there are no more sentences in this paragraph

To find out how many sentences there are in the text, simply split the whole text by '.' Also, every sentence must have at least 1 character.



```
<main id="main">
  <div id="exercise">
    <p id="input">
      "JavaScript, often abbreviated as JS, is a high-level, interpreted programming language. It is a language which is also
      characterized as dynamic, weakly typed, prototype-based and multi-paradigm. Alongside HTML and CSS, JavaScript is one of the
      three core technologies of the World Wide Web. JavaScript enables interactive web pages and thus is an essential part of web
      applications. The vast majority of websites use it, and all major web browsers have a dedicated JavaScript engine to execute it.
      As a multi-paradigm language, JavaScript supports event-driven, functional, and imperative (including object-oriented and
      prototype-based) programming styles. It has an API for working with text, arrays, dates, regular expressions, and basic
      manipulation of the DOM, but the language itself does not include any I/O, such as networking, storage, or graphics facilities,
      relying for these upon the host environment in which it is embedded."
    </p>
    <button type="button" id="formatItBtn">Format It!</button>
    <div id="output">
      <p>
        "JavaScript, often abbreviated as JS, is a high-level, interpreted programming language. It is a language which is also
        characterized as dynamic, weakly typed, prototype-based and multi-paradigm. Alongside HTML and CSS, JavaScript is one of the
        three core technologies of the World Wide Web."
      </p>
      <p>
        " JavaScript enables interactive web pages and thus is an essential part of web applications. The vast majority of websites use
        it, and all major web browsers have a dedicated JavaScript engine to execute it. As a multi-paradigm language, JavaScript
        supports event-driven, functional, and imperative (including object-oriented and prototype-based) programming styles."
      </p>
      <p>
        " It has an API for working with text, arrays, dates, regular expressions, and basic manipulation of the DOM, but the language
        itself does not include any I/O, such as networking, storage, or graphics facilities, relying for these upon the host
        environment in which it is embedded."
      </p>
    </div>
  </div>
```

3. Growing Word

In this problem, you should **create a JS functionality** which **changes the size and the color** of a given **paragraph** on **every click**.

```
<div id="container">
  <nav id="navigation">…</nav>
  <main id="main">
    <div id="exercise">
      <div id="colors">
        <div id="blueDiv">Im Blue</div>
        <div id="greenDiv">Im Green</div>
        <div id="redDiv">Im Red</div>
      </div>
      <div>
        <button type="button">CLICK ME!</button>
      </div>
      <p>Growing Word</p>
    </div>
    <img id="softUni-person-img" src="images/wizard.png" alt="softUni-person">
    ::after
  </main>
```

Every time when we **click** on the [**CLICK ME!**] button, **the color** and **the size** of **the paragraph** which contains "**Growing Word**" **should change!**

After every click, the current paragraph *font size* should be **changed** to the **total current clicks multiplied by 2.** Also **the color** of that paragraph should change, depending on the **total clicks**.

Example:

If we click **once**, the color should be changed to **blue**, if we click **twice, the color** should be changed to **green** and if we click **three times**, the current color of that paragraph should be changed to **red**.

If our paragraph already has a **red color, on** the **next** click, the color should turn to **blue**. Just loop throw these three colors (blue, green, red) again and again and again... while you are clicking on that button.

```
▼<body>
  ▼<div id="container">
    ▼<nav id="navigation">
      ▶<div id="navigation-text">…</div>
        <img id="logo-img" src="images/logo.png" alt="logo">
      </nav>
    ▼<main id="main">
      ▼<div id="exercise">
        ▼<div id="colors">
            <div id="blueDiv">Im Blue</div>
            <div id="greenDiv">Im Green</div>
            <div id="redDiv">Im Red</div>
          </div>
        ▶<div>…</div>
          <p style="color: blue; font-size: 2px;">Growing Word</p>
        </div>
```

```
▼<div id="container">
  ▼<nav id="navigation">
    ▶<div id="navigation-text">…</div>
      <img id="logo-img" src="images/logo.png" alt="logo">
    </nav>
  ▼<main id="main">
    ▼<div id="exercise">
      ▼<div id="colors">
          <div id="blueDiv">Im Blue</div>
          <div id="greenDiv">Im Green</div>
          <div id="redDiv">Im Red</div>
        </div>
      ▶<div>…</div>
        <p style="color: green; font-size: 4px;">Growing Word</p>
      </div>
```


```
▼<main id="main">
  ▼<div id="exercise">
    ▼<div id="colors">
        <div id="blueDiv">Im Blue</div>
        <div id="greenDiv">Im Green</div>
        <div id="redDiv">Im Red</div>
      </div>
    ▼<div>
        <button type="button">CLICK ME!</button>
      </div>
      <p style="color: red; font-size: 6px;">Growing Word</p>
    </div>
```

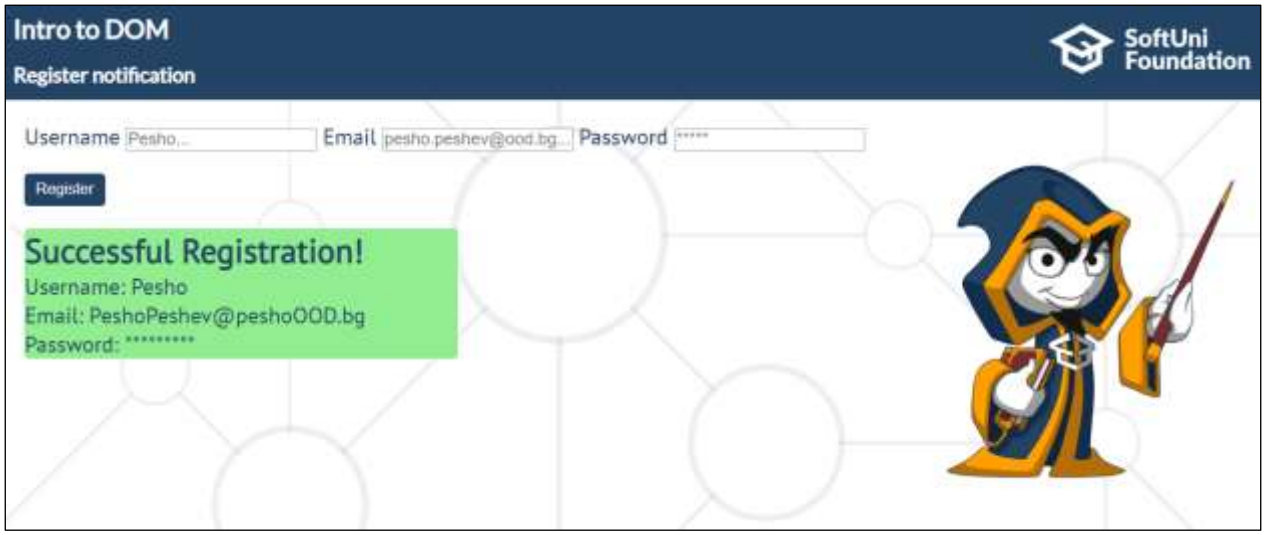
4. Register Notification

In this problem, you should **create a JS functionality that** shows notification after successful registration.

Constraints:

- The username should be a **non-empty string**
- The email address should match the current RegEx: **/(.+)@(.+).(com|bg)/gm**
- The password should be a **non-empty string**

When these conditions **are met** and after a click on the [**Register**] button, the following notification should appear for **5000 ms**. *(use the **setTimeOut** function to do this)*



The current information must be added to the section with an **id - result.**

The message should be in the following format:

'Successful Registration!' *(must be in h1 tag)*
'Username: ${currentUsername}'

'Email: ${currentEmail}'

'Password: ${currentPasswordLength in asterixes (*)}'

```
▼<main id="main">
  ▼<div id="exercise"> == $0
    ▼<form>
       <label for="username">Username</label>
       <input type="text" name="username" id="username" placeholder="Pesho...">
       <label for="email">Email</label>
       <input type="email" name="email" id="email" placeholder="pesho.peshev@ood.bg...">
       <label for="password">Password</label>
       <input type="password" name="password" id="password" placeholder="*****">
       <br>
       <button type="button" id="registerBtn" onclick="register()">Register</button>
     </form>
    ▼<section id="result">
       <h1>Successful Registration!</h1>
       "Username: Pesho"
       <br>
       "Email: PeshoPeshev@peshoOOD.bg"
       <br>
       "Password: *********"
     </section>
   </div>
   <img id="softUni-person-img" src="cw_2_New_Logo.png" alt="softUni-person">
   ::after
 </main>
```

5. Visited Sites

In this problem, you should **create a JS functonality** that keeps track of how many times a specific site has been **visited**.

For instance, if we click **twice on the Gmail link and once on the Youtube link**, the expected result must be: