

05. JavaScript Unit Test



Niezbędnik instalacyjny

System operacyjny

- 1. Zainstaluj **NodeJS** & **npm**
- 2. Sprawdź czy **node** oraz **npm** są dostępne z poziomu terminala (powinna zostać wyświetlona informacja o ich wersji)

node -v npm -v

IDEA InteliiJ / Webstorm WERSJA Ultimate

- 1. Pracujemy na wersji **Ultimate**, nie na Community!
- 2. Po otwarciu projektu, w terminalu (z poziomu folderu naszego projektu) wykonujemy polecenie **npm install,** które pobierze biblioteki wylistowane w pliku **package.json** i umieści je w folderze **node_modules**
- 3. Jeżeli plugin **Karma** jest niezainstalowany należy to zrobić poprzez File -> Settings -> Plugins -> Install JetBrains plugins.. -> Wpisać: **Karma** po instalacji niezbędny jest restart środowiska.

Domyślnie pracujemy na systemie **Linux**. Można korzystać z Windowsa na swoją odpowiedzialność.

BeforeEach BeforeAll

AfterEach AfterAll

```
this.model = model;
describe ('Car', function () {
                                                       this.year = year;
    describe ('property', function () {
        car = new answer.Car('Audi', 1998);
        it ('should defined model', function () {
            expect(car.model).toBeDefined();
        1):
        it('should defined year', function () {
            expect(car.year).toBeDefined();
        1);
    });
    describe ('value', function () {
        car = new answer.Car('Audi', 1998);
        it ('should be set to Audi on model property', function () {
            expect (car.model).toBe('Audi');
        1);
        it ('should be set to 1998 on year property', function () {
            expect (car.year).toBe (1998);
        1);
    1);
```

Car: function (model, year)

- ▼ ® Car
 - property
 should defined model
 - should defined year
 - ▼ ® value
 - should be set to Audi on model property
 - should be set to 1998 on year property

Car

property

- √ should defined model
- √ should defined year

value

- √ should be set to Audi on model property
- √ should be set to 1998 on year property

```
Car: function (model, year) {
   this.model = model;
   this.year = year;
}
```

```
describe ('value', function () {
    car = new answer.Car('Audi', 1998);
    it ('should be set to Audi on model property', function () {
        expect (car.model).toBe('Audi');
    });
    car = new answer.Car('Audi', 2000);
    it ('should be set to 1998 on year property', function () {
        expect (car.year).toBe (1998);
    1);
<u>ы</u> арр
      Car.
        @ property
           should defined model.
           should defined year
        walue
           should be set to Audi on model property.
           should be set to 1998 on year property
```

```
Car: function (model, year) {
    this.model = model;
    this.year = year;
}
```

Expected 2000 to be 1998.

```
this.model = model;
var car:
                                                           this.year = year;
describe ('Car', function () {
    beforeEach (function () {
         car = new answer.Car('Audi', 1998);
    1) ;
                                                               property
                                                                should defined model
    describe ('property', function () {
                                                                should defined year
         it('should defined model', function ()
                                                                should be set to Audi on model property
             expect(car.model).toBeDefined();
                                                                should be set to 1998 on year property
         1):
         it ('should defined year', function () {
             expect(car.year).toBeDefined();
         1);
    11:
    describe ('value', function () {
         it ('should be set to Audi on model property', function () {
             expect(car.model).toBe('Audi');
         1):
         it ('should be set to 1998 on year property', function () {
             expect (car.year).toBe (1998);
         1);
```

Car: function (model, year)

```
Car: function (model, year) {
    this.model = model;
    this.year = year;
}
```

```
describe ('value', function () {
    it ('should be set to Audi on model property', function () {
         expect(car.model).toBe('Audi');
    1);
    car = new answer.Car('Audi', 2000);
    it ('should be set to 1998 on year property', function () {
         expect (car.year).toBe (1998);
    });
1);
         Car
         operty property
            should defined model
            should defined year
         on value
            should be set to Audi on model property
            should be set to 1998 on year property
```

```
CarPortal: function () {
   this.credentials = {};
   this.login = function (username, password) {
      this.credentials.username = username;
      this.credentials.password = password;
   };
}
```

```
var carPortal;
describe('CarPortal', function () {
    carPortal = new answer.CarPortal();

it('should set username to john and password to 12345 when login is call', function () {
    carPortal.login('john', '12345');
    expect(carPortal.credentials).toEqual({username: 'john', password: '12345'});
});

it('should set username to maria and password to qwerty when login is call', function () {
    carPortal.login('maria', 'qwerty');
    expect(carPortal.credentials).toEqual({username: 'maria', password: 'qwerty'});
});
});
```

```
CarPortal: function () {
   this.credentials = {};
   this.login = function (username, password) {
      this.credentials.username = username;
      this.credentials.password = password;
   };
}
```

```
var carPortal;
describe('CarPortal', function () {
    carPortal = new answer.CarPortal();

it('should set username to john and password to 12345 when login is call', function () {
    carPortal.login('john', '12345');
    expect(carPortal.credentials).toEqual({username: 'john', password: '12345'});
});

it('should set username to maria and password to qwerty when login is call', function () {
    console.log(carPortal.credentials);
    carPortal.login('maria', 'qwerty');
    expect(carPortal.credentials).toEqual({username: 'maria', password: 'qwerty'});
});
});
```

Object{username: 'john', password: '12345'}

```
this.credentials.username = username;
                                                  this.credentials.password = password;
                                              };
var carPortal;
                                              this.logout = function () {
describe ('CarPortal', function () {
                                                  this.credentials = {};
    carPortal = new answer.CarPortal();
                                              };
    afterEach(function () {
        carPortal.logout();
    it ('should set username to john and password to 12345 when login is call', function () {
        carPortal.login('john', '12345');
        expect(carPortal.credentials).toEqual({username: 'john', password: '12345'});
    });
    it ('should set username to maria and password to gwerty when login is call', function () {
        console.log(carPortal.credentials);
        carPortal.login('maria', 'qwerty');
        expect(carPortal.credentials).toEqual({username: 'maria', password: 'qwerty'});
    1);
```

Object{}

CarPortal: function () {

this.credentials = {};

this.login = function (username, password)

```
this.credentials.username = username;
                                                  this.credentials.password = password;
                                              };
var carPortal:
                                              this.logout = function () {
describe ('CarPortal', function () {
    carPortal = new answer.CarPortal();
                                                  this.credentials = {};
    afterEach(function () {
                                              };
        carPortal.logout();
    1);
    it ('should set username to john and password to 12345 when login is call', function () {
        carPortal.login('john', '12345');
        expect(carPortal.credentials).toEqual({username: 'john', password: '12345'});
    1);
    it ('should clean credentials after each it', function ()
        expect(carPortal.credentials).toEqual({});
    1);
    it ('should set username to maria and password to gwerty when login is call', function () {
        carPortal.login('maria', 'qwerty');
        expect(carPortal.credentials).toEqual({username: 'maria', password: 'qwerty'});
    1);
    it('should clean credentials after each it', function ()
        expect(carPortal.credentials).toEqual({});
    });
```

CarPortal: function () {

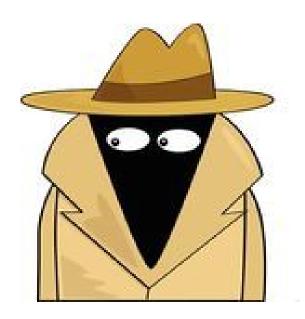
this.credentials = {};

this.login = function (username, password) {

beforeAll, afterAll

```
describe("A spec using beforeAll and afterAll", function() {
 var foo;
  beforeAll(function() { foo = 1; });
  afterAll(function() { foo = 0; });
  it("sets the initial value of foo before specs run", function(){
    expect(foo).toEqual(1);
    foo += 1;
  });
  it("does not reset foo between specs", function(){
    expect(foo).toEqual(2);
 });
});
```

SPY



Spy

```
spyOn('nazwa obiektu w której
znajduje się funkcja',
'nazwa funkcji');
```

```
w app.js
window.app = {
divide = function() {...}
}

w app.spec.js
var app = window.app;

spyOn('app',divide)
```



Spy

toHaveBeenCalled()
od v 2.0
and.callThrough()
and.return()
and.callFake()

poniżej v 2.0
andCallThrough()
andReturn()
andCallFake()
calls.length

calls.count()

Jak sprawdzić lokalną wersję Jasmine?

npm list jasmine



assignToSwimmingCourse - funkcja zapisująca na kurs pływania zależnie od wieku

```
assignToSwimmingCourse: function (name, birthDate) {
   var course;
   var age = this.calculateAge(birthDate);
   if (age >= 3 && age <= 12) {
        course = {name: name, age: age, course: 'kids'};
    else if (age > 12 && age < 18) {
        course = {name: name, age: age, course: 'teens'};
   else if (age >= 18) {
        course = {name: name, age: age, course: 'adults'}
   else {
        throw new TypeError('Wrong data or too young!');
    return course:
```

assignToSwimmingCourse korzysta z funkcji calculateAge

```
calculateAge: function (dateString) {
    var today = new Date();
    var birthDate = new Date(dateString);
    var age = today.getFullYear() - birthDate.getFullYear();
    var m = today.getMonth() - birthDate.getMonth();
    if (m < 0 | (m === 0 && today.getDate() < birthDate.getDate()))</pre>
        age--;
                           PODAJ MI SWOJA DATE URODZENIA
    return age;
                                                        Alicja
                                                        Jaworska
                                                        kod: 9400
                                                        Tarot, Jasnowidzenie
                                  100% trafności Macieja
                                                        www.kosmica.pl
                                                         Zadnych
```

toHaveBeenCalled()

```
describe('toHaveBeenCalled', function () {
    beforeAll(function () {
        spyOn(app, 'calculateAge');
        app.calculateAge('10/10/1991');
    });
    it('should call calculateAge function', function () {
        expect(app.calculateAge).toHaveBeenCalled();
        expect(app.calculateAge).toHaveBeenCalledWith('10/10/1991');
    });
});
```

- - ▼ ® toHaveBeenCalled
 - should call calculateAge function

toHaveBeenCalled()

```
describe('toHaveBeenCalled', function () {
    beforeAll(function () {
        spyOn(app, 'calculateAge');
        app.assignToSwimmingCourse('Jack', '10/10/1991');

});
it('should call calculateAge function', function () {
        expect(app.calculateAge).toHaveBeenCalled();
        expect(app.calculateAge).toHaveBeenCalledWith('10/10/1991');
});

});
```

- - ▼ **(II)** toHaveBeenCalled
 - should call calculateAge function

and.callThrough()

```
describe('and.callThrough', function () {
    beforeAll(function () {
        spyOn(app, 'calculateAge').and.callThrough();
        app.assignToSwimmingCourse('Maria', '11/10/1997');
    });
    it('should call calculateAge function function ' +
        'when assignToSwimmingCourse is call', function () {
        expect(app.calculateAge).toHaveBeenCalled();
        expect(app.calculateAge).toHaveBeenCalledWith('11/10/1997');
    });
});
```

- - ▶ ® toHaveBeenCalled
 - ▼ @ and.callThrough
 - should call calculateAge function function when assignToSwimmingCourse is call

and.returnValue()

```
describe('and.returnValue', function () {
    var age;
    beforeAll(function () {
        spyOn(app, 'calculateAge').and.returnValue(10);
    });
    it('should call calculateAge and return 10', function () {
        age = app.calculateAge('11/10/2000');
        expect(age).toBe(10);
    });
    it('should call assignToSwimmingCourse and calculateAge should return 10', function () {
        age = app.assignToSwimmingCourse('Maria', '11/10/1980');
        expect(age).toEqual({name: 'Maria', age: 10, course: 'kids'});
    });
});
```

- and.returnValue

 an
 - should call calculateAge and return 10
 - should call assignToSwimmingCourse and calculateAge should return 10

and.callFake()

```
describe ('and.callFake', function () {
   var age;
   beforeAll(function () {
        spyOn(app, 'calculateAge').and.callFake(function (dateString) {
           var today = new Date('03/23/2000');
            var birthDate = new Date(dateString);
           var age = today.getFullYear() - birthDate.getFullYear();
           var m = today.getMonth() - birthDate.getMonth();
            if (m < 0 || (m === 0 && today.getDate() < birthDate.getDate())) {
                age--;
            return age;
       1);
    1);
    it('should call calculateAge fake function', function () {
        age = app.calculateAge('11/10/1999');
        expect (age) . toBe (0);
    1);
    it('should call assignToSwimmingCourse and calculateAge fake function', function () {
        age = app.assignToSwimmingCourse('Maria', '11/10/1980');
        expect(age).toEqual({name: 'Maria', age: 19, course: 'adults'});
    1);
});
            and.callFake
```

should call assignToSwimmingCourse and calculateAge fake function.

should call calculateAge fake function

calls.count()

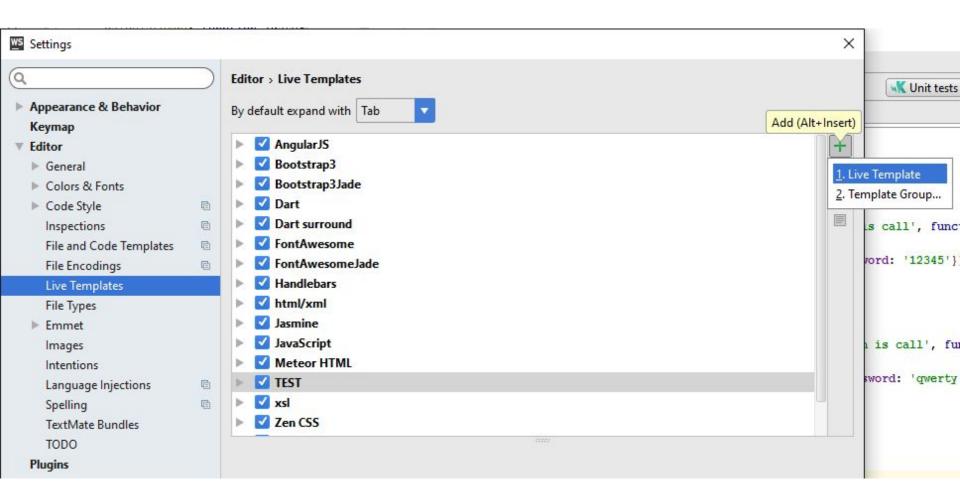
```
describe ('calls.count()', function () {
   var age:
    beforeAll(function () {
        spyOn(app, 'calculateAge').and.callThrough();
   it ('should notice that call calculateAge is call', function () {
        age = app.calculateAge('11/10/1999');
        expect(app.calculateAge.calls.count()).toBe(1);
    1);
    it ('should notice that calculateAge is call, ' +
        'when assignToSwimmingCourse is call ', function () {
        age = app.assignToSwimmingCourse('Maria', '11/10/1980');
        expect(app.calculateAge.calls.count()).toEqual(2);
    });
1);
           @ calls.count()
```

- - should notice that call calculateAge is call
 - should notice that calculateAge is call, when assignToSwimmingCourse is call

Live templates

File -> Settings -> Live Templates



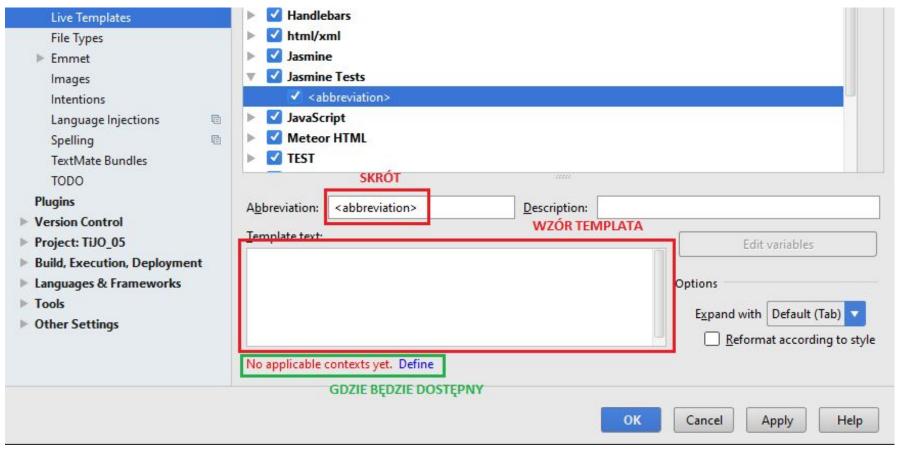


Live templates

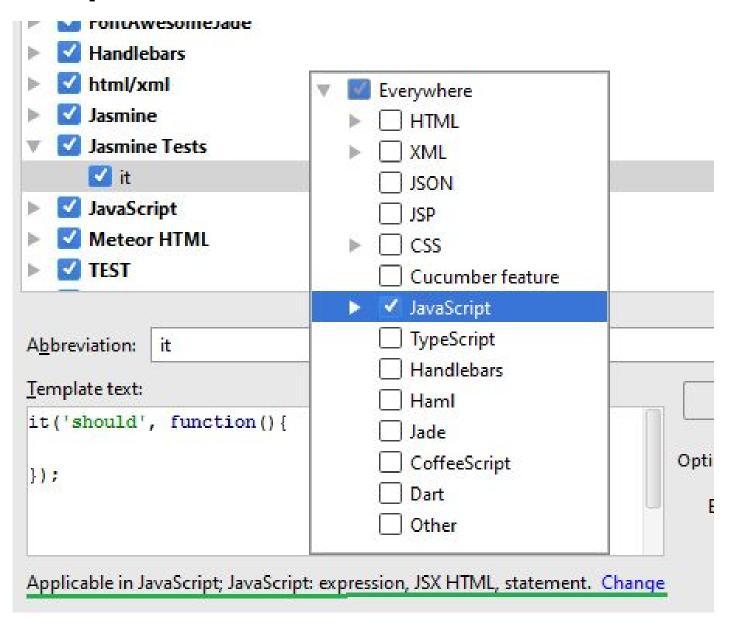
Template Group: Jasmine Tests



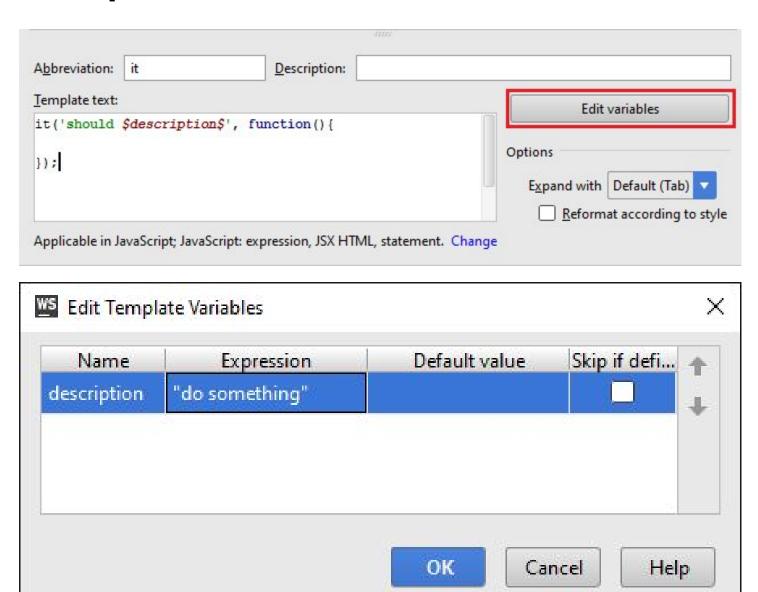
Do utworzonej grupy Jasmine Tests dodajemy nowy Live Template



Live templates - add context



Live templates - edit variable



Live templates

it -> TAB

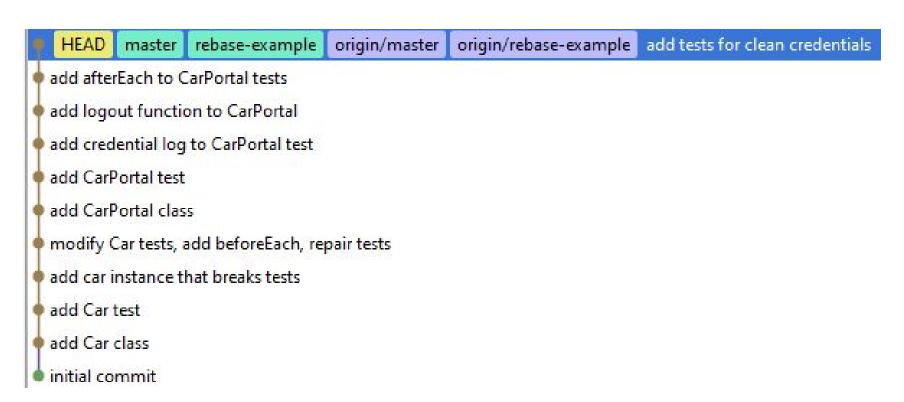
```
it('should do something', function(){
});
```



git rebase -i

git checkout -b rebase-example

git push origin rebase-example



git rebase -i HEAD~liczba_commitów

git rebase -i HEAD~5

```
pick bd2d694 add CarPortal test
pick 65d3bb3 add credential log to CarPortal test
pick 4b15a47 add logout function to CarPortal
pick 3b77a75 add afterEach to CarPortal tests
pick el6fa6f add tests for clean credentials
# Rebase 2e32d06..e16fa6f onto 2e32d06 (5 command(s))
# Commands:
# p, pick = use commit
‡ r, reword = use commit, but edit the commit message
# e, edit = use commit, but stop for amending
# s, squash = use commit, but meld into previous commit
# f, fixup = like "squash", but discard this commit's log message
# x, exec = run command (the rest of the line) using shell
# d, drop = remove commit
 These lines can be re-ordered; they are executed from top to bottom.
# If you remove a line here THAT COMMIT WILL BE LOST.
# However, if you remove everything, the rebase will be aborted.
Note that empty commits are commented out
```

git rebase -i HEAD~5 (edit)

```
pick bd2d694 add CarPortal test
pick 65d3bb3 add credential log to CarPortal test
pick 4b15a47 add logout function to CarPortal
edit 3b77a75 add afterEach to CarPortal tests
edit e16fa6f add tests for clean credentials
```

```
Stopped at 3b77a759f2d41c6415340b4929762008dcdc91df... add afterEach to CarPortal tests XXX You can amend the commit now, with
```

git commit --amend

Once you are satisfied with your changes, run

git rebase --continue

git rebase -i HEAD~5 (edit)

git commit --amend

```
add afterEach to CarPortal tests XXX
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
 Date: Sun Mar 20 16:17:49 2016 +0100
 interactive rebase in progress; onto 2e32d06
 Last commands done (4 commands done):
    pick 4b15a47 add logout function to CarPortal
    edit 3b77a75 add afterEach to CarPortal tests
 Next command to do (1 remaining command):
    edit e16fa6f add tests for clean credentials
 You are currently editing a commit while rebasing branch 'rebase-example' on '2e32d06'.
 Changes to be committed:
   modified: test/unit/app.spec.js
```

```
[detached HEAD 59fefbc] add afterEach to CarPortal tests XXX
Date: Sun Mar 20 16:17:49 2016 +0100
1 file changed, 3 insertions(+), 1 deletion(-)
```

git rebase -i HEAD~5 (edit)

git rebase --continue

```
C:\Users\Ania\Desktop\TiJO_05>git rebase --continue

Stopped at e16fa6f755205c798cb2ca097af9c43b4c1c5b53... add tests for clean credentials

You can amend the commit now, with

git commit --amend

Once you are satisfied with your changes, run

git rebase --continue
```

git rebase -i HEAD~5 (edit) git commit --amend

```
add tests for clean credentials YYY
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
            Sun Mar 20 16:20:49 2016 +0100
 Date:
 interactive rebase in progress; onto 2e32d06
 Last commands done (5 commands done):
    edit 3b77a75 add afterEach to CarPortal tests
     edit e16fa6f add tests for clean credentials
 No commands remaining.
 You are currently editing a commit while rebasing branch 'rebase-example' on '2e32d06'.
 Changes to be committed:
   modified: test/unit/app.spec.js
```

git rebase --continue

```
C:\Users\Ania\Desktop\TiJO_05>git commit --amend
[detached HEAD 2da7367] add tests for clean credentials YYY
Date: Sun Mar 20 16:20:49 2016 +0100
1 file changed, 6 insertions(+), 1 deletion(-)

C:\Users\Ania\Desktop\TiJO_05>git rebase --continue
Successfully rebased and updated refs/heads/rebase-example.
```

git rebase -i HEAD~5 (edit) - end effect

HEAD rebase-example add tests for clean credentials YYY add afterEach to CarPortal tests XXX add logout function to CarPortal add credential log to CarPortal test add CarPortal test add CarPortal class modify Car tests, add before Each, repair tests add car instance that breaks tests add Cartest add Car class initial commit

git log

```
2da7367 add tests for clean credentials YYY
59fefbc add afterEach to CarPortal tests XXX
4b15a47 add logout function to CarPortal
65d3bb3 add credential log to CarPortal test
bd2d694 add CarPortal test
2e32d06 add CarPortal class
c4a81e2 modify Car tests, add beforeEach, repair tests
9dedc7f add car instance that breaks tests
Ocecche add Car test
e26fead add Car class
OcebOdc initial commit
```

initial commit

git rebase -i

```
pick bd2d694 add CarPortal test
pick 65d3bb3 add credential log to CarPortal test
pick 4b15a47 add logout function to CarPortal
pick 59fefbc add afterEach to CarPortal tests XXX
pick 2da7367 add tests for clean credentials YYY
```

```
pick bd2d694 add CarPortal test
pick 65d3bb3 add credential log to CarPortal test
pick 4b15a47 add logout function to CarPortal
pick 59fefbc add afterEach to CarPortal tests XXX
squash 2da7367 add tests for clean credentials YYY
```

```
# Rebase 2e32d06..2da7367 onto 2e32d06 (5 command(s))
 Commands:
# p, pick = use commit
# r, reword = use commit, but edit the commit message
# e, edit = use commit, but stop for amending
# s, squash = use commit, but meld into previous commit
# f, fixup = like "squash", but discard this commit's log message
# x, exec = run command (the rest of the line) using shell
# d, drop = remove commit
 These lines can be re-ordered; they are executed from top to bottom.
 If you remove a line here THAT COMMIT WILL BE LOST.
# However, if you remove everything, the rebase will be aborted.
# Note that empty commits are commented out
```

```
# This is a combination of 2 commits.
# The first commit's message is:
add afterEach to CarPortal tests XXX
# This is the 2nd commit message:
add tests for clean credentials YYY
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
# Date:
         Sun Mar 20 16:17:49 2016 +0100
 interactive rebase in progress; onto 2e32d06
# Last commands done (5 commands done):
    pick 59fefbc add afterEach to CarPortal tests XXX
    squash 2da7367 add tests for clean credentials YYY
# No commands remaining.
# You are currently editing a commit while rebasing branch 'rebase-example' on '2e32d06'.
 Changes to be committed:
   modified: test/unit/app.spec.js
```

```
# This is a combination of 2 commits.
# The first commit's message is:
#add afterEach to CarPortal tests XXX
# This is the 2nd commit message:
#add tests for clean credentials YYY
improve CarPortal tests
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
 Date: Sun Mar 20 16:17:49 2016 +0100
 interactive rebase in progress; onto 2e32d06
# Last commands done (5 commands done):
    pick 59fefbc add afterEach to CarPortal tests XXX
    squash 2da7367 add tests for clean credentials YYY
 No commands remaining.
# You are currently editing a commit while rebasing branch 'rebase-example' on '2e32d06'.
 Changes to be committed:
   modified: test/unit/app.spec.js
```

```
[detached HEAD 1394fd3] improve CarPortal tests

Date: Sun Mar 20 16:17:49 2016 +0100

1 file changed, 9 insertions(+), 2 deletions(-)

Successfully rebased and updated refs/heads/rebase-example.
```

Przed rebasem Po rebasie rebase-example improve CarPortal tests HEAD HEAD rebase-example add tests for clean credentials YYY add afterEach to CarPortal tests XXX add logout function to CarPortal add logout function to CarPortal add credential log to CarPortal test add credential log to CarPortal test add CarPortal test add CarPortal test add CarPortal class add CarPortal class modify Car tests, add beforeEach, repair tests modify Car tests, add beforeEach, repair tests add car instance that breaks tests add car instance that breaks tests add Cartest add Cartest add Car class add Car class initial commit initial commit

```
pick 2e32d06 add CarPortal class
pick bd2d694 add CarPortal test
edit 65d3bb3 add credential log to CarPortal test
pick 4b15a47 add logout function to CarPortal
pick 1394fd3 improve CarPortal tests
```

```
it('should set username to maria and password to qwerty when login is call', function () {
    console.log('credentials');
    console.log(carPortal.credentials);
    carPortal.login('maria', 'qwerty');
    expect(carPortal.credentials).toEqual({username: 'maria', password: 'qwerty'});
});
```

git add . git commit --amend

1 file changed, 2 insertions (+)

add credential log to CarPortal test # Please enter the commit message for your changes. Lines starting # with '#' will be ignored, and an empty message aborts the commit. Sun Mar 20 16:16:13 2016 +0100 Date: # interactive rebase in progress; onto c4a81e2 # Last commands done (3 commands done): pick bd2d694 add CarPortal test edit 65d3bb3 add credential log to CarPortal test # Next commands to do (2 remaining commands): pick 4b15a47 add logout function to CarPortal pick 1394fd3 improve CarPortal tests # You are currently editing a commit while rebasing branch 'rebase-example' on 'c4a81e2'. # Changes to be committed: modified: test/unit/app.spec.js [detached HEAD 14a59e4] add credential log to CarPortal test Date: Sun Mar 20 16:16:13 2016 +0100

git rebase --continue

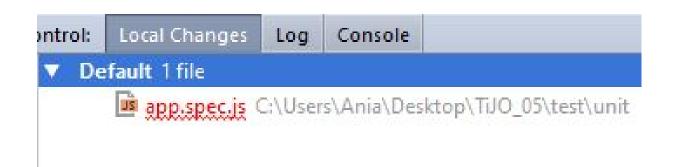
```
C:\Users\Ania\Desktop\TiJO_05>git rebase --continue
error: could not apply 1394fd3... improve CarPortal tests
```

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".

Could not apply 1394fd377f71adfed5614043c1769b8af14627fe... improve CarPortal tests



```
Local Changes (Read-only)
                                                     LF
                                                                                                                 CRLF
                                                                                                                           Changes from Server (revision 8564ae647fc7d1c5c9a92ef8349302... LF
                                                             Result
                                                     25
                                                             22
                                                                                 1);
             it ('should be set to 1998 on y
                                                     26
                                                                                                                           23
                 expect (car.year).toBe (1998
                                                     27
                                                             24
                                                                                 car = new app.Car('BMW', 2000);
                                                                                                                                                car = new app.Car('BMW', 2000)
             1);
                                                     28
                                                             25
                                                                                                                           25
        1);
                                                     29
                                                                                it ('should be set to 1998 on year
                                                             26
                                                                                                                           26
                                                                                                                                                it ('should be set to 1998 on ye
    });
                                                     30
                                                             27
                                                                                     expect (car.year).toBe (1998);
                                                                                                                           27
                                                                                                                                                    expect (car.year).toBe (1998
                                                     31
                                                             28
                                                                                });
                                                                                                                           28
                                                                                                                                                1);
    var carPortal:
                                                     32
                                                             29
                                                                            1);
                                                                                                                           29
                                                                                                                                            1);
    describe ('CarPortal', function () {
                                                     33
                                                             30
                                                                        1);
                                                                                                                           30
                                                                                                                                       1);
         carPortal = new app.CarPortal();
                                                     34
                                                             31
                                                                                                                           31
        afterEach(function () {
                                                X >> 35
                                                                        var carPortal:
                                                                                                                           32
                                                                                                                                       var carPortal:
             carPortal.logout();
                                                     36
                                                             33
                                                                        describe ('CarPortal', function () {
                                                                                                                           33
                                                                                                                                       describe('CarPortal', function () {
                                                     37
        1);
                                                             34
                                                                            carPortal = new app.CarPortal();
                                                                                                                           34
                                                                                                                                            carPortal = new app.CarPortal();
         it ('should set username to john an
                                                     38
                                                             35
                                                                                                                           35
             carPortal.login('john', '12345
                                                     39
                                                             36
                                                                            it ('should set username to john and r
                                                                                                                                            it ('should set username to john an-
                                                                                                                           36
             expect (carPortal.credentials).
                                                             37
                                                                                 carPortal.login('john', '12345');
                                                                                                                           37
                                                                                                                                                carPortal.login('john', '12345
                                                     41
        1);
                                                             38
                                                                                 expect (carPortal.credentials).toF
                                                                                                                           38
                                                                                                                                                expect(carPortal.credentials).
        it('should clean credentials after
                                                X >> 42
                                                             39
                                                                                                                           39
                                                                            1);
                                                                                                                                            1);
             expect (carPortal.credentials).
                                                     43
                                                             40
                                                                            it('should set username to maria and
                                                                                                                                            it('should set username to maria a
                                                     44
        1);
                                                              41
                                                                                 console.log(carPortal.credentials
                                                                                                                           41 «×
                                                                                                                                                console.log('credentials');
         it ('should set username to maria a
                                                     45
                                                                                 carPortal.login('maria', 'gwerty
                                                                                                                           42
                                                                                                                                                console.log(carPortal.credenti
                                                × >> 46
             carPortal.login('maria', 'qwer
                                                             43
                                                                                 expect (carPortal.credentials).toF
                                                                                                                                                carPortal.login('maria', 'qwer
                                                                                                                           43
             expect (carPortal.credentials).
                                                     47
                                                             44
                                                                            });
                                                                                                                           44
                                                                                                                                                expect (carPortal.credentials).
        1);
                                                     48
                                                             45
                                                                                                                           45
                                                                                                                                           1);
                                                                        1);
         it('should clean credentials after
                                                             46
                                                                                                                                       1);
             expect (carPortal.credentials).
                                                     50
                                                             47
                                                                                                                           47
        1);
                                                     51
                                                                                                                           48
    1);
                                                     52
                                                     53
                                                     54
```

git status

```
C:\Users\Ania\Desktop\TiJO_05>git status
interactive rebase in progress; onto c4a81e2
Last commands done (5 commands done):
  pick 4b15a47 add logout function to CarPortal
  pick 1394fd3 improve CarPortal tests
  (see more in file .git/rebase-merge/done)
No commands remaining.
You are currently rebasing branch 'rebase-example' on 'c4a81e2'.
  (all conflicts fixed: run "git rebase --continue")
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)
        modified: test/unit/app.spec.is
```

git rebase -- continue

improve CarPortal tests

```
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
# interactive rebase in progress; onto c4a81e2
# Last commands done (5 commands done):
# pick 4b15a47 add logout function to CarPortal
# pick 1394fd3 improve CarPortal tests
# No commands remaining.
# You are currently rebasing branch 'rebase-example' on 'c4a81e2'.
# Changes to be committed:
# modified: test/unit/app.spec.js
#
```

```
C:\Users\Ania\Desktop\TiJO_05>git rebase --continue
[detached HEAD f6f181f] improve CarPortal tests
1 file changed, 9 insertions(+), 1 deletion(-)
Successfully rebased and updated refs/heads/rebase-example.
```

git push origin rebase-example

wypchnięcie zmian zostało odrzucone.

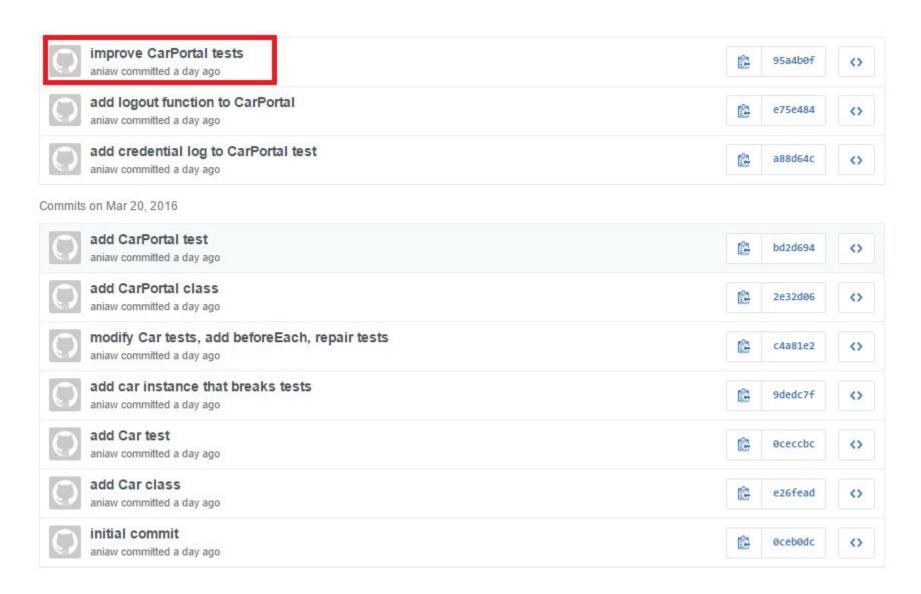
UWAGA - NIEBEZPIECZNE



git push -f origin rebase-example

```
C:\Users\Ania\Desktop\TiJO_05>git push -f origin rebase-example
Username for 'https://github.com': aniaw
Password for 'https://aniaw@github.com':
Counting objects: 14, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (11/11), done.
Writing objects: 100% (14/14), 1.30 KiB | 0 bytes/s, done.
Total 14 (delta 6), reused 0 (delta 0)
To https://github.com/aniaw/TiJO_05.git
+ e16fa6f...95a4b0f rebase-example -> rebase-example (forced update)
```

git push -f origin rebase-example



git push -f origin rebase-example



