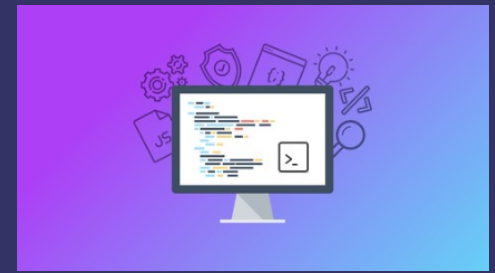
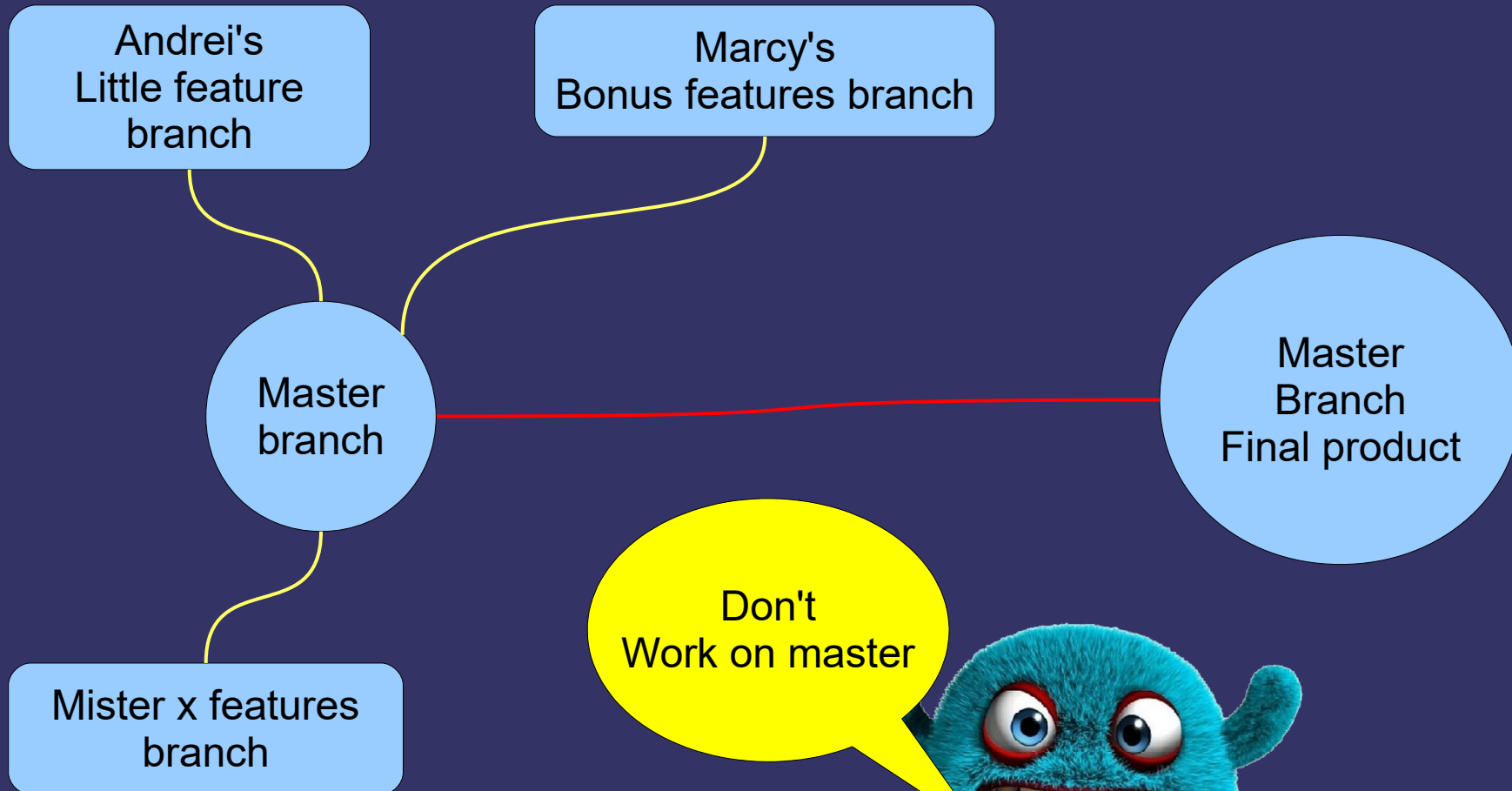


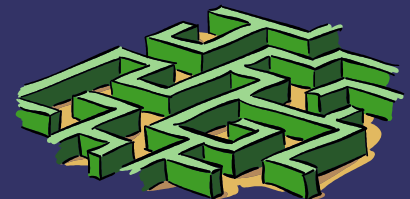
# Git and GitHub Guide Part-2 Branching



The complete  
Web Developer in 2018



Don't  
Work on master



# (Win 10) *Using Gitbash.exe or Visual Studio Code*

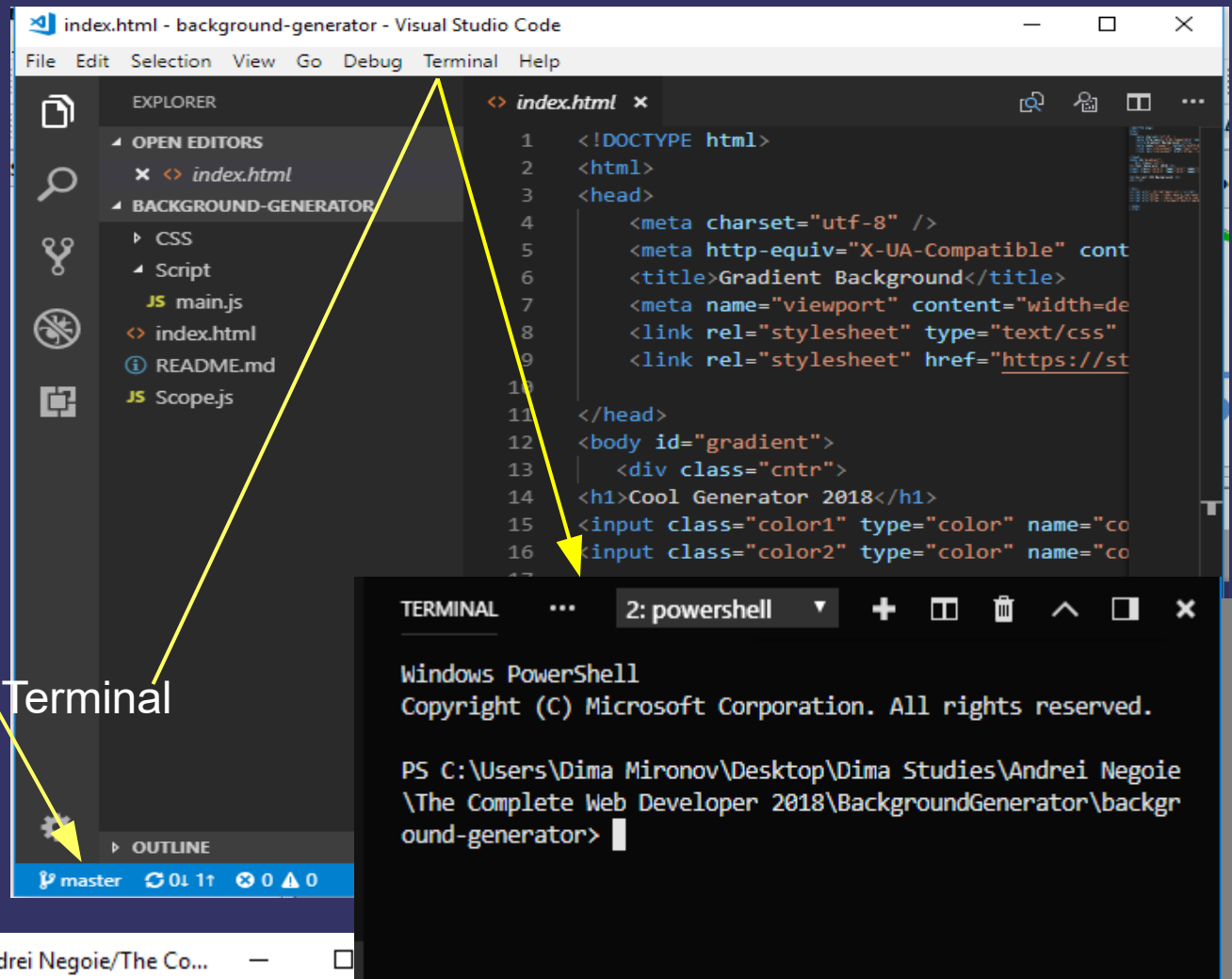
*The overall procedure is pretty much the same for both - mac and win*



Open Visual Studio Code

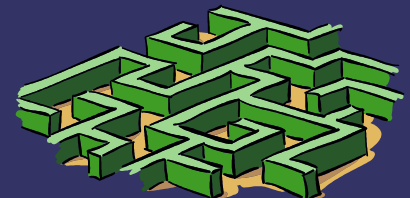
If this folder already contains a .git folder you will automatically see the Master branch icon at the left bottom corner

Step 2.  
Open Terminal Window/New Terminal  
Or use external Terminal



MINGW64:/c/Users/Dima Mironov/DEsktop/Dima Studies/Andrei Negoie/The Co...

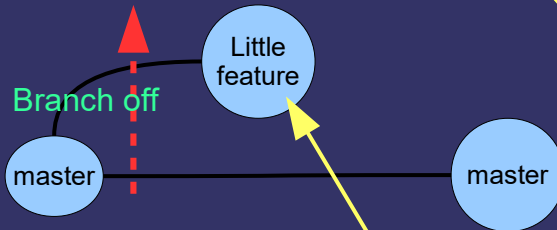
Dima Mironov@Dmitry-M MINGW64 ~/DEsktop/Dima Studies/Andrei Negoie/The Complete Web Developer 2018/BackgroundGenerator/background-generator (master)  
\$ |



# Create a new branch Using IDE(VSCode) or Terminal

Let's create a new branch (terminal)

1. Type `git branch littlefeature` (this will create a new branch)
2. Type `git branch` (will display all branches available)
3. Type `git checkout littlefeature` (Switch to a new branch)



\* `master` means we currently on master branch.

## Note:

If something went wrong and you need to delete the branch, type `git branch -d littlefeature`  
The above command will delete the mistaken branch

```
MINGW64:/c/Users/Dima Mironov/DEsktop/Dima Studies/Andrei Negoie/The Co...  
Dima Mironov@Dmitry-M MINGW64 ~/DEsktop/Dima Studies/Andrei Negoie/The Complete Web  
Developer 2018/BackgroundGenerator/background-generator (master)  
$ git branch littlefeature  
  
Dima Mironov@Dmitry-M MINGW64 ~/DEsktop/Dima Studies/Andrei Negoie/The Complete Web  
Developer 2018/BackgroundGenerator/background-generator (master)  
$ git branch  
  littlefeature  
* master  
  
Dima Mironov@Dmitry-M MINGW64 ~/DEsktop/Dima Studies/Andrei Negoie/The Complete Web  
Developer 2018/BackgroundGenerator/background-generator (master)  
$
```

```
MINGW64:/c/Users/Dima Mironov/DEsktop/Dima Studies/Andrei Negoie/The Co...  
Dima Mironov@Dmitry-M MINGW64 ~/DEsktop/Dima Studies/Andrei Negoie/The Complete Web  
Developer 2018/BackgroundGenerator/background-generator (master)  
$ git checkout littlefeature  
Switched to branch 'littlefeature'  
  
Dima Mironov@Dmitry-M MINGW64 ~/DEsktop/Dima Studies/Andrei Negoie/The Complete Web  
Developer 2018/BackgroundGenerator/background-generator (littlefeature)  
$
```

4. We successfully switched to a new branch

# Let's modify index.html now

1. Open index.html (use IDE or terminal) Type: start code index.html
2. Locate the <h2> tag and change the title to <h2>This is the background</h2>
3. Save all, then do the following procedure...
4. `git add index.html`
5. `git commit -m "changing title"`
6. `git push`

If it doesn't work and you get an error

fatal: The current branch littlefeature has no upstream branch.  
To push the current branch and set the remote as upstream,  
use `git push --set-upstream origin littlefeature`

Fix.

Type `git push --set-upstream origin littlefeature`

After using the above command once,  
you can then use a regular  
`git push` command (without notifications)

Finally, you can cheat and type this  
`git push origin littlefeature`

```
12 <body id="gradient">
13 |   <div class="cntr">
14 |     <h1>Cool Generator 2018</h1>
15 |     <input class="color1" type="color" name="color1" value="#00f
16 |     <input class="color2" type="color" name="color2" value="#ff6
17 |
18 |     <h2>This is the background</h2>
19 |     <h3></h3>
20 |
21 |
```

```
Dima Mironov@Dmitry-M MINGW64 ~/Desktop/Dima Studies/Andrei Negoie/The Complete
Web Developer 2018/BackgroundGenerator/background-generator (littlefeature)
$ git push
fatal: The current branch littlefeature has no upstream branch.
To push the current branch and set the remote as upstream, use

    git push --set-upstream origin littlefeature

Dima Mironov@Dmitry-M MINGW64 ~/Desktop/Dima Studies/Andrei Negoie/The Complete
Web Developer 2018/BackgroundGenerator/background-generator (littlefeature)
$ git push origin littlefeature
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 302 bytes | 302.00 KiB/s, done.
Total 3 (delta 2), reused 0 (delta 0)
```

# Go Back to <https://github.com>

1. We now see a yellow notification  
**You recently pushed branches**

2. If we click the green button  
**Compare & pull request**  
It will open the a pull request window

## Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).

base: master ← compare: littlefeature ✓ Able to merge. These branches can be automatically merged.



Littlefeature

Write Preview

AA B i “ < > @ @ @

Marcy, I've changed the title what do you think?

Marcy i've changed the title  
What do you think?

Attach files by dragging & dropping, selecting them, or pasting from the clipboard.

Styling with Markdown is supported

Create pull request

3. Enter a message, check the changes  
And finally click the create pull request  
button

## Note:

We've made a change to index.html!  
Marcy will decide approve it or not.



antonykidis / background-generator

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

No description, website, or topics provided.

Manage topics

6 commits 2 branches 0 releases

Your recently pushed branches:

littlefeature (less than a minute ago)

Compare & pull request

Branch: littlefeature New pull request

Upload files Find file Clone or download

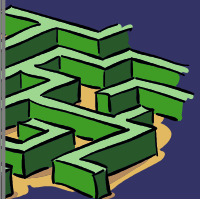
This branch is 2 commits ahead of master.

Pull request Compare

Showing 1 changed file with 2 additions and 2 deletions.

index.html

```
@@ -11,11 +11,11 @@
11 </head>
12 <body id="gradient">
13   <div class="cntr">
14 - <h1>Cool Generator</h1>
14 + <h1>Cool Generator 2018</h1>
15   <input class="color1" type="color" name="color1" value="#00ff00">
16   <input class="color2" type="color" name="color2" value="#ff0000">
17
18 - <h2>Current CSS Background</h2>
18 + <h2>This is the background1</h2>
19   <h3></h3>
20
21
```



Okay now STOP!

Do you really understand what is going on here!?


No...

Yes or Yes!?



Hey marcy I made a pull request  
Do something about it



 Compare & pull request

Hey Marcy I made a pull request. Please look at my html file,  
compare new changes to the previous one.

And if they good enough please **pull them, and merge them** into the master branch.

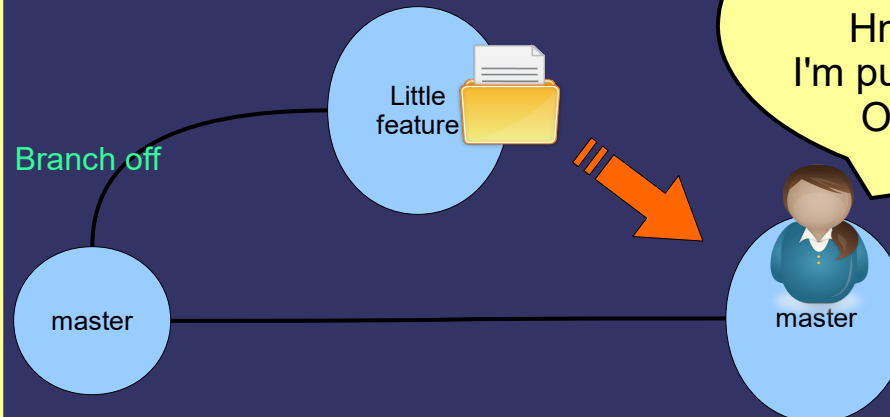
Marcy is an administrator and she will open your pushed files on a littlefeature branch.  
She will compare them to the previous one, and decide whether to prove these changes or not

### Important

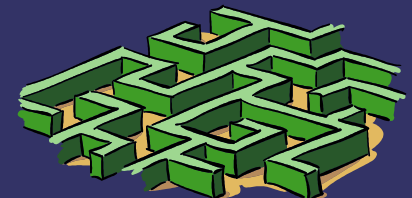
At this point you as a developer  
Just need to wait for Marcy's approval.  
That's it.  
Don't be confused by the rest of the  
diagrams.

Let's see How Marcy handle my  
request on her side as Administrator.

With this information in mind let's  
Proceed to the next step.



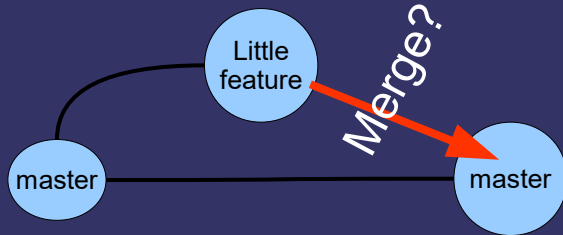
Hi Andrei!  
Let's compare your changes  
Hmm..okay looks good!  
I'm pulling this into the master  
Okay it's merged now!



# We successfully created a pull request (PR)

As you can see antonykidis(Andrei) wants to merge 3 commits into **master** from **littlefeature**

Hey Marcy I did a little Change on little feature, is it okay for me to Merge it to master?



Let's see what Marcy will probably do..

**Littlefeature #1**

antonykidis wants to merge 3 commits into **master** from **littlefeature**

Conversation 0 Commits 3 Checks 0 Files changed 1

antonykidis commented 4 minutes ago

Marcy, I've changed the title what do you think?

antonykidis added some commits 19 hours ago

- update the title 122ade7
- changing title ef61fcc
- changing title to background1 52de4ef

1 commit  
2 commit  
3 commit

Add more commits by pushing to the **littlefeature** branch on antonykidis/background-generator.

Continuous integration has not been set up  
Several apps are available to automatically catch bugs and enforce style.

✓ This branch has no conflicts with the base branch  
Merging can be performed automatically.

**Merge pull request** You can also open this in GitHub Desktop or view command line instructions.

Write Preview

Leave a comment



# Marcy will Open-up a pull request link

Littlefeature #1

Open antonykidis wants to merge 3 commits into master from littlefeature

Conversation 0 Commits 0 Checks 0 Files changed 1

Click

antonykidis commented 32 minutes ago

Marcy, I've changed the title what do you think?

antonykidis added some commits 19 hours ago

- update the title
- changing title
- changing title to background1

Showing 1 changed file with 2 additions and 2 deletions.

4 index.html

```
@@ -11,11 +11,11 @@
</head>
<body id="gradient">
  <div class="cntr">
    <h1>Cool Generator</h1>
    <h1>Cool Generator 2018</h1>
    <input class="color1" type="color" name="color1" value="#00ff00">
    <input class="color2" type="color" name="color2" value="#ff0000">
    - <h2>Current CSS Background</h2>
    + <h2>This is the background1</h2>
  </div>
</body>
</html>
```

Hover on plus sign

antonykidis / background-generator

Code Issues 0 Pull requests 1

Click

Filters is:pr is:open

1 Open 0 Closed

Click

Littlefeature #1 opened 29 minutes ago by antonykidis





Hey everything Looks good!

(Click a plus sign)

1. Start a review, add some comments, submit the Review.
2. Click Review changes, add a comment, and Finally click Submit review
3. Click Merge pull request, then confirm merge.



@@ -11,11 +11,11 @@

```
11 11 </head>
12 12 <body id="gradient">
13 13 <div class="cntr">
14 - <h1>Cool Generator</h1>
14 + <h1>Cool Generator 2018</h1>
15 15 <input class="color1" type="color" name="color1" value="#00ff00">
16 16 <input class="color2" type="color" name="color2" value="#ff0000">
17 17
18 - <h2>Current CSS Background</h2>
18 + <h2>This is the background1</h2>
```

Write Preview

Looks good

Attach files by dragging & dropping, selecting them, or pasting from the clipboard.

Styling with Markdown is supported

Cancel Add single comment Submit review

Diff settings Review changes 1

Submit your 1 pending comment

Review summary

Everything is good

Comment

Submit general feedback without explicit approval.

Approve

Submit feedback and approve merging these changes.

Request changes

Submit feedback that must be addressed before merging.

Submit review



Then She will merge a pull request.

Add more commits by pushing to the **littlefeature** branch on antonykidis/background-generator.

Continuous integration has not been set up

Several apps are available to automatically catch bugs and enforce style.

This branch has no conflicts with the base branch

Merging can be performed automatically.

Merge pull request

You can also open this in GitHub Desktop or view command line instructions.

Pull request is now merged into the master.  
Marcy can now delete littlefeature branch if she want.

Merge pull request #1 from antonykidis/littlefeature

Littlefeature

Confirm merge Cancel

Pull request successfully merged and closed

You're all set—the **littlefeature** branch can be safely deleted.

Delete branch

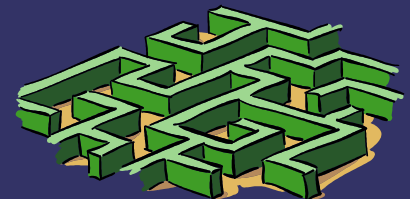
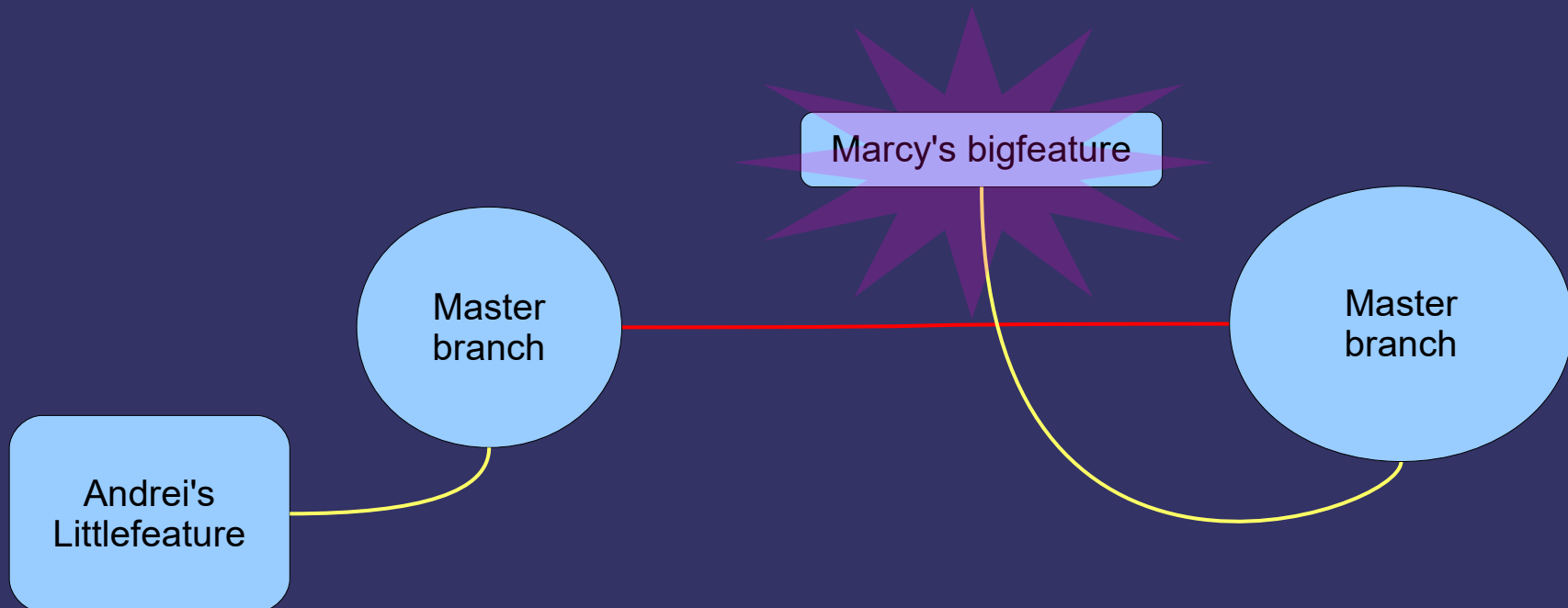
Write Preview

Styling with Markdown is supported

# Merge Conflicts



What if Marcy wants to create her own feature!?





I want to create my own „bigfeature“ branch.

Marcy will create a new branch like this

Step 1

- 1 git branch bigfeature
- 2 git checkout bigfeature

```
MINGW64:/c/Users/Dima Mironov/Desktop/Dima Studies/Andrei Negoie/T...
Dima Mironov@Dmitry-M MINGW64 ~/Desktop/Dima Studies/Andrei Negoie/The Complete Web Developer 2018/BackgroundGenerator/background-generator (littlefeature)
$ git branch bigfeature

Dima Mironov@Dmitry-M MINGW64 ~/Desktop/Dima Studies/Andrei Negoie/The Complete Web Developer 2018/BackgroundGenerator/background-generator (littlefeature)
$ git checkout bigfeature
Switched to branch 'bigfeature'

Dima Mironov@Dmitry-M MINGW64 ~/Desktop/Dima Studies/Andrei Negoie/The Complete Web Developer 2018/BackgroundGenerator/background-generator (bigfeature)
$ |
```

Step 2

Marcy changed the title back to the Background generator

```
<div class="cntr">
<h1>Background Generator</h1>
<input class="color1" type="color"
<input class="color2" type="color"
```

Step 3

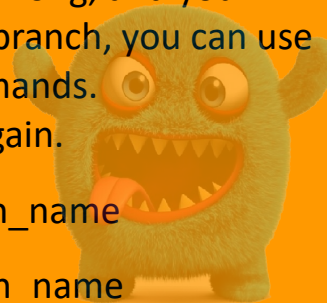
She will then do a regular procedure, to save the changes.

- 1 git add index.html
- 2 git commit -m "reverting back to old title"
- 3 git push

If something went wrong, and you want to delete the branch, you can use The following commands. And start all over again.

`git branch -d branch_name`

`git branch -D branch_name`



Now go back to a GitHub. We again see The pull request. **Don't compare and pull request This time!**

Before **comparing and pulling a request** Marcy decided to add an exclamation mark to the title

```
<div class="color">
<h1>background Generator!</h1>
<input class="color1" type="color" name="color1">
<input class="color2" type="color" name="color2">
```

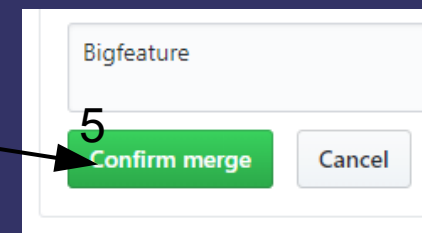
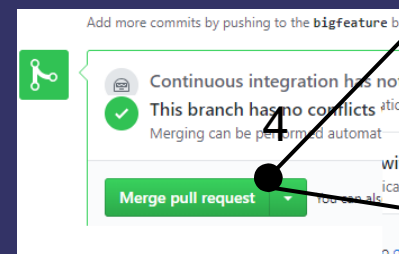
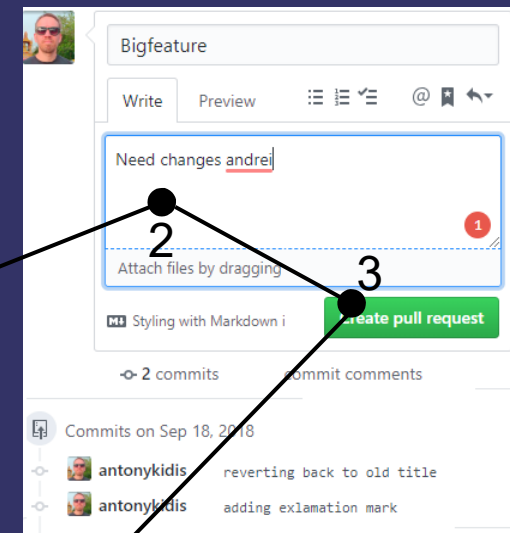
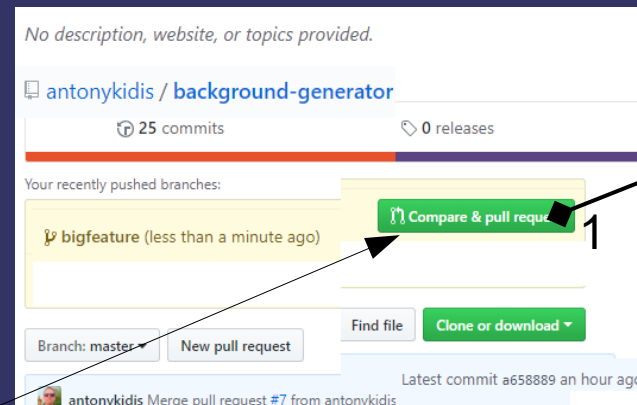
Marcy adds exclamation mark

She then Save all...and follow the below steps

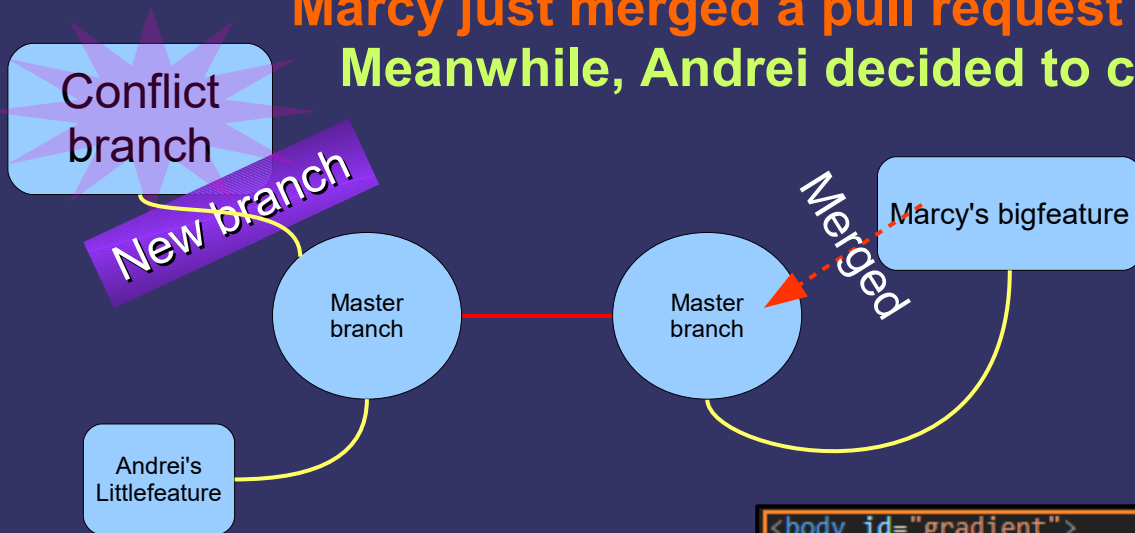
- 1 git add index.html
- 2 git commit -m "adding exclamation mark"
- 3 git push

Let's go back to GitHub.  
So now we have 2 commits  
1. is the **background generator**  
2. and the **background generator!** with the exclamation mark

1. Click **Compare and pull request** button,
2. Add a comment.
3. Click **Create Pull Request** button.
4. **Merge pull request** button.
5. Finally click **Confirm merge** button.



**Marcy just merged a pull request from a bigfeature branch.**  
**Meanwhile, Andrei decided to create a new branch too**



In the terminal window, Andrei will enter the following commands:

1. `git branch conflict`
2. `git checkout conflict`
3. `git pull`

- 4 Andrei decided to completely remove the background generator title
5. `save all`

```
<body id="gradient">
  <div class="cntr">
    <h1>Background Generator!</h1>
    <input class="color1" type="color" name="c1">
    <input class="color2" type="color" name="c2">
  </div>
</body>
</html>
```

Index.html

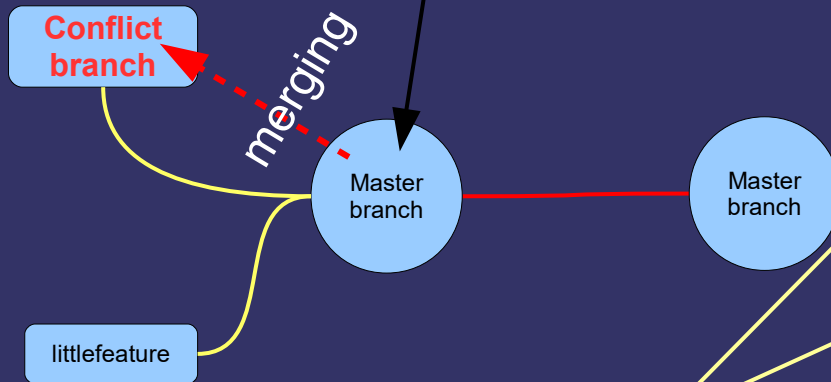
He will then go back to a terminal  
And enter the following commands:

6. `git add index.html`
7. `git commit -m"deleting title"`
8. `git push`



## Next step:

8. Andrei will Go back to **master** branch.
9. Type `git checkout master`
10. Type `git pull`
11. Go back to a conflict branch again: `git checkout conflict`
11. Finally he will merge **master** into the **conflict** branch.
- 12 type `git merge master`



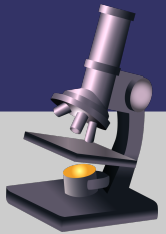
```
Dima Mironov@Dmitry-M MINGW64 ~/Desktop/Dima Studies/Andrei Negoie/The Complete Web Developer 2018/backgroundGenerator/background-generator (conflict)
$ git merge master
Auto-merging index.html
CONFLICT (content): Merge conflict in index.html
Automatic merge failed; fix conflicts and then commit the result.

Dima Mironov@Dmitry-M MINGW64 ~/Desktop/Dima Studies/Andrei Negoie/The Complete Web Developer 2018/backgroundGenerator/background-generator (conflict|MERGING)
$
```

```
<<<<<<<<<< Current
=====
<h1>background Generator!</h1>
>>>>>>>>>> Incoming
```

6. By now you should receive the following error
7. If you Open a (Visual Studio Code/Sublime) You could see the the following output:

Important to read!



Let's understand the problem.

1. We Made a conflict brach.
2. Then we removed the title from HTML.
3. Then we pushed this new „title-less“ HTML back into GitHub.

\*\*\*\*But, title-less html is not merged into the master yet!  
We didn't know that, because Marcy lives in different country. And she didn't merged our pull request yet (just an example)

4. So we got back into the master branch.
5. We then pulled master's **current version** (to a local computer)
6. Then we merged the master into the conflict. Just to be sure the conflict is synchronized with the master.  
But we have invoked an error. Because master contains A title, but a conflict branch doesn't have a title.

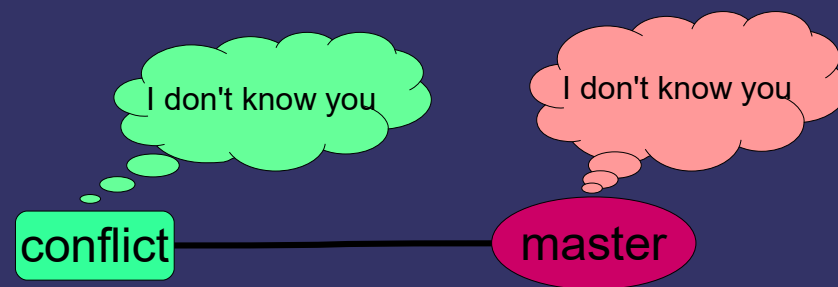
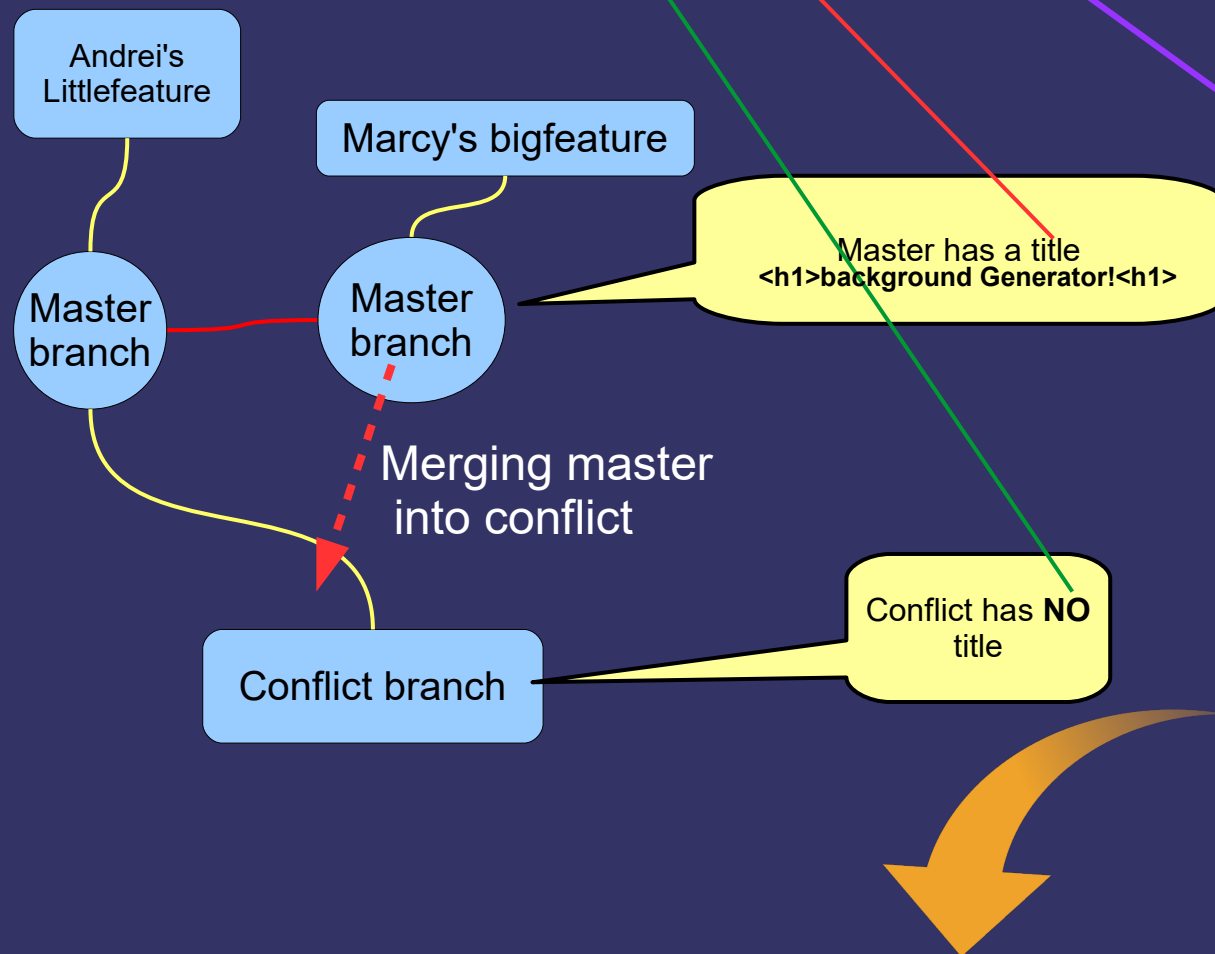
```
1 </head>
2 <body id="gradient">
3   <div class="cntr">
4     <<<<<<<<<< HEAD (Current Change)
5     =====
6     <h1>Background Generator!</h1>
7     >>>>>>>>>> master (Incoming Change)
8     <input class="color1" type="color" name="color1" value="#00ff00">
9     <input class="color2" type="color" name="color2" value="#ff0000">
10    <input class="color2" type="color" name="color2" value="#ff0000">
11
```



```
1 </head>
2 <body id="gradient">
3   <div class="cntr">
4     Accept Current Change | Accept Incoming Change | Accept Both Changes | Compare Changes
5     <<<<<<< HEAD (Current Change)
6     =====
7     <h1>Background Generator!</h1>
8     >>>>>>> master (Incoming Change)
9     <input class="color1" type="color" name="color1" value="#00ff00">
10    <input class="color2" type="color" name="color2" value="#ff0000">
11    <input class="color2" type="color" name="color2" value="#ff0000">
```

<<<Head This is **conflict** brach

>>>master This is **master** branch



Ask Marcy first if she want to leave the title. If yes, we can accept the Incoming changes by clicking the Accept incoming link, Or delete manually the following:

```
<<<<<<<<<< Head Current change
=====
>>>>>>>>>> Master Incoming change
```

Leaving the  
<h1>background Generator</h1>  
In place  
If you edit the file manually



Finally use the following commands

1	git add index.html
2	git commit -m "Okay we leaving the title as is"
3	git push

That's it for now! :-)



***TO BE CONTINUED  
IN PART 3 (Contribute to the open source)***

