

Exercise: Development Workflow

Exercises for the ["Software Engineering and DevOps" course @ SoftUni](#).

1. Scary Story

Your task is to follow the entire process of **development workflow**.

WRITE YOUR SCARY STORY
Fill the author information, genre and the story text!

Author Information

First Name:

Last Name:

Age:

Story Title:

Genre:

Story

Your Story:

PREVIEW

You should have a **GitHub Projects board** with following **categories**:

- **Pending**
- **Sprint TODO**
- **In Progress**
- **For Testing**
- **Verified**
- **For Deploy**
- **Done**

GitHub Projects visualizes the **issues (tasks) workflow** as a **Kanban board**.

Scary Stories

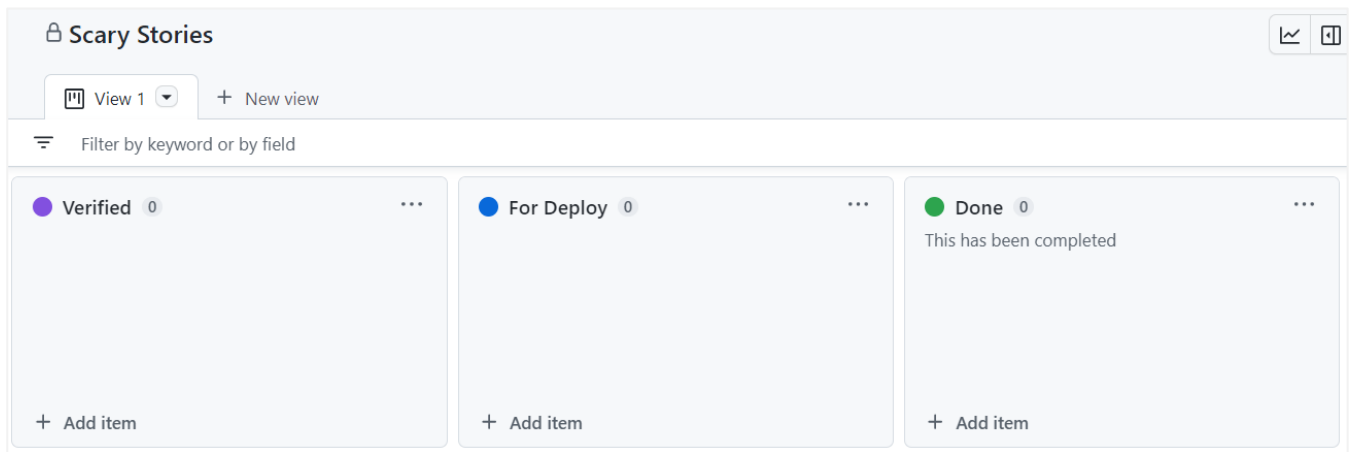
View 1 + New view

Filter by keyword or by field

Pending 0
This item hasn't been started
+ Add item

Sprint TODO 0
+ Add item

In Progress 0
This is actively being worked on
+ Add item



You should **create three issues**:

- **Change background**
- **Add genre field**
- **Add field icons**

NOTE: You can work in in teams of 3 students or work alone with several roles to simulate multi-user interaction, where each role follows the provided instructions for the given team member.

Senior

- Make an **empty GitHub repo** and **commit files** from **resources**.
- Create a **GitHub Projects board** and **add tasks**.
- **Deploy site** from the **staging branch** to the **staging environment** on **Render . com**.
- Conduct a **code review** when a **pull request** is created to the **staging branch**
- At the end, merge the **staging** to the **main branch**
- **Deploy site** from the **main branch** to the **production environment** on **Render.com**

QA

- **Deploy site** from the **qa branch** to the **QA environment** on **Render . com** (first time, then it will be automated)
- Looks **QA environment** to see if **changes** are **done correctly**
- If something does not pass, return the issue to "In Progress"

Junior

- Create a **branch** for each **issue**.
- Implement the **issue TODOs**.
- When ready, merge each of your feature branches to the **qa branch**
- Then, if issue is "Verified", merge its feature branch to the **staging branch** with a **pull request**

2. Senior

Step 1: Creating an Empty GitHub Repository

Senior makes an **empty GitHub repo** and **commits files** from **resources**. After that they add the **Junior** and the **QA** as **collaborators**.

Senior / Scary-Stories Public

Pin
 Unwatch 1
 Fork 0
 Star 0

Code
 Issues
 Pull requests
 Actions
 Projects
 Wiki
 Security
 Insights

main
 Go to file
Add file
<> Code
About

Senior Initial commit ... 1 minute ago 2

	.vscode	Initial commit	1 minute ago
	style	Initial commit	1 minute ago
	README.md	Initial commit	4 minutes ago
	app.js	Initial commit	1 minute ago
	index.html	Initial commit	1 minute ago

No description, website, or topics provided.

Readme
 0 stars
 1 watching
 0 forks

Releases

index.html

1

<!DOCTYPE html>

2

<html Lang="en">

3

</html>

4

</html>

5

<head>

6

<meta charset="UTF-8" />

7

<meta http-equiv="X-UA-Compatible" content="IE=edge" />

8

<meta name="viewport" content="width=device-width, initial-scale=1" />

9

<link rel="stylesheet" href="/style/css/styles.css" />

10

<link rel="preconnect" href="https://fonts.googleapis.com">

11

<link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />

12

<link href="https://fonts.googleapis.com/css2?family=Creepster" />

13

</head>

14

</head>

15

<body class="body">

16

<div id="main">

17

<div class="form-wrapper">

18

<h1>

19

Write your scary story

20

Fill the author information, genre and the story

21

</h1>

22

</div>

23

</div>

24

<div class="section">

25

Author Information</div>

26

<div class="inner-wrap">

27

<label>First Name: <input type="text" id="first-name" />

28

<label>Last Name: <input type="text" id="last-name" />

29

<label>Age: <input type="number" id="age" name="field" />

30

</div>

31

</div>

32

</div>

33

</div>

34

</div>

35

</div>

36

</div>

37

</div>

38

</div>

39

</div>

40

</div>

app.js

1

window.addEventListener("load", solve);

2

3

function solve() {

4

let firstNameElement = document.getElementById("first-name");

5

let lastNameElement = document.getElementById("last-name");

6

let ageElement = document.getElementById("age");

7

let storyTitleElement = document.getElementById("story-title");

8

let storyElement = document.getElementById("story");

9

let publishBtnElement = document.getElementById("form-btn");

10

let previewUElement = document.getElementById("preview-list");

11

let mainElement = document.getElementById("main");

12

let bodyElement = document.querySelector(".body");

13

14

15

16

publishBtnElement.addEventListener('click', onPublish);

17

function onPublish(e) {

18

e.preventDefault();

19

if (firstNameElement.value == ''

20

|| lastNameElement.value == ''

21

|| ageElement.value == ''

22

|| storyTitleElement.value == ''

23

|| storyElement.value == '') {

24

return;

25

}

26

27

let liElement = document.createElement("li");

28

liElement.setAttribute('class', 'story-info');

29

30

let articleElement = document.createElement("article");

31

32

33

34

35

36

37

38

39

40

Step 2: Creating Branches

Senior makes 2 more branches (qa and staging) that are clones of the main branch.

Default branch

main

Updated 51 minutes ago by Senior

Default

Your branches

staging

Updated 51 minutes ago by Senior

qa

Updated 51 minutes ago by Senior

SoftUni

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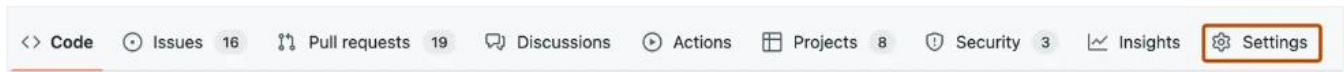
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Step 3: Creating a Branch Protection Rule

Create a **branch protection rule** for committing to **main branch**, following the steps below:

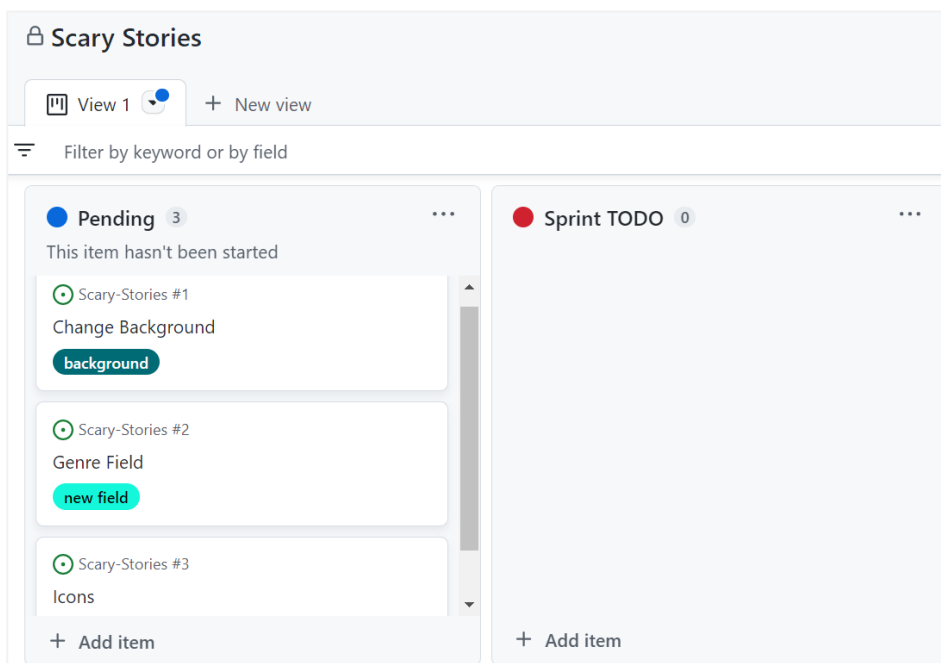
1. On **GitHub.com**, navigate to the **main page** of the **repository**.
2. **Under your repository name**, click **[Settings]**. If you **cannot see** the **[Settings]** tab, select the **[...]** **dropdown menu**, then click **[Settings]**.

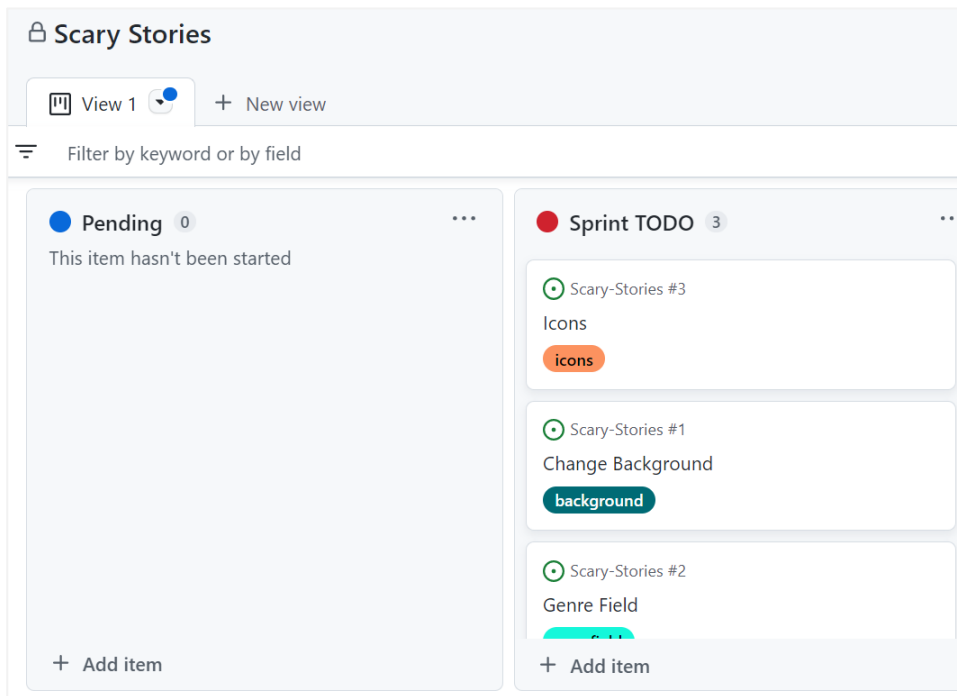


3. In the **"Code and automation"** section of the sidebar, click **[Branches]**.
4. Next to **"Branch protection rules"**, click **[Add rule]**.
5. **Under "Branch name pattern"**, type the **branch name** or **pattern** you want to protect.
6. Optionally, enable **required pull requests**.
7. For **more information** see here: <https://docs.github.com/en/repositories/configuring-branches-and-merges-in-your-repository/managing-protected-branches/managing-a-branch-protection-rule>

Step 4: Creating GitHub Projects Board

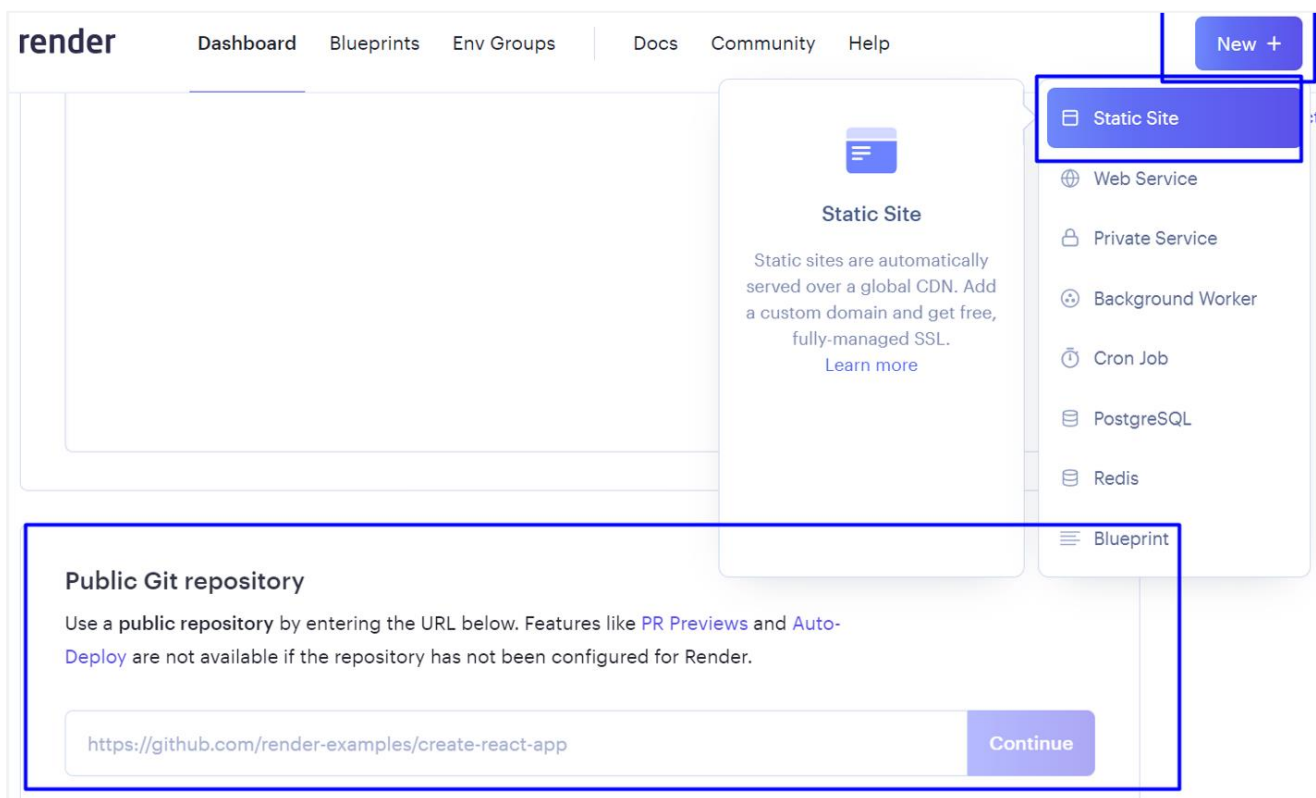
Senior makes the **GitHub Projects board "Scary Stories"** and adds **3 issues ("Change Background", "Add genre field", "Add field icons")** in the **"Pending"** section. After that they move them to the **"Sprint TODO"** section.





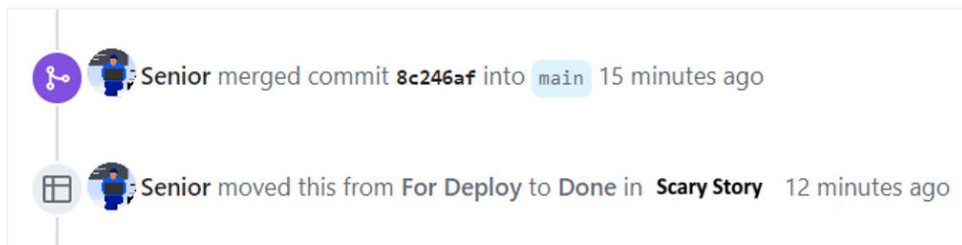
Step 5: Deploying site

Senior deploys site from the **staging branch** to the **staging environment** on **Render . com**.



Senior conducts a **code review** when a **pull request** is created to the **staging branch**.

At the end, **Senior merges the staging** to the **main branch**.

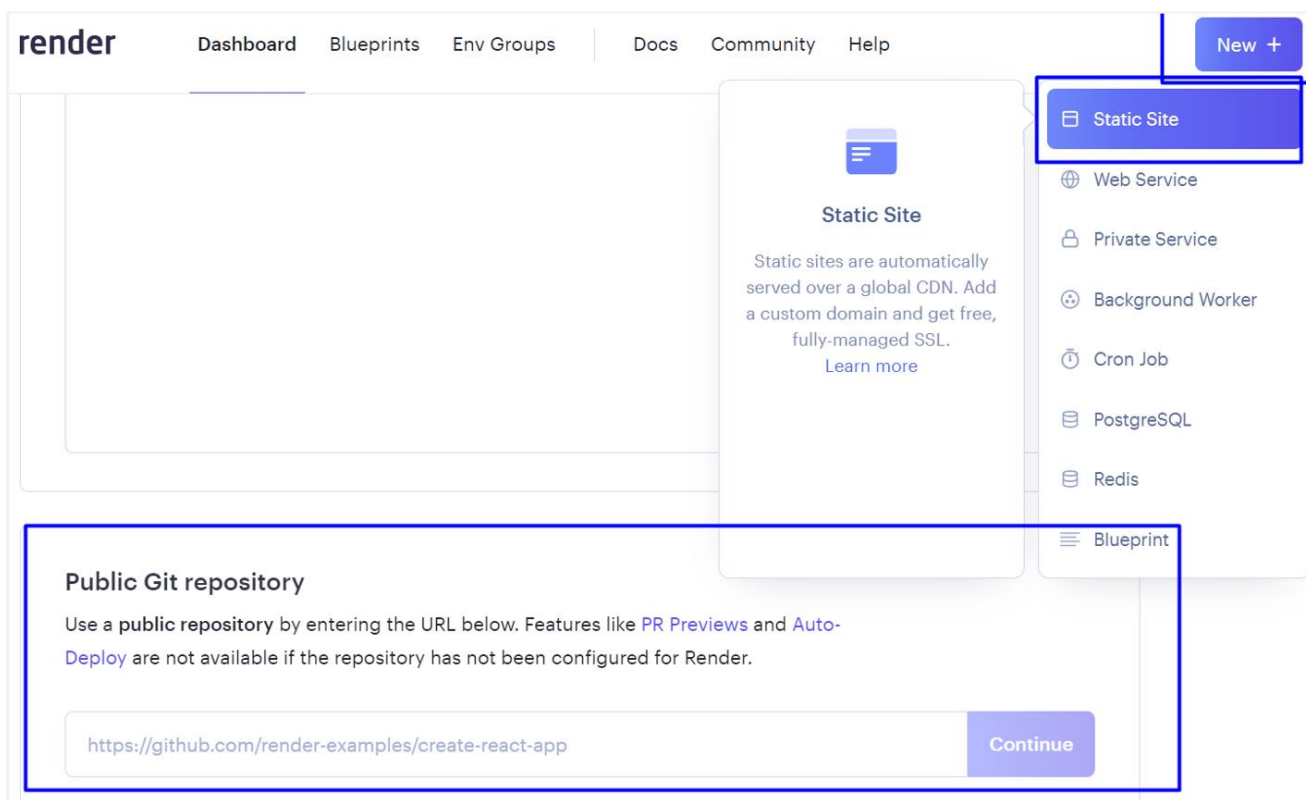


Senior deploy site from the **main branch** to the **production environment** on **Render . com**.

3. QA

Step 1: Deploying QA Branch

QA deploys site from the **qa branch** to the **QA environment** on **Render.com** (first time, then it will be automated)



Step 2: QA Environment Check

QA looks **QA environment** to see if **changes** are **done correctly**.

WRITE YOUR SCARY STORY
Fill the author information, genre and the story text

Author Information

First Name:

Last Name:

Age:

Story Title:

Story

Your Story:

PREVIEW

If something **does not pass**, return the **issue** to "In Progress"

Scary Stories

View 1 + New View

Filter by keyword or by field

In Progress 1

This is actively being worked on

Scary-Stories #1

Change Background

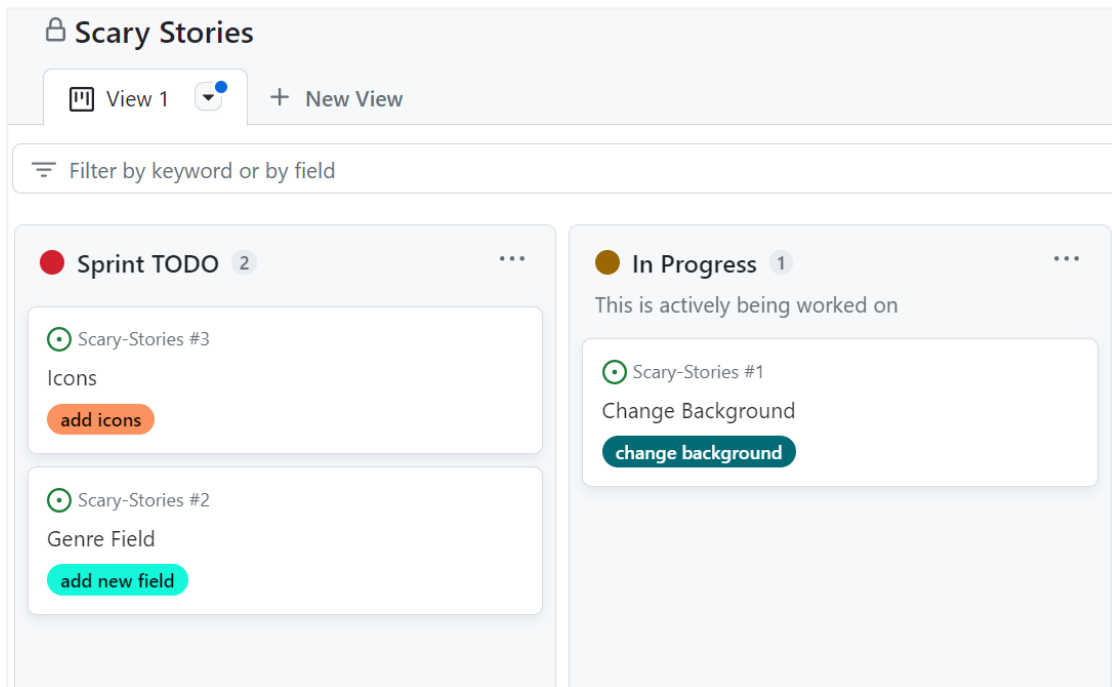
change background

For Testing 0

4. Junior

Step 1: Taking the Tasks

Junior takes the task "Change Background" from the "Sprint TODO" section and transfers it to "In Progress".



Step 2: Creating a Branch

Then they should create a new branch – **change-background**.

```
C:\Users\Desktop\demo\Scary-Stories>git branch change-background
```

After that they implement the **functionality** for **current issue**.

- **Change Background Issue**

```

JS app.js
styles.css M X
style > css > styles.css > .form-wrapper
1 body {
2   background-image: url("../images/fantasyStoriesNewImage.png");
3   background-repeat: no-repeat;
4   background-size: cover;
5   background-attachment: fixed;
6   margin: 0;
7 }
8

```

Junior commits into **background branch** and after that move the "Change Background" issue from "In Progress" to "For Testing" column.

```

C:\Users\Desktop\demo\Scary-Stories>git add style/css/styles.css

C:\Users\Desktop\demo\Scary-Stories>git commit -m "Change background"
[main dd172c5] Change background
1 file changed, 1 insertion(+), 1 deletion(-)

```


Scary Stories

View 1

+ New View

Filter by keyword or by field

In Progress 0

This is actively being worked on

For Testing 1

Scary-Stories #1

Change Background

change background

Step 3: Open a Pull Request

Then, if the **issue** is "Verified", merge its **feature branch** to the **staging branch** with a **pull request**.

For Testing 0

Verified 1

Scary-Stories #1

Change Background

+ Add item

+ Add item

Junior moved this from In Progress to For Testing in Scary Story 43 minutes ago

Qa added the QA Verified label 35 minutes ago

Qa moved this from For Testing to Verified in Scary Story 35 minutes ago

Junior merged commit 6a189ag into staging 30 minutes ago

Junior moved this from Verified to For Deploy in Scary Story 30 minutes ago

Junior does the same for the rest of the tasks ("Add genre field", "Add field icons").

- The necessary changes for "Add field icons" are:

```
index.html M X
index.html > html > body.body > div#main > div.form-wrapper > form > div.section > span
17 <div id="main">
18   <div class="form-wrapper">
19     <h1>
20       Write your scary story
21       <span>Fill the author information, genre and the story text!</span>
22     </h1>
23     <form>
24       <div class="section"><span>&#9753;</span>
25         Author Information</div>
26       <div class="inner-wrap">
27         <label>First Name: <input type="text" id="first-name" name="field1" /></label>
28         <label>Last Name: <input type="text" id="last-name" name="field2" /></label>
29         <label>Age: <input type="number" id="age" name="field3" /></label>
30         <label>
31           <label>Story Title:
32             <input type="text" id="story-title" name="field5" />
33           </label>
34         </div>
35
36       <div class="section"><span>&#9753;</span>Story</div>
37       <div class="inner-wrap">
38         <label for="story">Your Story:</label>
39         <textarea id="story" name="story" rows="6" cols="50"></textarea>
40       </div>
```

- The necessary changes for "Add genre field" are:

```
index.html M X
index.html > html > body.body > div#main > div.form-wrapper > form > div.inner-wrap > textarea#story
25   Author Information</div>
26   <div class="inner-wrap">
27     <label>First Name: <input type="text" id="first-name" name="field1" /></label>
28     <label>Last Name: <input type="text" id="last-name" name="field2" /></label>
29     <label>Age: <input type="number" id="age" name="field3" /></label>
30     </label>
31     <label>Story Title:
32       <input type="text" id="story-title" name="field5" />
33     </label>
34     <label>Genre:
35       <select name="field4" id="genre">
36         <option value="Disturbing">Disturbing</option>
37         <option value="Psychological">Psychological</option>
38         <option value="Killer">Killer</option>
39         <option value="Monsters">Monsters</option>
40         <option value="Paranormal">Paranormal</option>
41       </select>
42     </div>
```