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## how to use track by inside ngFor angular 2



tried every syntax i can guess couldnt make it works !

```
<!-- THIS WORKS FINE -->
<ion-card *ngFor="#post of posts">
  {{post|json}}
</ion-card>

<!-- BLANK PAGE -->
<ion-card *ngFor="#post of posts track by post.id">
  {{post|json}}
</ion-card>

<!-- Exception : Cannot read property 'id' of undefined -->
<ion-card *ngFor="#post of posts;trackBy:post.id">
  {{post|json}}
</ion-card>

<!-- Exception : Cannot read property 'undefined' of undefined -->
<ion-card *ngFor="#post of posts;trackBy:posts[index].id">
  {{post|json}}
</ion-card>

<!-- Blank page no exception raised ! -->
<ion-card *ngFor="#post of posts;#index index;trackBy:posts[index].id">
  {{post|json}}
</ion-card>
```

the only approach that worked for me was

### 1. Creating method in controller Class

```
identify(index,post:Post){ return post.id }
```

and

```
<ion-card *ngFor="#post of posts;trackBy:identify">
</ion-card>
```

is this is only way ? cannot i just specify the properting inline for trackBy ?

angular2 ngfor

edited Jul 21 '16 at 19:29



Mostafa Fateen

345 3 19

asked Mar 31 '16 at 1:57



Zalaboza

2,522 8 32 70

Can you please update me what is the use of trackBy in ngFor? Eric's answer seems to be working fine. – micronyks Mar 31 '16 at 3:13

@micronyks It allows you to pass a function to \*ngFor that NgFor forwards to  
<https://angular.io/docs/ts/latest/api/core/IterableDifferFactory-interface.html>  
[github.com/angular/angular/blob/master/modules/angular2/src/...](https://github.com/angular/angular/blob/master/modules/angular2/src/...) (don't know how that diffing is working exactly yet though) – Günter Zöchbauer Mar 31 '16 at 5:19

<https://angular.io/docs/ts/latest/api/core/IterableDifferFactory-interface.html> not found. Any other link? – [micronyks](#) Mar 31 '16 at 5:37

1 Still I'm not clear with clean usage of `trackBy` . – [micronyks](#) Mar 31 '16 at 5:40

i would be very helpful if anyone here post example with the usage of `trackBy` in `*ngFor` – [Pardeep Jain](#) Mar 31 '16 at 5:53

## 4 Answers

As pointed out in [@Eric](#) comment, and after lots of reading and playing around, here is how to use `trackBy` in angular2

1. the first thing you need to know its not same syntax as angular1, now you need to separate it from the for loop with a `;` .

### Usage 1: Track by property of object

```
<ion-card *ngFor="let post of posts;trackBy:post?.id">
</ion-card>
---or---
<ion-card *ngFor="let post of posts;trackBy:trackByFn">
</ion-card>
```

here you ask angular2 to

1. create a local variable `post`;
2. you tell `trackBy` to wait until this local variable is ready "you do that by using elvis operator 'the question mark after the variable name', then use its id as tracker.

so

```
*ngFor="#post of posts;trackBy:post?.id"
```

is what same as angular's 1

```
ng-repeat="post in posts track by post.id"
```

### Usage 2: Track using your own Function

```
@Page({
  template: `
    <ul>
      <li *ngFor="#post of posts;trackBy:identify">
        {{post.data}}
      </li>
    </ul>
  `
})
export class HomeworkAddStudentsPage {
  posts:Array<{id:number,data:string}>;

  constructor() {
    this.posts = [ {id:1,data:'post with id 1'},
                   {id:2,data:'post with id 2'} ];
  }

  identify(index,item){
    //do what ever logic you need to come up with the unique identifier of your item in
    loop, i will just return the object id.
    return post.id
  }
}
```

`trackBy` can take a name of callback, and it will call it for us supplying 2 paramaters, the index of the loop, and the current item;

Angular 1 to get same effect i used to do

```
<li ng-repeat="post in posts track by identify($index,post)"></li>

app.controller(function($scope){
  $scope.identify = function(index, item) {return item.id;};
});
```

edited Nov 10 '16 at 0:06



[ikh](#)

1,417 10 16

answered Mar 31 '16 at 10:52



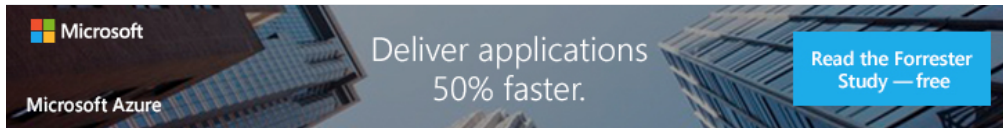
[Zalaboza](#)

2,522 8 32 70

Pretty well explained +1 – [Pankaj Parkar](#) Jun 24 '16 at 16:58

What if the `item` is an immutable.js map, and to access the `id`, you need to do `item.get('id')`? – [Birowsky](#) Jun 30 '16 at 11:30

- 1 I do not think that `trackBy:post?.id` works. In my case, the state of the child element is lost. A separate `trackBy` function works though (but is definitely not convenient). By the way, the elvis operator itself indicates that something is wrong. If it worked, then you would not have to use it here (unless the collection items can be null). – [Joel Richard](#) Jul 6 '16 at 13:37
- 4 I confirm, `trackBy` only works with functions, it doesn't error with `post?.id` but it will trackBy "null" in this case (you can inspect the html and see that), which means that it doesn't track at all, you just don't see an error @Zalaboza could you update your post so that it is not misleading for new users? – [Olivier](#) Nov 25 '16 at 14:45
- 1 In addition to @Olivier comment. Starting with Angular 2.4.1, using `*ngFor="#post of posts;trackBy:post?.id"` will throw an error, because `trackBy` only accepts functions – [Volker Andres](#) Dec 22 '16 at 12:22



As you already recognized, using a function is the only way to use `trackBy` in Angular 2

```
<ion-card *ngFor="#post of posts;trackBy:identify"></ion-card>
```

The official documentation states that  
<https://angular.io/docs/ts/latest/api/common/index/NgFor-directive.html>

All the other information about `<ion-card *ngFor="let post of posts;trackBy:post?.id"></ion-card>` is wrong. Starting with Angular 2.4.1 this will also throw an error in the application.

answered Dec 22 '16 at 12:56



[Volker Andres](#)

229 3 12

Mi-ho's answer doesn't work with the latest versions of Angular2 / Typescript, because the `#i` syntax is deprecated. Use instead :

```
<li *ngFor="let post of posts; let i = index">
  {{i}}
</li>
```

answered Jan 4 at 15:20



[Jeremy Thille](#)

4,597 1 14 26

That doesn't really answer the question. The question was how to use `trackBy` – [Günter Zöchbauer](#) Jan 4 at 16:00

- 1 Indeed, my bad. But that gives an index, and that's actually what I was looking for when I landed here :) – [Jeremy Thille](#) Jan 4 at 18:58

This simple solution worked for my scenario

```
<ion-card *ngFor="let post of posts;let i = index">
  {{i+1}}
</ion-card>
```

**EDIT:** As suggested by Jeremy Thille below, you should use `let` instead of `#`, as `#` is deprecated in the latest versions of Angular2.

edited Jan 4 at 15:57

answered Dec 30 '16 at 14:50



[mi-ho](#)

10 5

`#` is deprecated and doesn't work in the latest versions of Angular2. Use instead : `*ngFor="let post of posts; let i = index"` – [Jeremy Thille](#) Jan 4 at 15:17

Thanks will update my suggestion – [mi-ho](#) Jan 4 at 15:51

I used angular-cli and it worked there, I believe. But it seems that it won't work with other versions – [mi-ho](#) Jan 4 at 15:59

That doesn't really answer the question. The question was how to use `trackBy` – [Günter Zöchbauer](#) Jan 4 at 16:00

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This pops up when you search "Angular2 track by index", what I searched for, so let it stay here for users who look for exactly this simple answer. – [mi-ho](#) Jan 5 at 11:38

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