

# 03. Git - push pull

wludyka.anna@gmail.com

09.03.2016

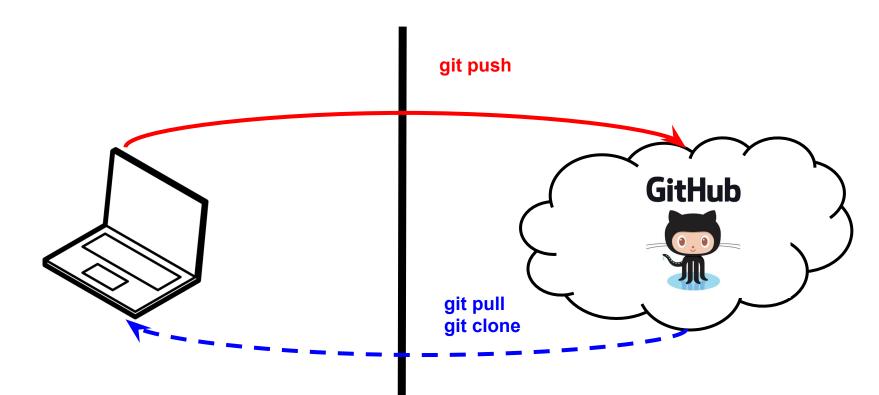
- git init
- git add .
- git **status**
- git **commit -m** "opis commita"
- git remote add origin [adres\_repozytorium]
- git push origin master
- git log --oneline --graph --decorate --all
- git commit --amend m "opis commita"

- git reset HEAD nazwa\_pliku
- git branch nazwa\_nowego\_brancha
- git branch --all
- git **checkout** nazwa\_brancha
- git checkout -b nazwa\_nowego\_brancha
- git branch -D nazwa\_brancha\_lokalnego\_do usuni

  çia
- git push origin :nazwa\_brancha\_zdalnego\_do\_usuniecia

#### REPOZYTORIUM LOKALNE

#### REPOZYTORIUM ZDALNE



#### **REPOZYTORIUM LOKALNE**

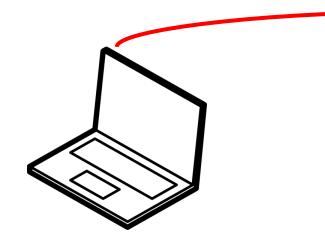
git init - w folderze projektu

git init .git

git remote add origin adres\_repo git add .

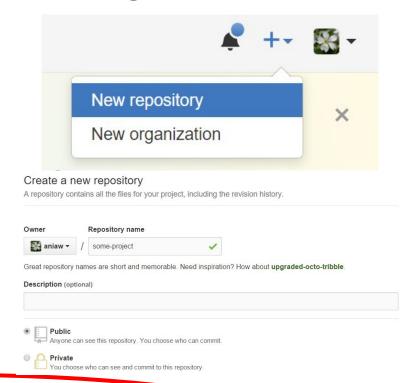
git commit -m "opis commita"

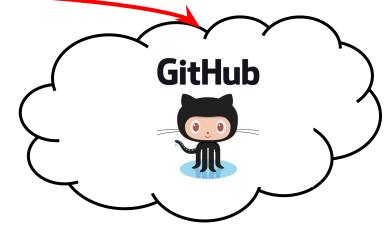
git push origin master



#### **REPOZYTORIUM ZDALNE**

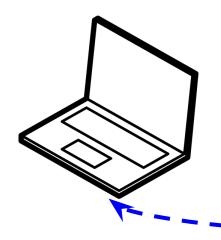
## github.com





#### **REPOZYTORIUM LOKALNE**

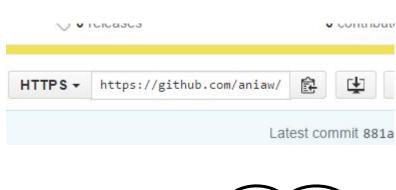
# git clone https://github.com/aniaw/TiJO\_02.git



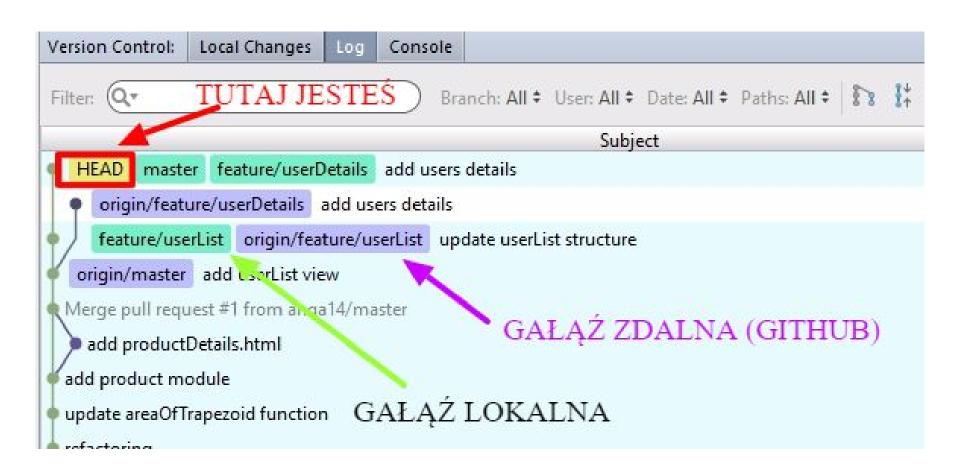
TiJO\_02

■ .git

#### **REPOZYTORIUM ZDALNE**

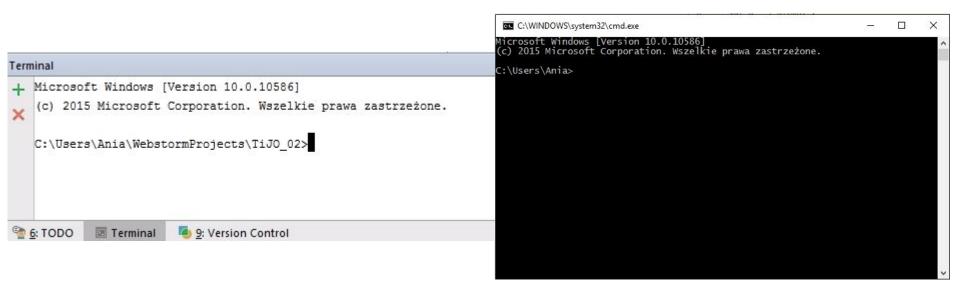




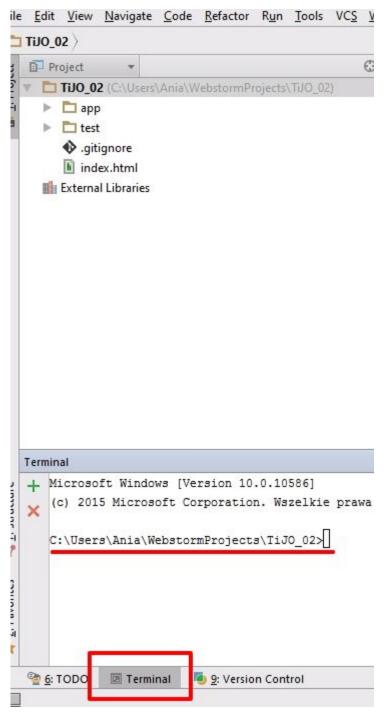


#### Konsola IDEA IntelliJ

## Konsola systemowa - Windows



Ścieżka w konsoli - powinna zgadzać się ze ścieżką folderu w której znajduje się nasz projekt



## Ścieżka w konsoli - powinna zgadzać się ze ścieżką folderu w której znajduje się nasz projekt

```
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. Wszelkie
C:\Users\Ania>
```

```
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. Wszelkie practical C:\Users\Ania>cd WebstormProjects
C:\Users\Ania\WebstormProjects>cd TiJO_02
C:\Users\Ania\WebstormProjects\TiJO_02>
```

#### **Schowek**

```
▼ TiJO_02 (C:\Users\Ania\WebstormProjects\TiJO_02)

▼ □ app
□ app.js
□ route.js

► □ test
□ .gitignore
□ index.html
□ External Libraries
```

```
C:\Users\Ania\WebstormProjects\TiJO_02>git status
On branch master
Changes to be committed:
   (use "git reset HEAD <file>..." to unstage)

    new file: app/route.js

Changes not staged for commit:
   (use "git add <file>..." to update what will be committed)
   (use "git checkout -- <file>..." to discard changes in working directory)

   modified: app/app.js
```

#### git checkout user

```
C:\Users\Ania\WebstormProjects\TiJO_02>git checkout user

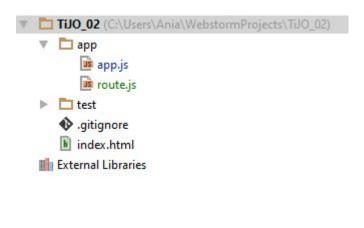
M app/app.js

A app/route.js

Switched to branch 'user'
```

#### Schowek

#### git checkout master



```
C:\Users\Ania\WebstormProjects\TiJO_02>git status
On branch master
Changes to be committed:
   (use "git reset HEAD <file>..." to unstage)

        new file: app/route.js

Changes not staged for commit:
   (use "git add <file>..." to update what will be committed)
   (use "git checkout -- <file>..." to discard changes in working directory)

        modified: app/app.js
```

#### git stash

C:\Users\Ania\WebstormProjects\TiJO\_02>git stash
Saved working directory and index state WIP on master: 881a85a update areaOfTrapezoid function
HEAD is now at 881a85a update areaOfTrapezoid function



C:\Users\Ania\WebstormProjects\TiJO\_02>git status
On branch master
nothing to commit, working directory clean

#### Schowek

#### git stash list

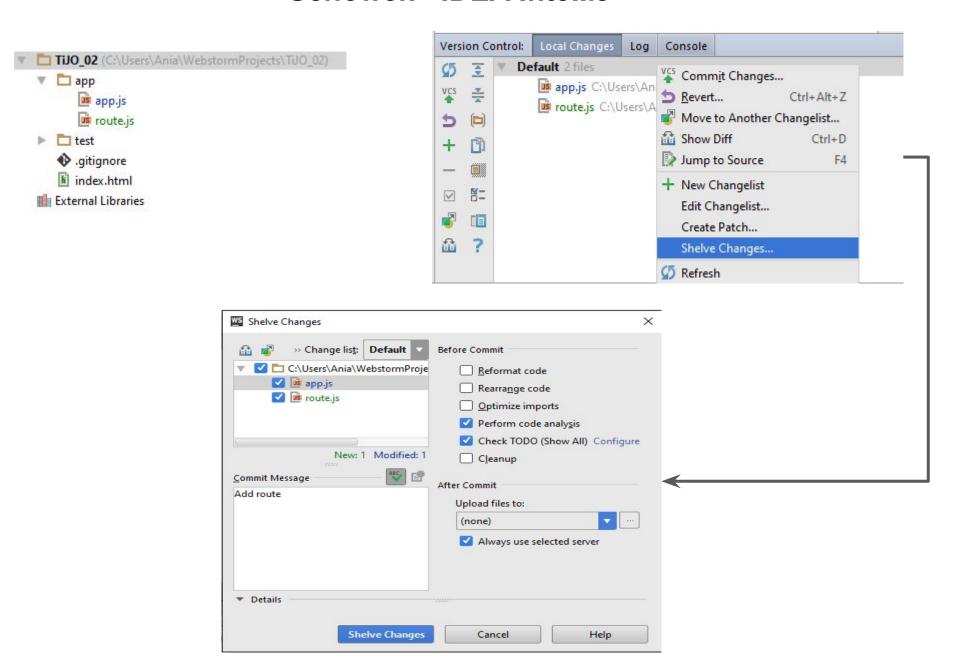
```
C:\Users\Ania\WebstormProjects\TiJO_02>git stash list
stash@{0}: WIP on master: 881a85a update areaOfTrapezoid function
```

#### git stash pop

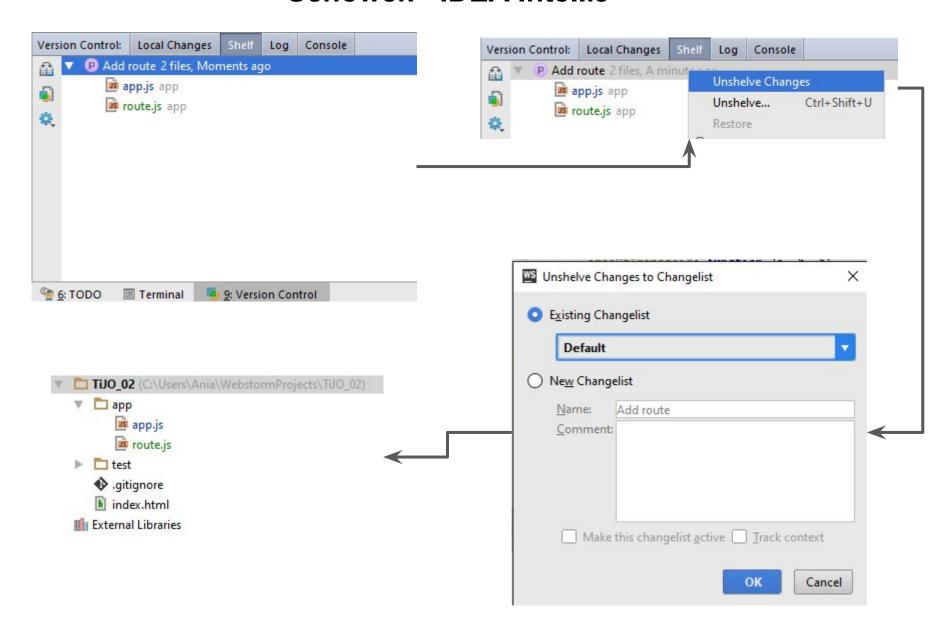
```
TiJO 02 (C:\Users\Ania\WebstormProjects\TiJO 02)
                                            C:\Users\Ania\WebstormProjects\TiJO 02>git stash pop
▼ □ app
                                             On branch master
     app.js
                                            Changes to be committed:
     route.js
                                               (use "git reset HEAD <file>..." to unstage)
test
  .gitignore
                                                    new file: app/route.js
  index.html
External Libraries
                                            Changes not staged for commit:
                                               (use "git add <file>..." to update what will be committed)
                                               (use "git checkout -- <file>..." to discard changes in working directory)
                                                     modified: app/app.js
```

Dropped refs/stash@{0} (817f15ee4643af367f8a76e7e88e8c360305d89f)

#### Schowek - IDEA IntelliJ



#### **Schowek - IDEA IntelliJ**

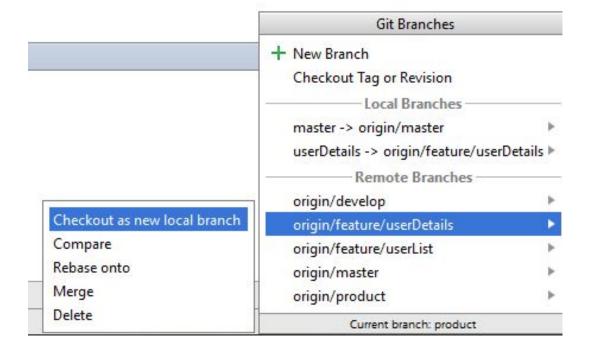


#### Branch zdalny -> branch lokalny

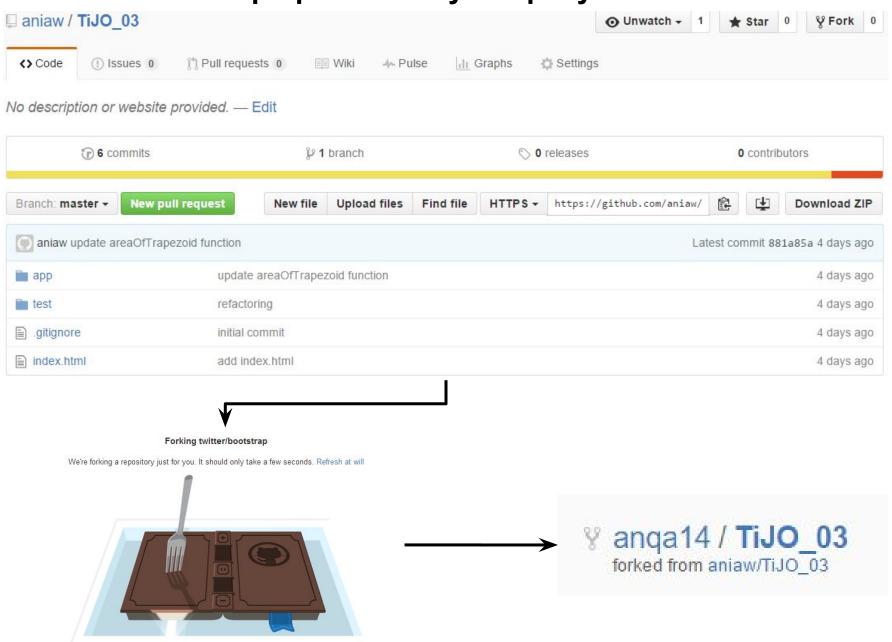
git branch --all

## git checkout -b nazwa\_brancha alias\_repo/nazwa\_brancha

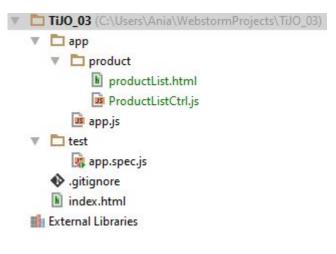
C:\Users\Ania\Desktop\TiJO\_03>git checkout -b userDetails origin/feature/userDetails Branch userDetails set up to track remote branch feature/userDetails from origin. Switched to a new branch 'userDetails'



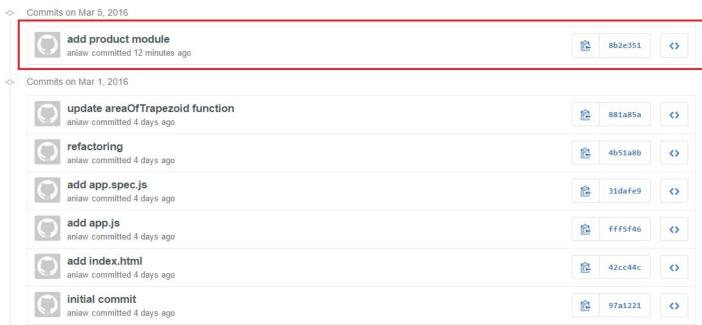
Współpraca z innym repozytorium



## aniaw / TiJO\_03

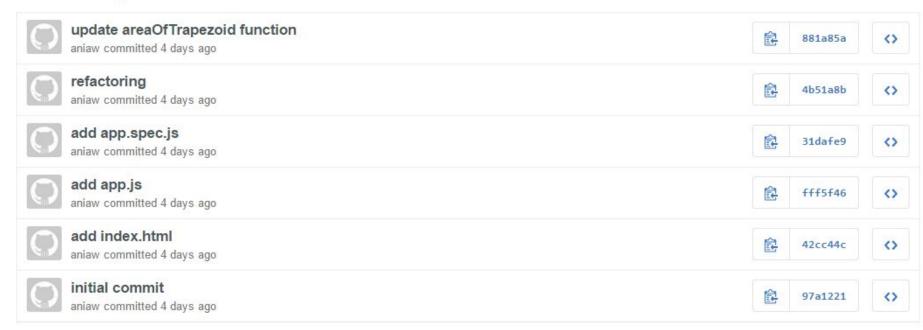


git add . git commit -m "add product module" git push origin master





Commits on Mar 1, 2016



#### git remote -v

```
C:\Users\Ania\WebstormProjects\fork\TiJO_03>git remote -v
origin https://github.com/anqa14/TiJO_03.git (fetch)
origin https://github.com/anqa14/TiJO_03.git (push)
```

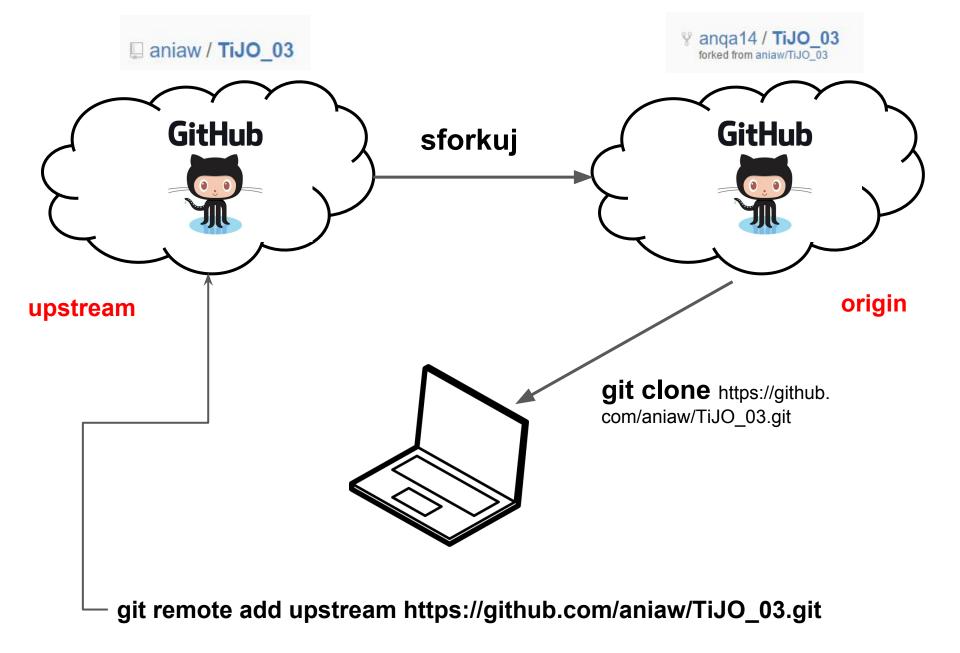
## git remote add upstream https://github.com/aniaw/TiJO\_03.git

```
C:\Users\Ania\WebstormProjects\fork\TiJO_03>git remote -v
origin https://github.com/anqa14/TiJO_03.git (fetch)
origin https://github.com/anqa14/TiJO_03.git (push)
upstream https://github.com/aniaw/TiJO_03.git (fetch)
upstream https://github.com/aniaw/TiJO_03.git (push)
```

## git push <a href="https://github.com/aniaw/TiJO">https://github.com/aniaw/TiJO</a> 03.git master

## git push origin master

origin jest aliasem dla adresu <a href="https://github.com/aniaw/TiJO\_03.git">https://github.com/aniaw/TiJO\_03.git</a>



## git fetch nazwa\_repozytorium

```
C:\Users\Ania\WebstormProjects\fork\TiJO_03>git fetch upstream
remote: Counting objects: 6, done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 6 (delta 0), reused 6 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), done.
From https://github.com/aniaw/TiJO_03
  * [new branch] master -> upstream/master
```

```
    upstream/master add product module
    HEAD master origin/master update areaOfTrapezoid function
    refactoring
    add app.spec.js
    add app.js
    add index.html
    initial commit
```

### Pobieranie zmian z innego repozytorium

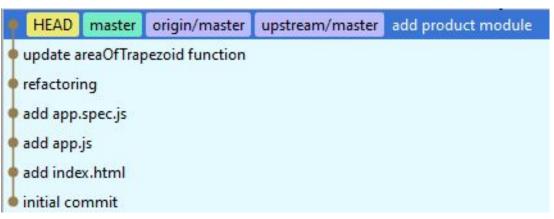
### git pull nazwa\_repozytorium nazwa\_brancha

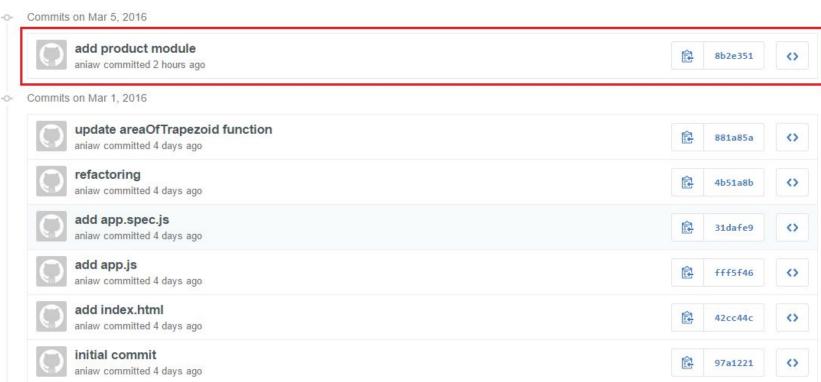
git pull = git fetch + git merge

```
HEAD master upstream/master add product module
origin/master update areaOfTrapezoid function
refactoring
add app.spec.js
add app.js
add index.html
initial commit
```

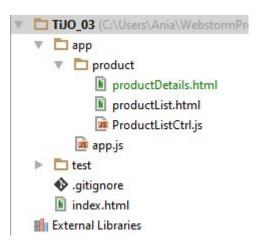


### git push origin master



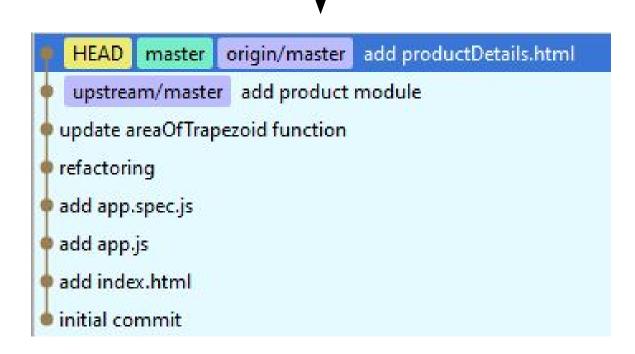


# % anqa14 / TiJO\_03 forked from aniaw/TiJO\_03

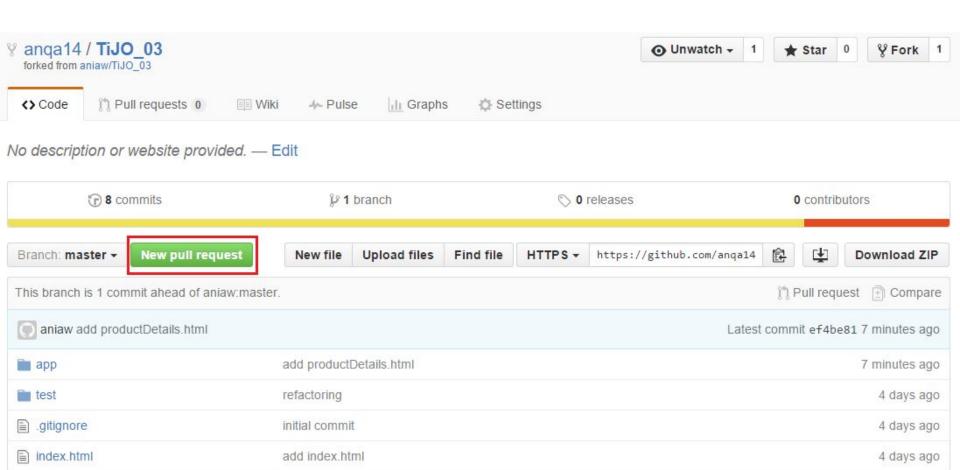


# Wysyłanie swoich zmian do innego repozytorium

git add .
git commit -m "add productDetails.html"
git push origin master



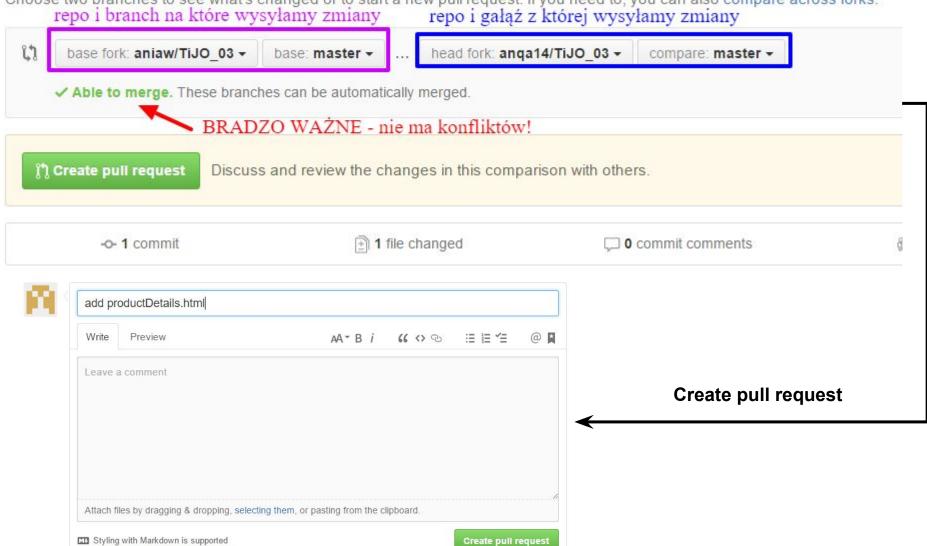
#### wykonany z gałęzi master





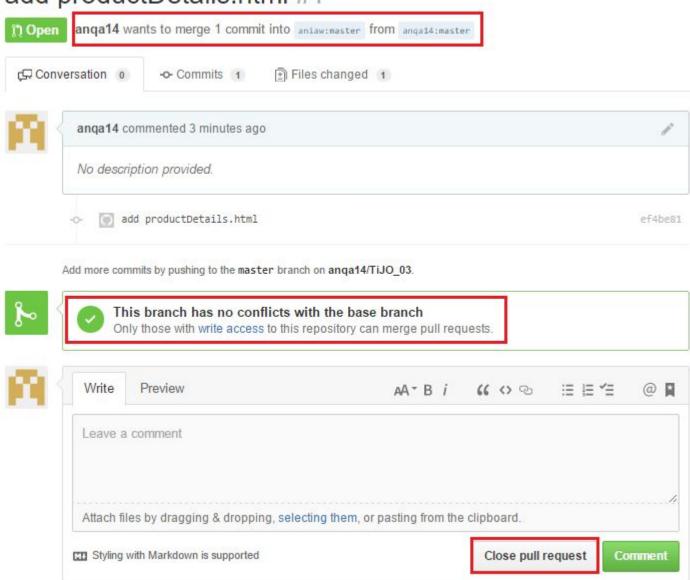
## Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also compare across forks. repo i branch na które wysyłamy zmiany

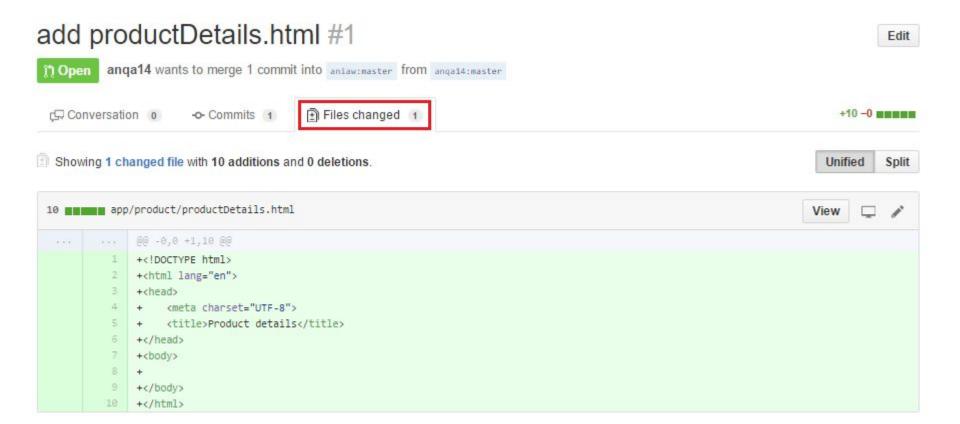




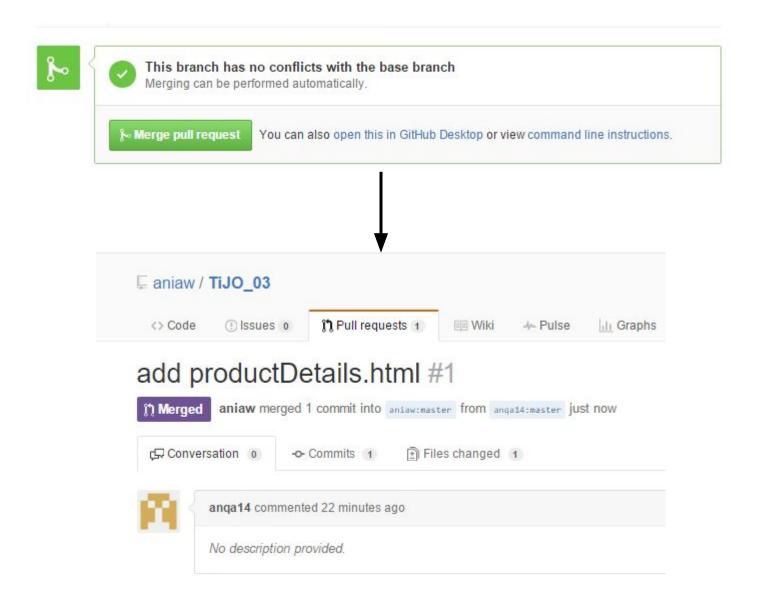
add productDetails.html #1



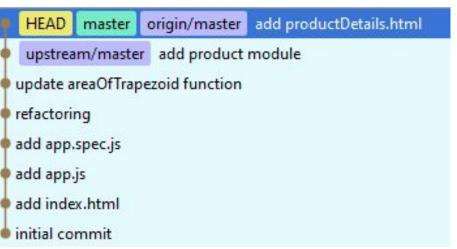
aniaw / TiJO\_03



aniaw / TiJO\_03

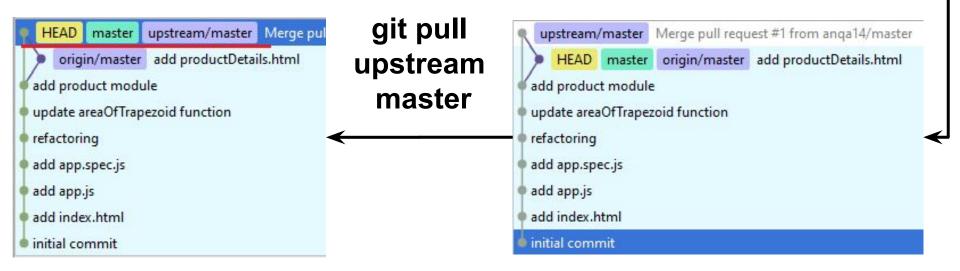






## git fetch upstream

C:\Users\Ania\WebstormProjects\fork\TiJO\_03>git fetch upstream remote: Counting objects: 1, done.
remote: Total 1 (delta 0), reused 1 (delta 0), pack-reused 0
Unpacking objects: 100% (1/1), done.
From https://github.com/aniaw/TiJO\_03
8b2e351..6a6bd5d master -> upstream/master

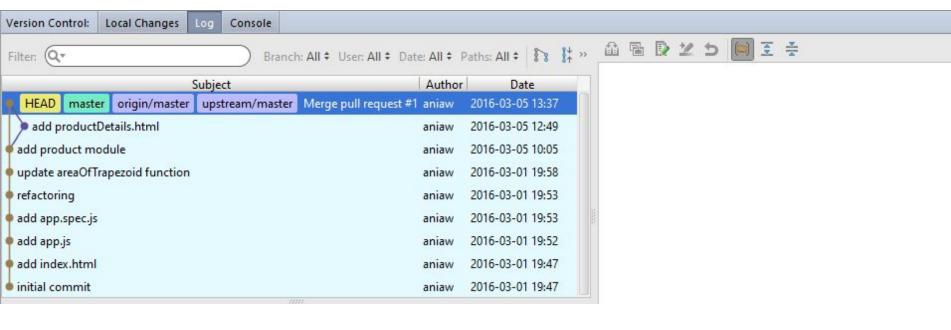


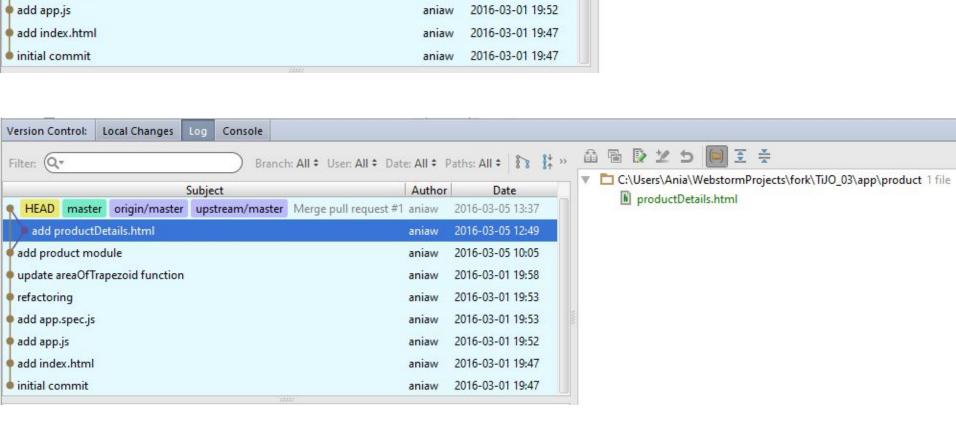
#### git status

```
C:\Users\Ania\WebstormProjects\fork\TiJO_03>git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)
nothing to commit, working directory clean
```

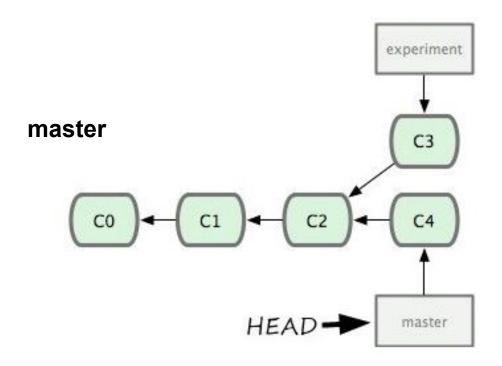
## git push origin master

HEAD	master	origin/master	upstream/master	Merge pull request #1	aniaw	2016-03-05 13:37
add productDetails.html aniav						2016-03-05 12:49
add product module					aniaw	2016-03-05 10:05
update areaOfTrapezoid function					aniaw	2016-03-01 19:58
• refactoring					aniaw	2016-03-01 19:53
add app	.spec.js				aniaw	2016-03-01 19:53
add app.js					aniaw	2016-03-01 19:52
add index.html					aniaw	2016-03-01 19:47
initial commit						2016-03-01 19:47





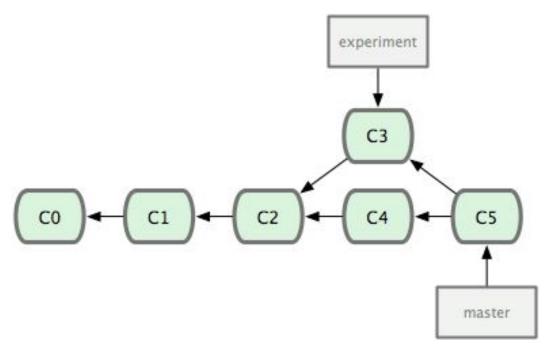
#### Scalanie zmian



- rozpoczynamy od brancha master
- po wykonaniu trzech commitów (C0,C1,C2) został utworzony branch experiment
   (z nową funkcjonalnością) bazujący na commicie C2 brancha master
- na branchu master, równolegle do brancha experiment zacomitowano zmiany (C4)

CEL: integracja branchy - scalenie zmian do do głównego brancha master

## git merge



## git merge experiment

git merge nazwa\_brancha

Polecenie git merge wykonuje się na branchu do którego chcecmy dodać zmiany.

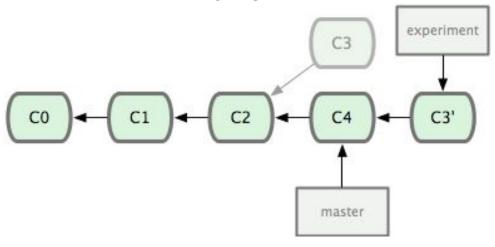
W przykładzie powyżej **HEAD** wskazuje na branch **master** (w przeciwnym razie należałoby użyć polecenia **git checkout master**).

Polecenie odszuka wspólnego przodka C4 i C3 - czyli C2 a następnie, odnajdzie konflikty (jeśli istnieją), które dopiero po ich rozwiązaniu utworzą **merge commita** 

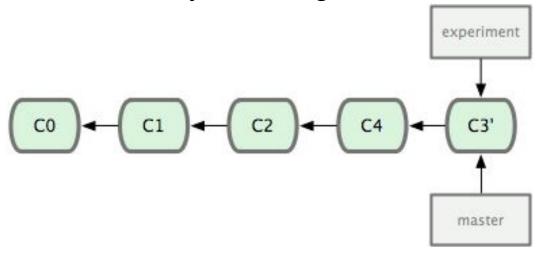
## git rebase

tworzy czystszą historię - tak, że wygląda ona na liniową jakby cała praca była wykonywana stopniowo, nawet jeśli oryginalnie odbywała się równolegle.

#### W trakcje git rebase



### Po wykonaniu git rebase



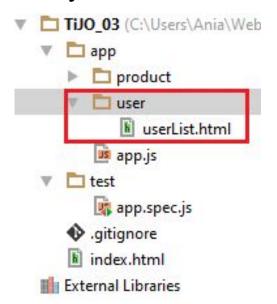
#### Polecenie git rebase można wykonać z poziomu

- brancha do którego chcemy dodać zmiany (HEAD na branch master, polecenie)
   git rebase master experience
- 2) brancha, którego zmiany chcemy dodać do innego brancha (HEAD na branch experience) git rebase master

W przykładzie powyżej polecenie git rebase master experience

- 1) odszuka wspólnego przodka C4 i C3 czyli C2
- 2) zachowa commity z brancha experience (tutaj C3) w tymczasowych plikach,
- 3) zresetuje brancha ze zmianami (**experience**) do poziomu brancha master i commita z którego robimy **gti rebase** (C4)
- 4) doda commity zaciągnięte z **experience** (C3).
- 5) mergujemy zmiany z branchem **master**

#### Przykład



```
b productList.html ×
               ProductListCtrl.js ×
                              li userList.html ×
     <! DOCTYPE html>
1
     <html lang="en">
2
3
     <head>
4
        <meta charset="UTF-8">
5
        <title>User list</title>
6
     </head>
     <body>
8
     9
        <thead>
10
        >
11
            Id
12
            First name
13
            Last name
14
        15
        </thead>
16
        17
        18
           1 
           John 
19
20
            Smith
```

git add . git commit -m "add userList view" z poziomu branch master
git checkout -b feature/userList

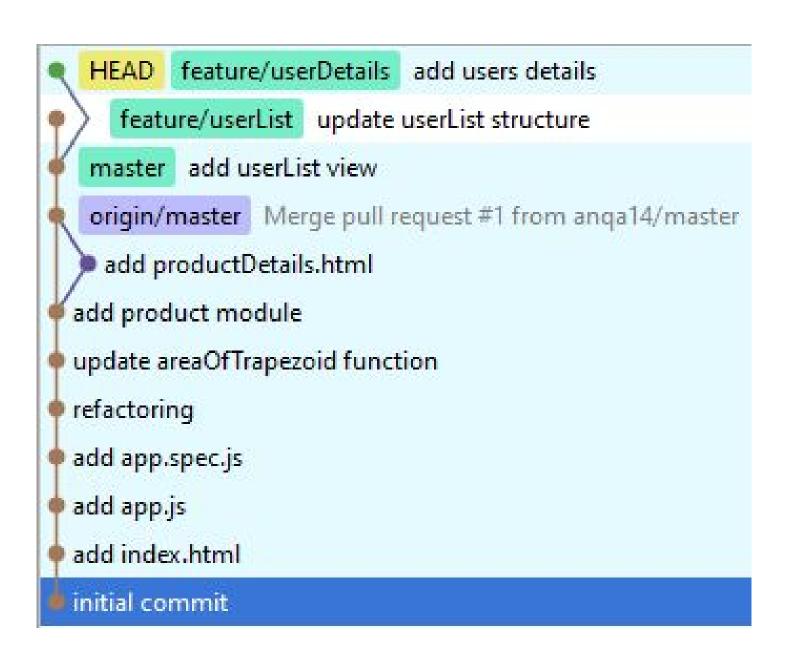
<pre></pre>	8	7	<body></body>
<thead></thead>	9	8	<pre></pre>
	10	9	<thead></thead>
Id	11	10	
First name	» 12	11	Id
Last name	13	12 X	Name
	14	13	
	15	14	
	16	15	
	17	16	
1	18	17	1
John	>> 19	18 X	John Smith
Smith	20	19	
	21	20	
	22	21	2
2	23	22 X	Stephan Swan
Stephan	>> 24	23	
Swan	25	24	
	26	25	3
	27	26 X	Marie Bell
3	28	27	
Marie	>> 29	28	
Bell	30	29	
	31	30	
	32	31	
	33	32	

git add .
git commit -m "update userList structure"

### git checkout -b feature/userDetails

	10	12	First name
Id	11	13	Last name
First name	12	14 X	Age
Last name	13	15	Email
	>> 14	16	
	15	17	
	16	18	
	17	19	
1	18	20	1
John	19	21	John
Smith	20	22	Smith
	>> 21	23 X	45
	22	24	john.smith@gmail.com
2	23	25	
Stephan	24	26	
Swan	25	27	2
	>> 26	28	Stephan
	27	29	Swan
3	28	30 X	18
Marie	29	31	stephan.swan@gmail.com <
Bell	30	32	
	» 31	33	
	32	34	3
	33	35	Marie
	34	36	Bell
	35	37 X	26
	△ 36	38	marie.bell@gmail.com
		39	
git add .		40	

git commit -m "add users details"



git merge

## git merge feature/userList

```
C:\Users\Ania\WebstormProjects\TiJO 03>qit merge feature/userList
Updating ab33d86..c47c116
                                               Fast-forward
                                                  <thead>
 app/user/userList.html | 12 ++++-----
                                                  1 file changed, 4 insertions (+), 8 deletions (-)
                                                      Id
                                                      Name 
                                                  feature/userDetails add users details
                                                  </thead>
   HEAD master feature/userList update userList structure
                                                  add userlist view
                                                     1 
  origin/master Merge pull request #1 from anga14/master
                                                     John Smith
                                                  add productDetails.html
                                                  add product module
                                                     2 
                                                     Stephan Swan
 update areaOfTrapezoid function
                                                  refactoring
                                                  3 
 add app.spec.js
                                                      Marie Bell
 add app.js
                                                  add index.html
 initial commit
```

#### git merge feature/userDetails

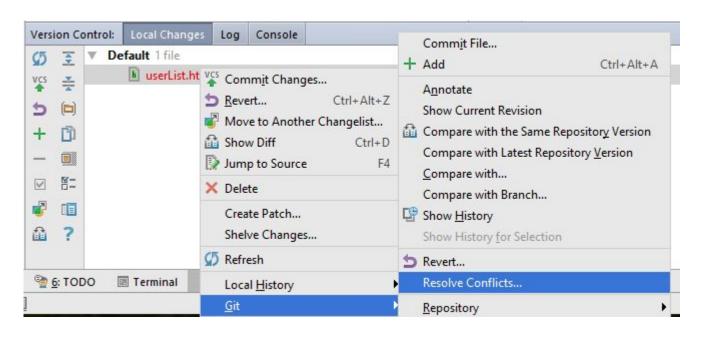
C:\Users\Ania\WebstormProjects\TiJO\_03>git merge feature/userDetails Auto-merging app/user/userList.html

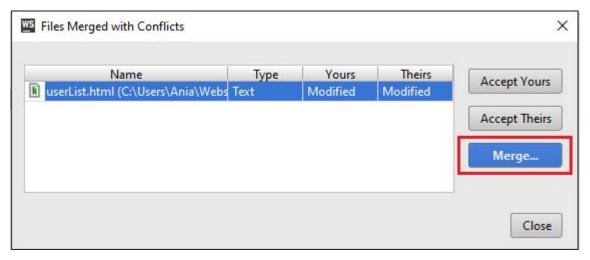
CONFLICT (content): Merge conflict in app/user/userList.html
Automatic merge failed; fix conflicts and then commit the result.

```
<<<<<<  HEAD
                                  Name 
 TiJO 03 (C:\Users\Ania\Webs
    app
                                  First name
                                  Last name
    product
                                  Age 
      user
                                  Email 
                            >>>>> feature/userDetails
      userList.html
                              📭 app.js
                             </thead>
                              1 test
                             📝 app.spec.js
                                 1 
                            <<<<<<  HEAD
  gitignore
                                 John Smith
  index.html
                             External Libraries
                                 2 
                                 Stephan Swan
                            3
```

Marie Bell

#### rozwiązywanie konflikótw IDEA IntelliJ





#### aktualny plik / rezult mergowania / zmiany które mają zostać wprowadzone

Merge Revisions for C:\Users\Ania\WebstormProjects\TiJO\_03\app\user\userList.html X No changes, 4 conflicts Local Changes (Read-only) LF CRLF Changes from Server (revision c8fe0b10d6a1f8b0b9dce3caa... LF Result 3 <meta charset="UTF-8"> <head> 4 </head> <meta charset="UTF-8"> 5 <title>User list</title> <body> <title>User list</title> 5 6 </head> 8 </head> 6 <body> 9 <thead> <body> 10 8 9 <thead> 11 Id 12 «× <thead> 9 10 First name 10 11 Id 13 Last name Id 12 First name 14 11 Age × >> 12 13 Last name Name 15 Email 13 14 16 </thead> 14 15 </thead> 17 </thead> 15 16 18 16 17 19 1 17 18 1 1 John Smith X >> 18 19 John 21 «× John 19 20 Smith 22 Smith 21 45 20 23 2 21 22 24 john.smith@gmail.com </f Stephan Swan × >> 22 23 2 25 23 24 Stephan 26 24 25 Swan 27 2 28 «× 3 25 26 Stephan Marie Bell × >> 26 27 29 Swan 28 18 27 3 30 28 29 31 stephan.swan@gmail.com < Marie 29 30 Bell 32 </body> 30 31 </html> 31 32 3 32 33 35 «× Marie 31 //hades 36 Bell Accept Left Accept Right Apply Abort

#### po rozwiązaniu konfliktów

X Merge Revisions for C:\Users\Ania\WebstormProjects\TiJO\_03\app\user\userList.html All conflicts resolved Local Changes (Read-only) LF Result CRLF Changes from Server (revision c8fe0b10d6a1f8b0b9dce3caa453a... LF <meta charset="UTF-8"> </head> <body> <title>User list</title> <body> </head> <thead> <body> <thead> Id <thead> First name Id Name Last name Id Age Age Name Email Email </thead> </thead> </thead> John Smith John Smith John Smith john.smith@gmail.com john.smith@gmail.com Stephan Swan Stephan Swan Stephan stephan.swan@gmail.com Marie Bell Swan (tr> stephan.swan@gmail.com </body> Marie Bell </html> marie.bell@gmail.com Marie Bell //thodas 

Apply

Abort

Accept Right

Accept Left

### git status

```
C:\Users\Ania\WebstormProjects\TiJO_03>git status

On branch master

Your branch is ahead of 'origin/master' by 2 commits.

(use "git push" to publish your local commits)

All conflicts fixed but you are still merging.

(use "git commit" to conclude merge)

Changes to be committed:

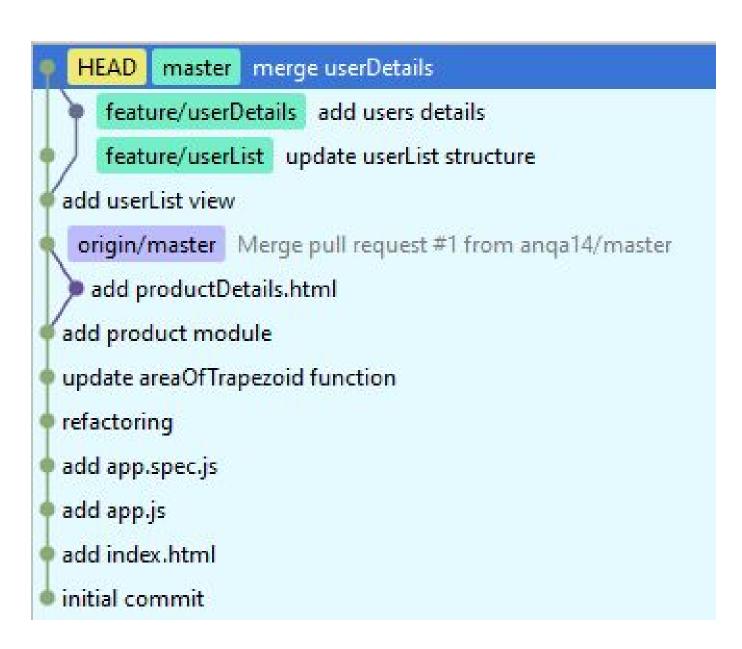
## Event Log

UTF-8 Git: Merging master ** **

modified: app/user/userList.html
```

# git commit -m "merge userDetails"

C:\Users\Ania\WebstormProjects\TiJO\_03>git commit -m "merge userDetails"
[master 7f416d4] merge userDetails



git rebase

#### git rebase master feature/userList

polecenie przeniesie nas na branch **feature/userList -** którą możemy zmergować do branch **master** bez konfliktów

# git checkout master git merge feature/userDetails

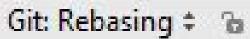
```
C:\Users\Ania\WebstormProjects\TiJO_03>git rebase master feature/userList Current branch feature/userList is up to date.
```

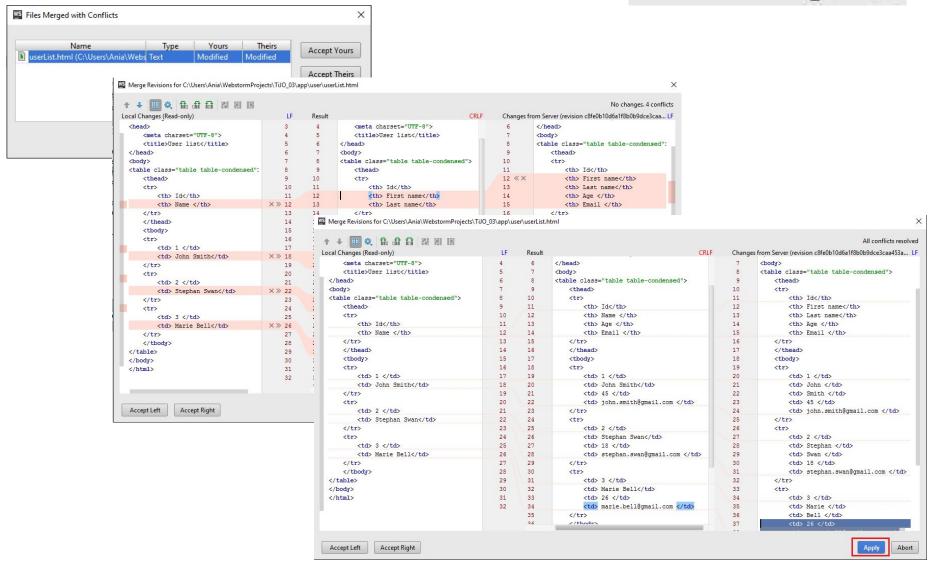
```
C:\Users\Ania\WebstormProjects\TiJO_03>git merge feature/userList
Updating b14bfcb..f694d78
Fast-forward
app/user/userList.html | 12 ++++-----
1 file changed, 4 insertions(+), 8 deletions(-)
```

#### git rebase master feature/userDetails

```
C:\Users\Ania\WebstormProjects\TiJO 03>git merge feature/userList
Updating b14bfcb..f694d78
Fast-forward
 app/user/userList.html | 12 ++++-----
1 file changed, 4 insertions (+), 8 deletions (-)
C:\Users\Ania\WebstormProjects\TiJO 03>qit rebase master feature/userDetails
First, rewinding head to replay your work on top of it...
Applying: add users details
Using index info to reconstruct a base tree...
      app/user/userList.html
Falling back to patching base and 3-way merge...
Auto-merging app/user/userList.html
CONFLICT (content): Merge conflict in app/user/userList.html
error: Failed to merge in the changes.
Patch failed at 0001 add users details
The copy of the patch that failed is found in: .git/rebase-apply/patch
When you have resolved this problem, run "git rebase --continue".
If you prefer to skip this patch, run "git rebase --skip" instead.
To check out the original branch and stop rebasing, run "git rebase --abort".
```

#### rozwiązujemy konflikty





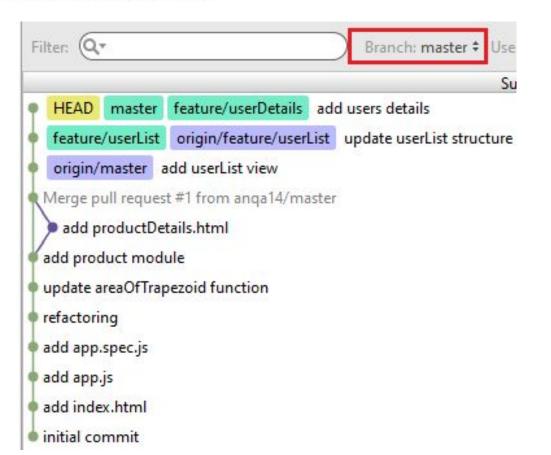
#### git rebase --continue

C:\Users\Ania\WebstormProjects\TiJO\_03>git rebase --continue Applying: add users details

```
HEAD feature/userDetails add users details
   origin/feature/userDetails add users details
   master feature/userList origin/feature/userList update userList structure
 origin/master add userList view
                                           Merge pull request #1 from anga14/master
                                               Id
add productDetails.html
                                               Name 
                                               Age 
add product module
                                               Email 
update areaOfTrapezoid function
                                           refactoring
                                           </thead>
add app.spec.js
                                           add app.js
                                              1 
add index.html
                                              John Smith
                                              45 
                                               john.smith@gmail.com
```

# git checkout master git merge feature/userDetails

```
C:\Users\Ania\WebstormProjects\TiJO_03>git merge feature/userDetails
Updating f694d78..46113f5
Fast-forward
app/user/userList.html | 8 +++++++
1 file changed, 8 insertions(+)
```



# Po dodaniu zmian usunąć niepotrzebne gałęzie

git branch -D feature/userList git branch -D feature/userDetails git push origin :feature/userList git push origin :feature/userDetails

```
HEAD master update userList structure

add users details

origin/master origin/develop origin/product add userList view

Merge pull request #1 from anqa14/master

add productDetails.html

add product module

update areaOfTrapezoid function
```