

How to use ng-bootstrap Timepicker based on Bootstrap4 in Angular 8

2019.7.11

by *Shuichi Ohtsu*



Full source code

<https://github.com/Ohtsu/ng8-bootstrap4-accordion>

Video commentary (Japanese)

<https://youtu.be/oo0GLv8e5ng>

Video commentary (English)

<>

About creating a project

Here, I will introduce how to use ng-bootstrap Timepicker based on Bootstrap4 in Angular 8.

As for how to set Bootstrap4 from the project creation stage, please see the *How to set Bootstrap4 environment in Angular8* <https://youtu.be/NoSkIVvf5o8>, which I have already published.

This time, we are going to download such a pre-set project from GitHub, and then proceed with incorporating Timepicker into it.

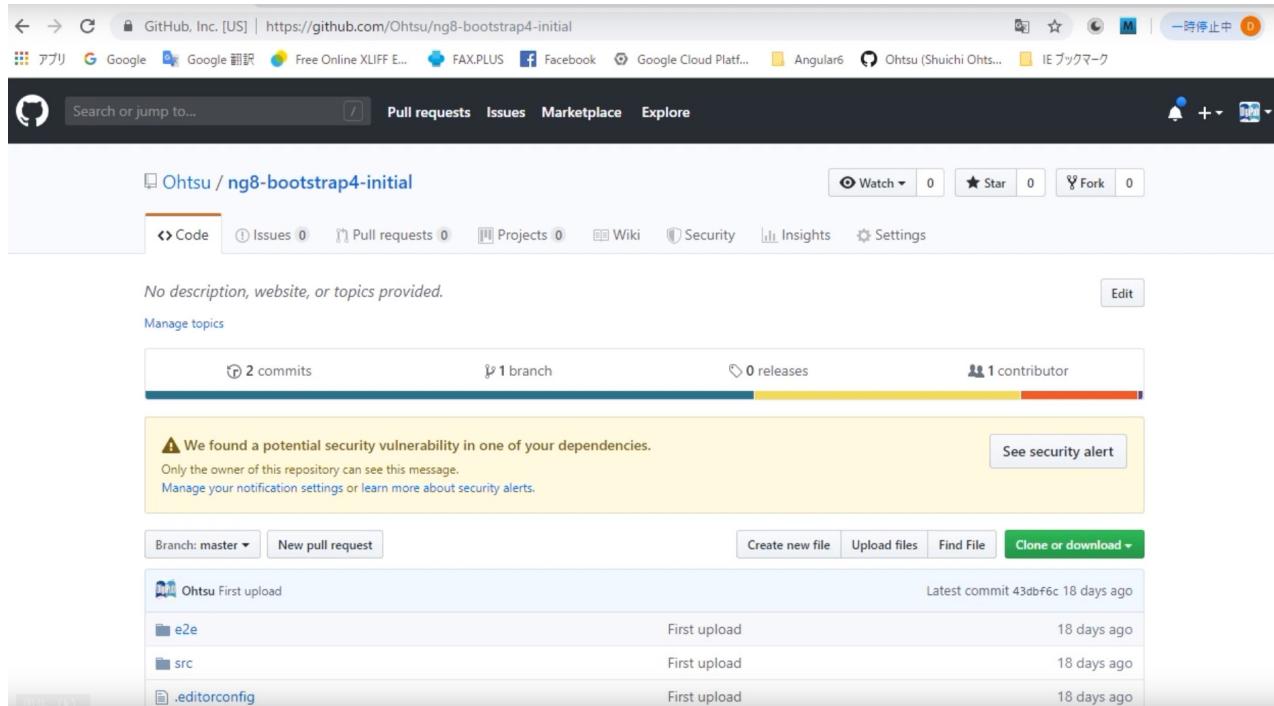
For the contents of the project, please see the full source code.

Download Project Source with Bootstrap 4 from GitHub

First, download the full source code of the project incorporating Bootstrap4 from GitHub.

The URL is

<https://github.com/Ohtsu/ng8-bootstrap4-initial>.



No description, website, or topics provided.

Manage topics

2 commits 1 branch 0 releases 1 contributor

⚠ We found a potential security vulnerability in one of your dependencies.
Only the owner of this repository can see this message.
[Manage your notification settings](#) or [learn more about security alerts](#).

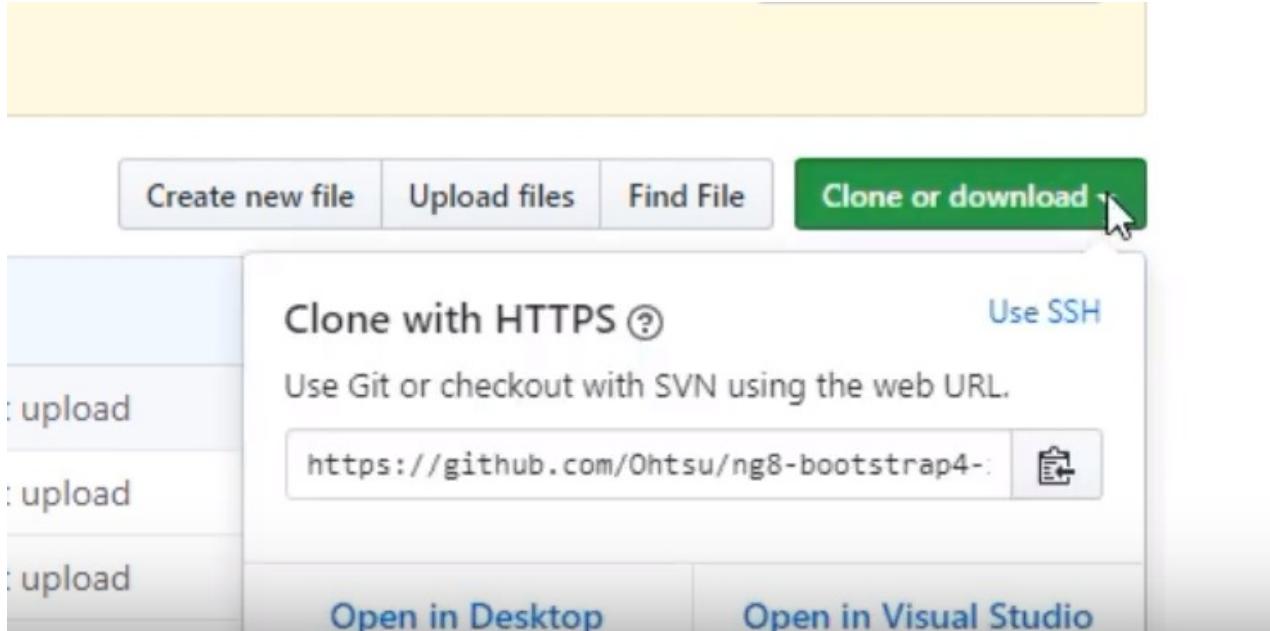
See security alert

Branch: master ▾ New pull request Create new file Upload files Find File Clone or download ▾

Ohtsu First upload	Latest commit 43dbf6c 18 days ago
e2e	First upload 18 days ago
src	First upload 18 days ago
.editorconfig	First upload 18 days ago

When the page is displayed, click the green *Clone or download* button on the right.

Then the download address will be displayed, so click the copy icon on the right and copy the address.



Generate a project

Open a command prompt, move to a suitable directory, and paste the copied address in that directory, following `git clone`. Type

```
git clone https://github.com/Ohtsu/ng8-bootstrap4-initial.git.
```

Then the download will start.

```
ohtsu@Tiger64:/mnt/c/mvorp/test/git$ git clone https://github.com/Ohtsu/ng8-bootstrap4-initial.git
Cloning into 'ng8-bootstrap4-initial'...
```

Launch Visual Studio Code

Next, enter the directory of the generated project,

```
cd ng8-bootstrap4-initial
```

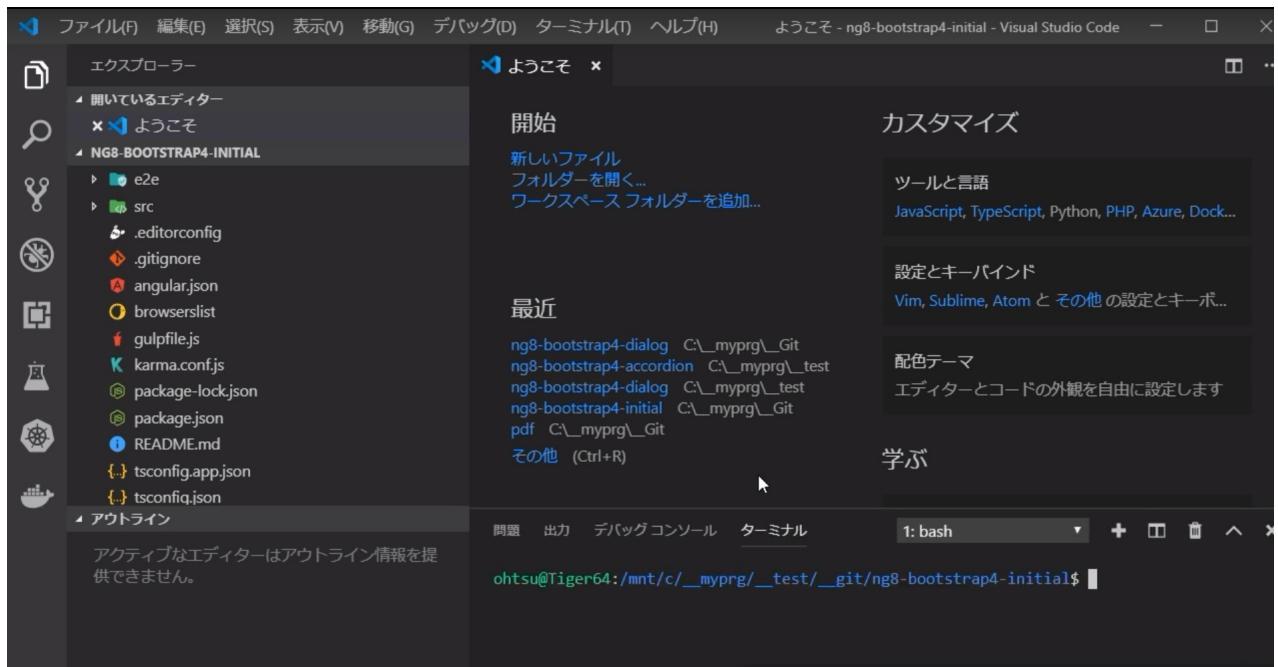
Start Visual Studio Code. Type

```
code .
```



Once VSCode starts up,

Press `ctrl + `` to open a terminal window.

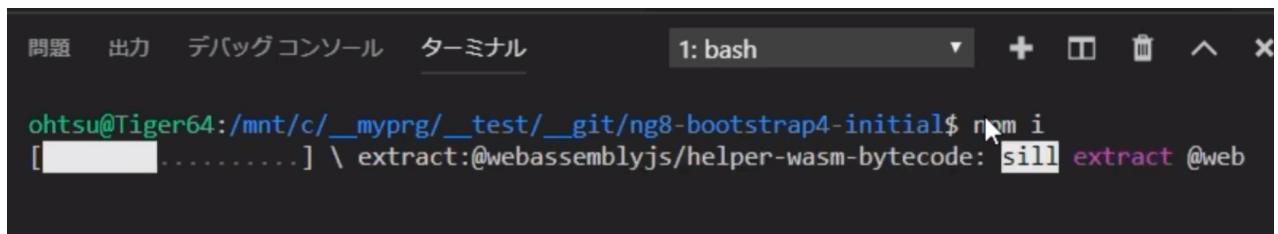


And type

```
npm i
```

to install the required libraries for the project.

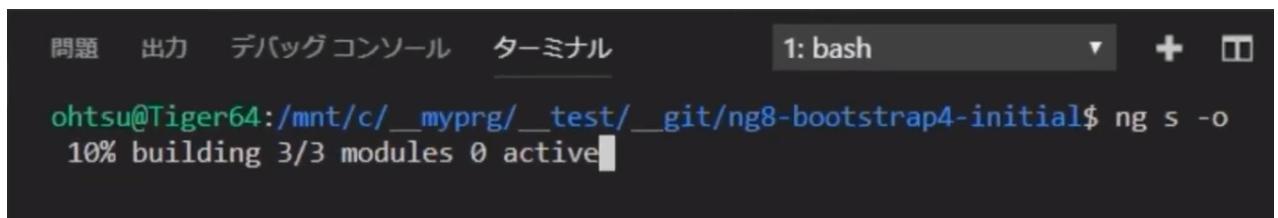
This process takes some time.



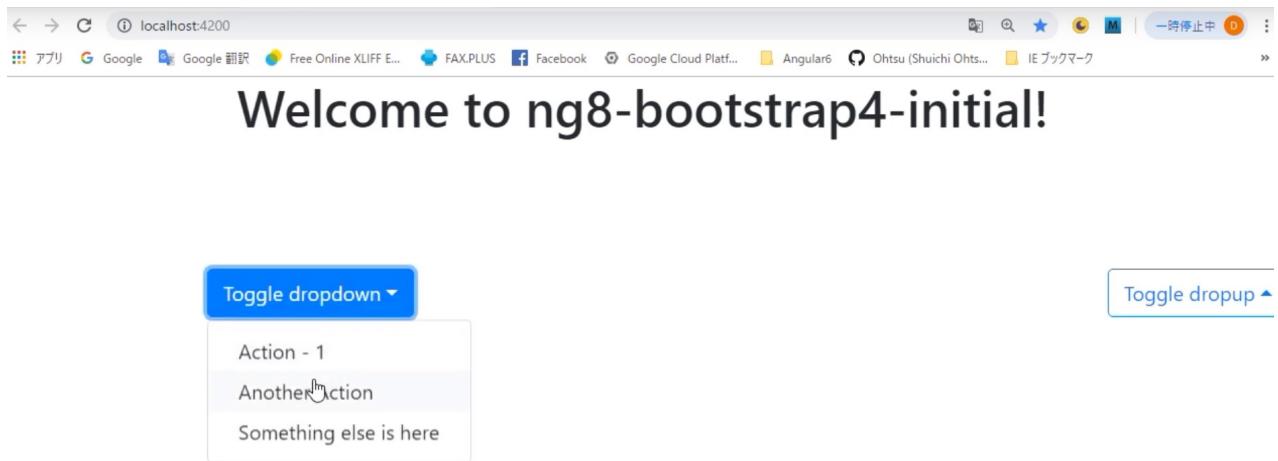
Confirming Project Launch

Next, check if the project can be launched. Type

```
ng s -o.
```



The browser will open automatically, with drop-downs and drop-ups.



OK.

Create backup with Gulp

At this stage, make a backup of the source before change. However, since it is not necessary to back up related libraries, we are going to exclude files under `node_modules`.

Since I have already included `gulpfile.js` for such backup, we are going to execute it. Type

```
gulp -m Initial.
```

The `-m` option is the string to be added to the created project name.

```
問題 出力 デバッグコンソール ターミナル 1: bash + □ ■ ▲
ohtsu@Tiger64:/mnt/c/_myprg/_test/_git/ng8-bootstrap4-initial$ gulp -m Initial
[19:39:23] Using gulpfile /mnt/c/_myprg/_test/_git/ng8-bootstrap4-initial/gulpfile.js
[19:39:23] Starting 'default'...
current_dir ----- ng8-bootstrap4-initial
time_version ----- 201907071939
target_path ----- ../ng8-bootstrap4-initial_201907071939_Initial
message ----- Initial
[19:39:23] Finished 'default' after 282 ms
```

Next, create a project for Timepicker test. Type

```
gulp -m ForTimepicker.
```

```
問題 出力 デバッグコンソール ターミナル 1: bash + □ ■ ▲
ohtsu@Tiger64:/mnt/c/_myprg/_git/ng8-bootstrap4-initial$ gulp -m ForTimepicker
```

Next, open the file explorer, copy the created Timepicker test project together with the directory, and

paste it into the appropriate directory.

ク (C) > _myprg > _test >			
名前	更新日時	種類	サイズ
__Git	2019/07/07 19:39	ファイル フォルダー	
__Old	2019/07/12 17:56	ファイル フォルダー	
Alpine	2018/12/16 20:25	ファイル フォルダー	
Docker	2018/12/18 19:07	ファイル フォルダー	
Express	2018/12/18 18:44	ファイル フォルダー	
mean_stack_on_docker	2019/03/20 19:36	ファイル フォルダー	
mean_stack_on_docker_ver1.0	2019/03/20 19:20	ファイル フォルダー	
ng8-bootstrap4-accordion	2019/07/10 11:09	ファイル フォルダー	
ng8-bootstrap4-dialog	2019/07/07 20:00	ファイル フォルダー	
ng8-bootstrap4-fontawesome	2019/07/04 9:40	ファイル フォルダー	
ng8-bootstrap4-fontawesome_201907040937_BeforeAddF...	2019/07/04 9:37	ファイル フォルダー	
ng8-bootstrap4-initial_201907121801_ForTimepicker	2019/07/12 18:01	ファイル フォルダー	

And change the directory name to ng8-bootstrap4-timepicker.

ng8-bootstrap4-fontawesome	2019/07/04 9:40	ファイル フォルダー
ng8-bootstrap4-fontawesome_201907040937_BeforeAddF...	2019/07/04 9:37	ファイル フォルダー
ng8-bootstrap4-timepicker	2019/07/12 18:01	ファイル フォルダー

Then open a command prompt and change to this directory.

And type

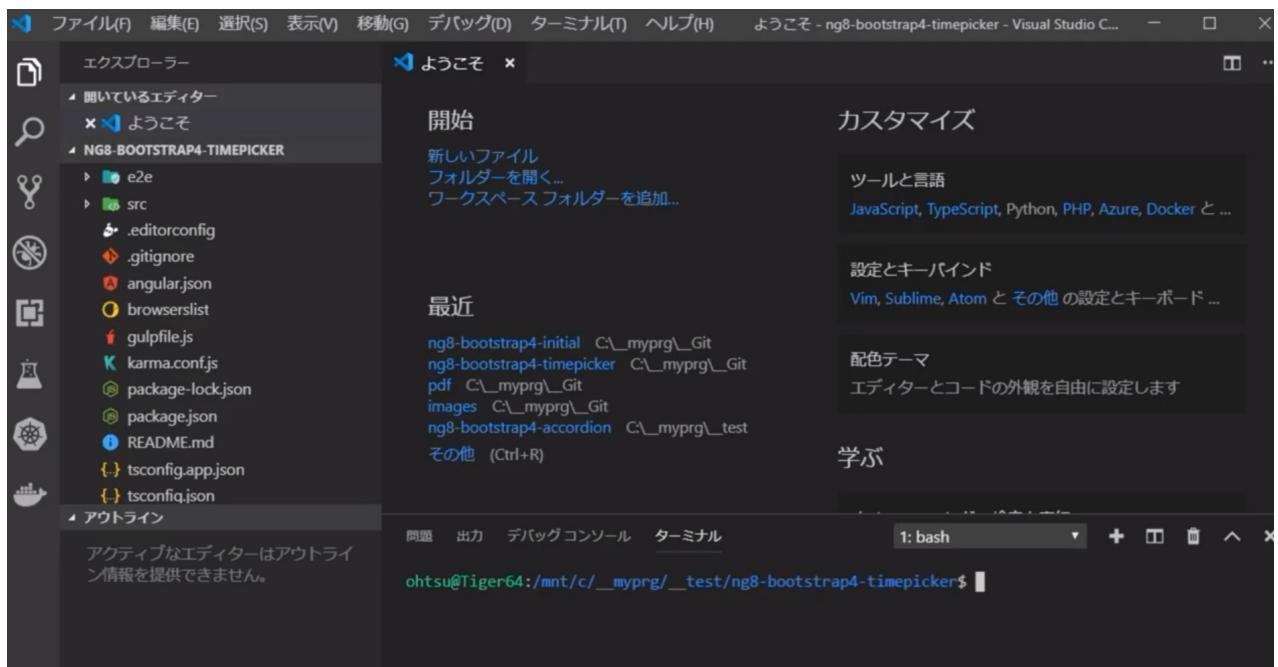
code .

to open VSCode.

```
$ cd ng8-bootstrap4-timepicker  
/ng8-bootstrap4-timepicker$ code ...
```

Once VSCode starts up,

Press `ctrl + `` to open a terminal window.



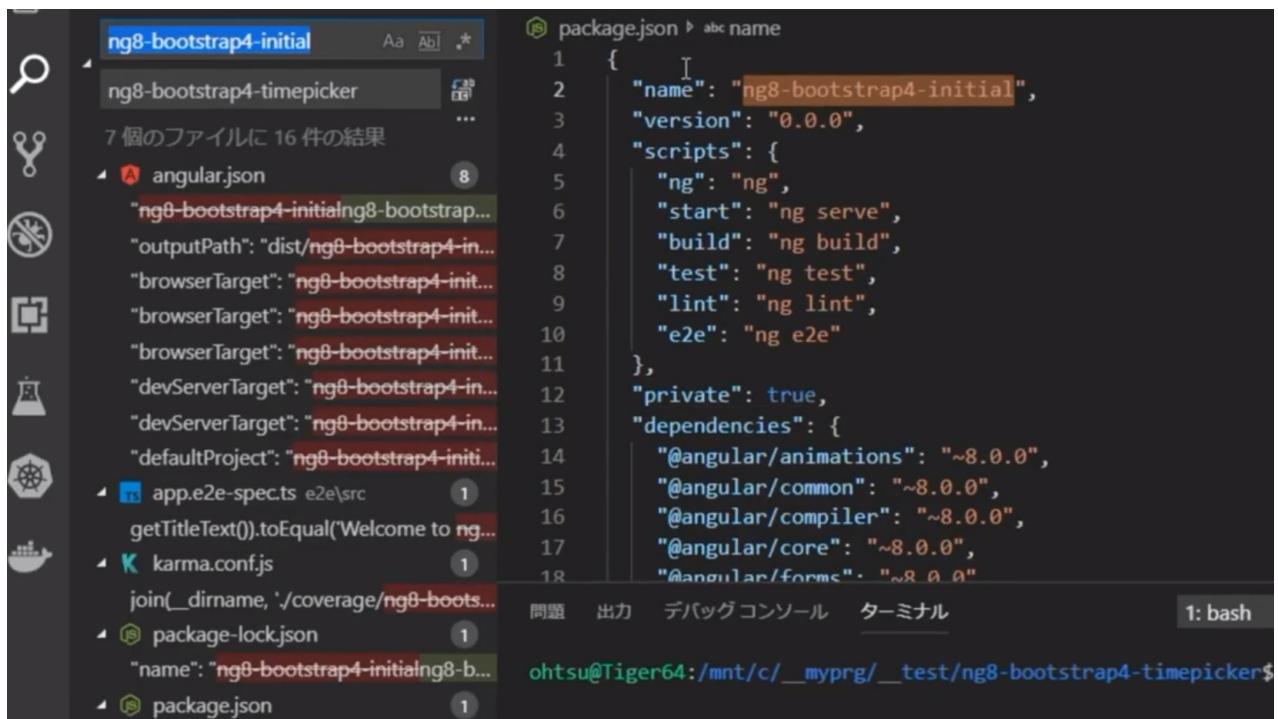
Change project name

Next, we are going to change the contents of the project.

First, change the project name.

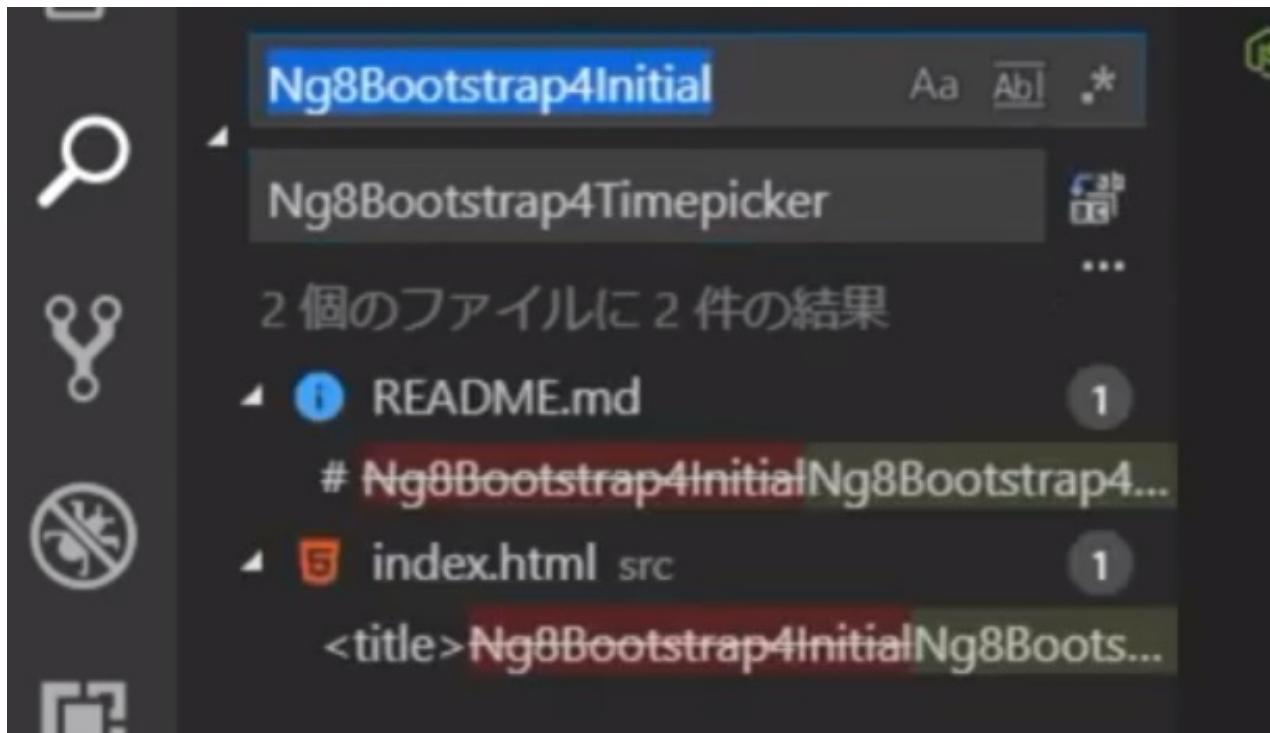
If you open the `package.json` file, you can see that the project name is `ng8-bootstrap4-initial`. Change this to `ng8-bootstrap4-timepicker`.

Click the search icon on the left to replace the source of the entire project.



Next, there are Pascal cases, that is, they are separated by capital letters, not -, so change

Ng8Bootstrap4Initial to Ng8Bootstrap4Timepicker.



Next type

npm i

to install the library again.

A screenshot of a terminal window. The title bar says "問題 22" and "出力 デバッグコンソール ターミナル". The status bar says "1: bash". The command "npm i" is being typed into the terminal. The output shows a progress bar and the message "[.....] | diffTrees: sill install generateActionsToTake".

This process takes some time.

Also check if the project can be launched. Type

ng s -o.

A screenshot of a terminal window. The title bar says "問題 6" and "出力 デバッグコンソール ターミナル". The status bar says "1: bash". The command "ng s -o" is being typed into the terminal. The output shows "10% building 3/3 modules 0 active".

The browser will open automatically, with drop-downs and drop-ups.

Welcome to ng8-bootstrap4-timepicker!



OK.

Add Timepicker

Next, open the site of *ng-bootstrap* and refer to the sample program of Timepicker.

The URL is

<https://ng-bootstrap.github.io/#/home>.



Bootstrap widgets

The angular way

Angular widgets built from the ground up using only Bootstrap 4 CSS with APIs designed for the Angular ecosystem

No dependencies on 3rd party JavaScript.

[Demo](#)

[Installation](#)

Currently at v5.0.0

Now click on the Demo button and click Timepicker from the left menu.

And *Global configuration of timepickers* is displayed.

We are going to import this setting.

Popover
Progressbar
Rating
Table
Tabset
Timepicker
Toast
Tooltip
Typeahead

Positioning

🔗 Global configuration of timepickers

[Code](#) [StackBlitz](#)

This timepicker uses customized default values.

13 : 30 : 00

First, click on the `Code` button on the top right to display its source.

First, copy the HTML sentence.

Global configuration of timepickers

[Code](#) [StackBlitz](#)

```
<p>This timepicker uses customized default values.</p>
<ngb-timepicker [(ngModel)]="time"></ngb-timepicker>
```

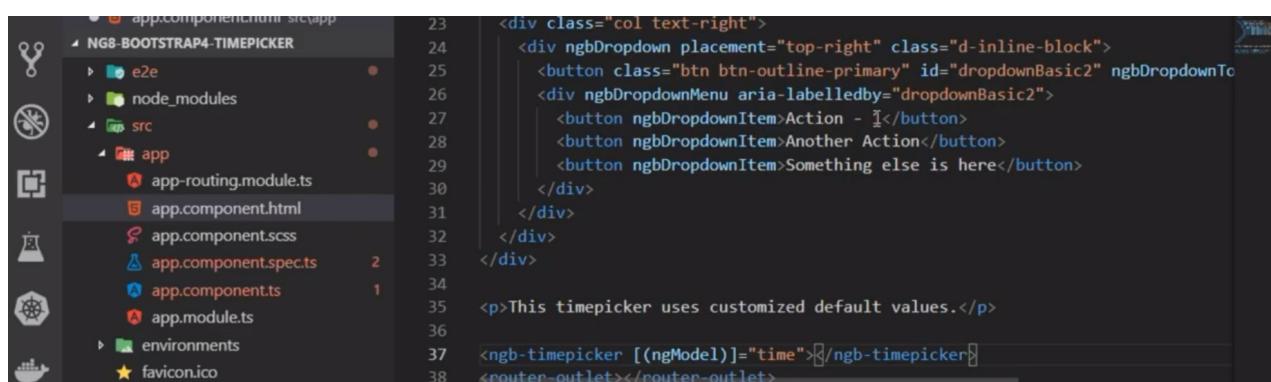
This timepicker uses customized default values.

13 : 30 : 00

Go back to VSCode and open the `app.component.html` file in `src/app`.

Paste the copied HTML here.

Also, comment out pull-down and pull-up related parts.



```
● app.component.html src\app
  ▲ NG8-BOOTSTRAP4-TIMEPICKER
    > e2e
    > node_modules
    ▲ src
      ▲ app
        app-routing.module.ts
        app.component.html
        app.component.scss
        app.component.spec.ts
        app.module.ts
      environments
      favicon.ico

  23  <div class="col text-right">
  24    <div ngbDropdown placement="top-right" class="d-inline-block">
  25      <button class="btn btn-outline-primary" id="dropdownBasic2" ngbDropdownTc
  26        <div ngbDropdownMenu aria-labelledby="dropdownBasic2">
  27          <button ngbDropdownItem>Action - 1</button>
  28          <button ngbDropdownItem>Another Action</button>
  29          <button ngbDropdownItem>Something else is here</button>
  30      </div>
  31    </div>
  32  </div>
  33  </div>
  34  <p>This timepicker uses customized default values.</p>
  35  <ngb-timepicker [(ngModel)]="time"></ngb-timepicker>
  36
  37  <router-outlet></router-outlet>
  38
```

Return to the browser and open the file of TypeScript.

Global configuration of timepickers

Code StackBlitz

```
timepicker-config.html timepicker-config.ts
```

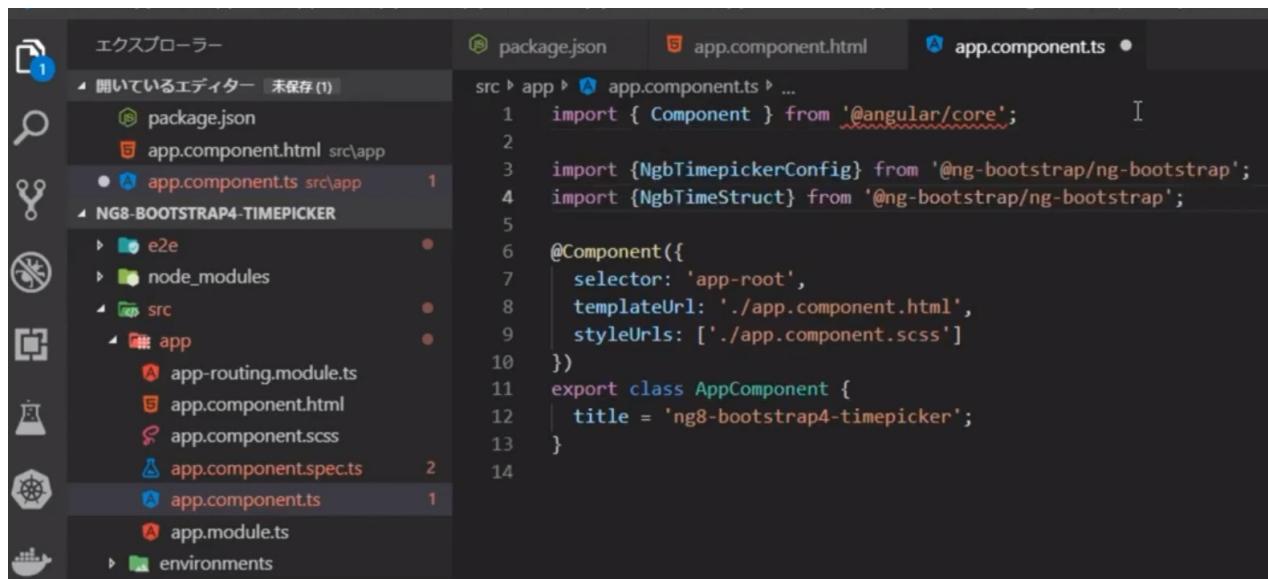
```
import {Component} from '@angular/core';
import {NgbTimepickerConfig} from '@ng-bootstrap/ng-bootstrap';
import {NgbTimeStruct} from '@ng-bootstrap/ng-bootstrap';

@Component({
  selector: 'ngbd-timepicker-config',
  templateUrl: './timepicker-config.html',
  providers: [NgbTimepickerConfig] // add NgbTimepickerConfig to the component providers
})
export class NgbdTimepickerConfig {
  time: NgbTimeStruct = {hour: 13, minute: 30, second: 0};
```

First of all, it is necessary to add an import part.

Go back to VSCode and open the `app.component.ts` file in `src/app`.

Paste the copied import part here.



The screenshot shows the VSCode interface. On the left is the Explorer sidebar displaying the project structure. In the center is the Code Editor with the file `app.component.ts` open. The code in the editor is:

```
src > app > app.component.ts > ...
1 import { Component } from '@angular/core';
2
3 import {NgbTimepickerConfig} from '@ng-bootstrap/ng-bootstrap';
4 import {NgbTimeStruct} from '@ng-bootstrap/ng-bootstrap';
5
6 @Component({
7   selector: 'app-root',
8   templateUrl: './app.component.html',
9   styleUrls: ['./app.component.scss']
10 })
11 export class AppComponent {
12   title = 'ng8-bootstrap4-timepicker';
13 }
```

Go back to your browser and copy the providers part.

```

timepicker-config.ts

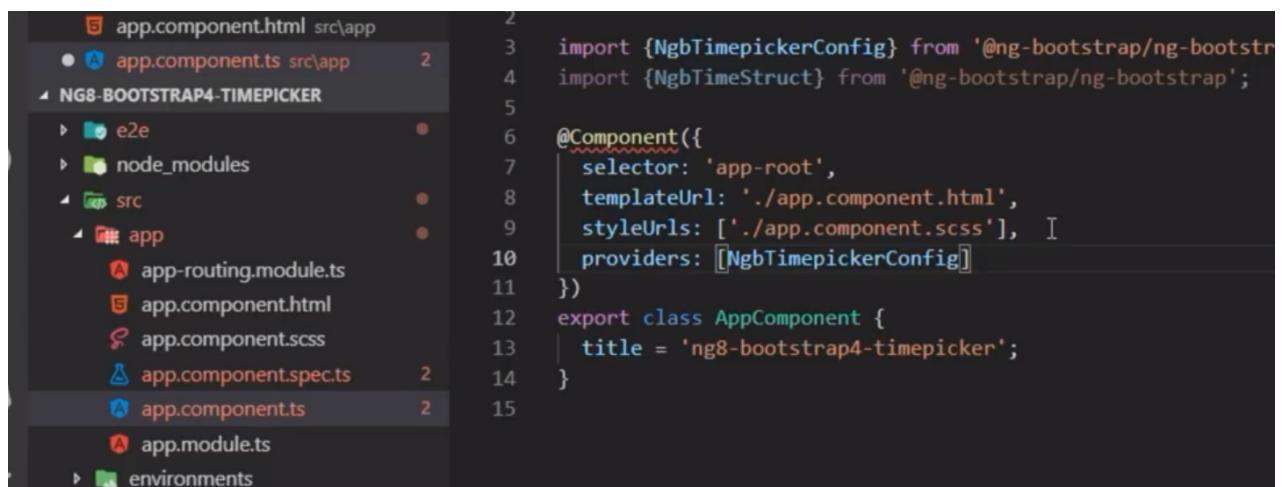
import {Component} from '@angular/core';
import {NgbTimepickerConfig} from '@ng-bootstrap/ng-bootstrap';
import {NgbTimeStruct} from '@ng-bootstrap/ng-bootstrap';

@Component({
  selector: 'ngbd-timepicker-config',
  templateUrl: './timepicker-config.html',
  providers: [NgbTimepickerConfig] // add NgbTimepickerConfig to the component's provider list
})
export class NgbdTimepickerConfig {
  time: NgbTimeStruct = {hour: 13, minute: 30, second: 0};

  constructor(config: NgbTimepickerConfig) {
    // customize default values of ratings used by this component tree
    config.seconds = true;
    config.spinners = false;
  }
}

```

Return to VSCode, open the `app.component.ts` file and paste the providers part here.



```

app.component.html src\app
● A app.component.ts src\app 2
NG8-BOOTSTRAP4-TIMEPICKER
  ▶ e2e
  ▶ node_modules
  ▶ src
    ▶ app
      A app-routing.module.ts
      G app.component.html
      S app.component.scss
      A app.component.spec.ts 2
      A app.component.ts 2
      A app.module.ts
    ▶ environments

```

```

2
3 import {NgbTimepickerConfig} from '@ng-bootstrap/ng-bootstrap';
4 import {NgbTimeStruct} from '@ng-bootstrap/ng-bootstrap';
5
6 @Component({
7   selector: 'app-root',
8   templateUrl: './app.component.html',
9   styleUrls: ['./app.component.scss'],
10  providers: [NgbTimepickerConfig]
11 })
12 export class AppComponent {
13   title = 'ng8-bootstrap4-timepicker';
14 }
15

```

Return to the browser and copy the constructor part and etc in the class.

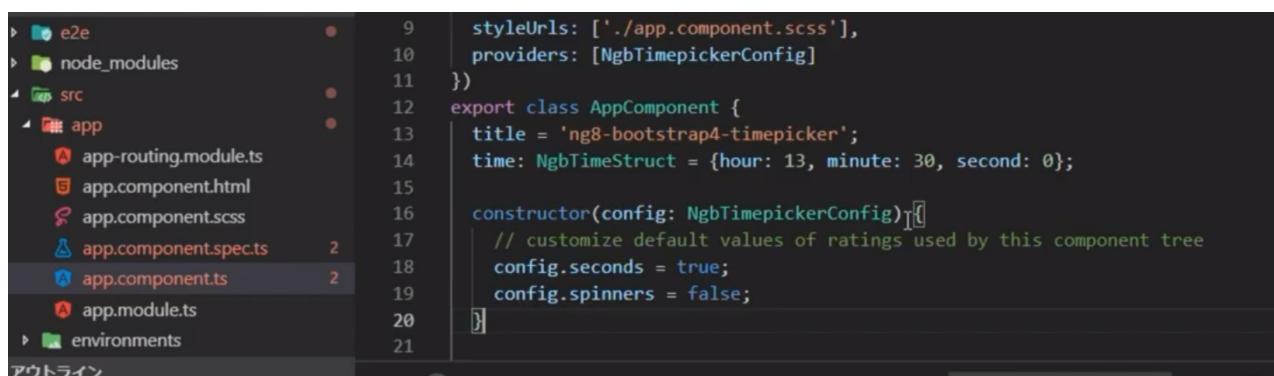
```

@Component({
  selector: 'ngbd-timepicker-config',
  templateUrl: './timepicker-config.html',
  providers: [NgbTimepickerConfig] // add NgbTimepickerConfig to the component's provider list
})
export class NgbdTimepickerConfig {
  time: NgbTimeStruct = {hour: 13, minute: 30, second: 0};

  constructor(config: NgbTimepickerConfig) {
    // customize default values of ratings used by this component tree
    config.seconds = true;
    config.spinners = false;
  }
}

```

Go back to VSCode, open the `app.component.ts` file and paste the constructor part and etc here.



```

e2e          9  styleUrls: ['./app.component.scss'],
node_modules 10 providers: [NgbTimepickerConfig]
src          11 }
  app        12 export class AppComponent {
    title = 'ng8-bootstrap4-timepicker';
    time: NgbTimeStruct = {hour: 13, minute: 30, second: 0};

    constructor(config: NgbTimepickerConfig) {
      // customize default values of ratings used by this component tree
      config.seconds = true;
      config.spinners = false;
    }
  }
environments 21

```

Display of Timepicker

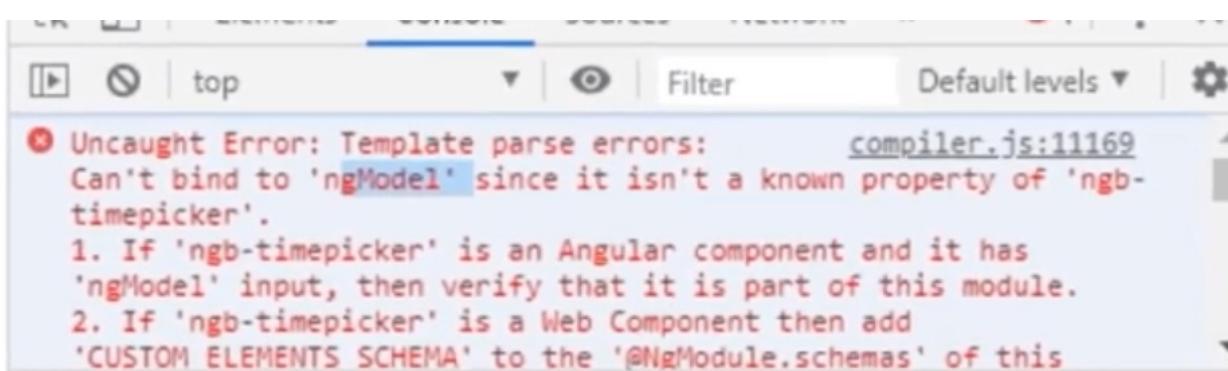
Now go back to your browser and open `http://localhost:4200`.

But Timepicker does not appear. It seems that an error has occurred.

Display console information with `Ctrl + Shift + i`.

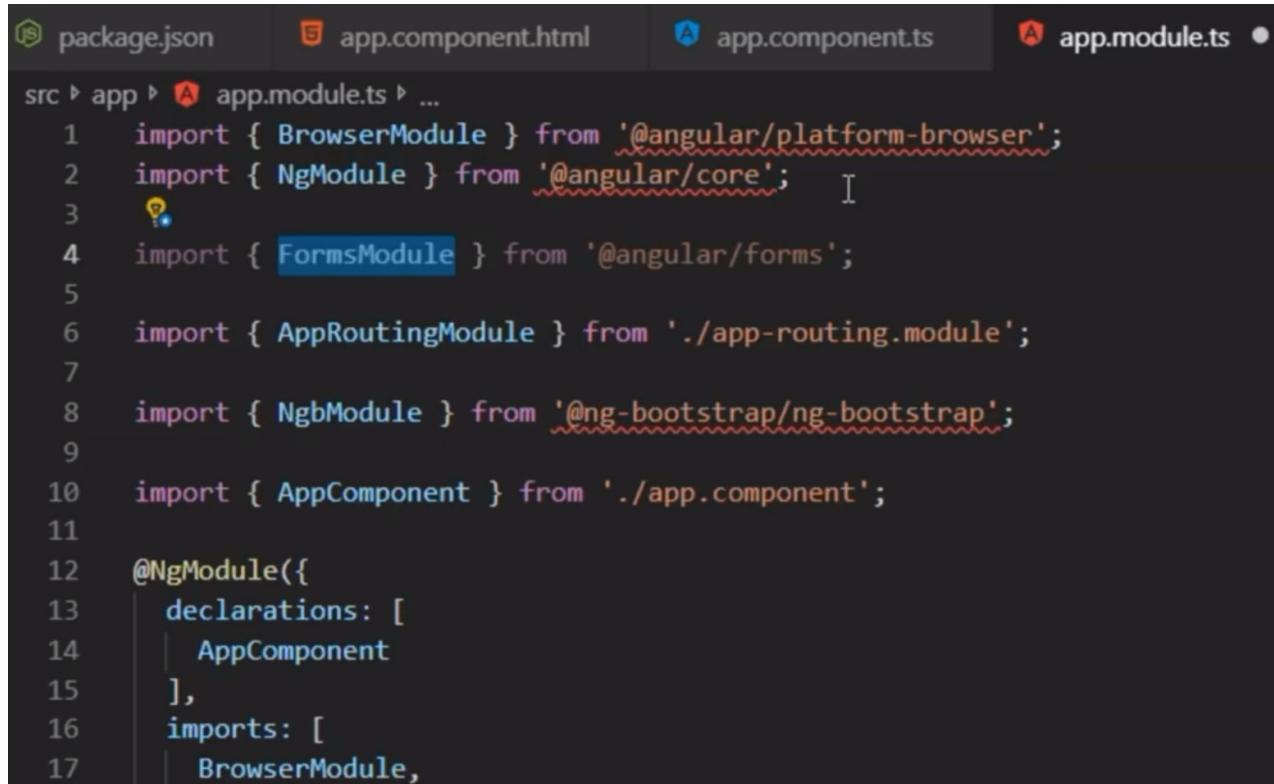
It seems that `ngModel` is the cause.

In order to use `ngModel`, we need to import `FormsModule`.



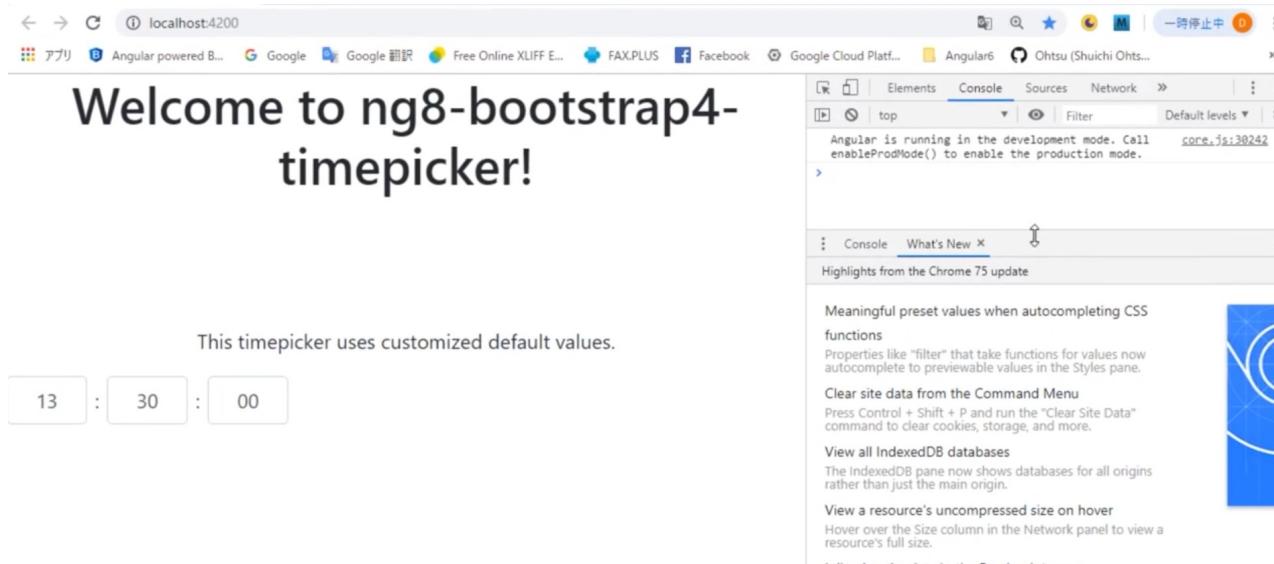
Import FormsModule

Go back to VSCode, open `app.module.ts` and import `FormsModule`.



```
src > app > A app.module.ts > ...
1  import { BrowserModule } from '@angular/platform-browser';
2  import { NgModule } from '@angular/core';    [
3  ⚡
4  import { FormsModule } from '@angular/forms';
5
6  import { AppRoutingModule } from './app-routing.module';
7
8  import { NgbModule } from '@ng-bootstrap/ng-bootstrap';
9
10 import { AppComponent } from './app.component';
11
12 @NgModule({
13   declarations: [
14     AppComponent
15   ],
16   imports: [
17     BrowserModule,
```

When we returns to the browser again, there are no errors and the Timepicker are displayed.



The screenshot shows a browser window displaying the application's landing page. The title of the page is "Welcome to ng8-bootstrap4-timepicker!". Below the title, a message states "This timepicker uses customized default values." followed by a timepicker input field showing "13 : 30 : 00". To the right of the browser window is the developer tools interface, specifically the "Console" tab. The console output shows the message "Angular is running in the development mode. Call enableProdMode() to enable the production mode." at the top, followed by several informational messages about the Chrome 75 update and browser features.

OK.

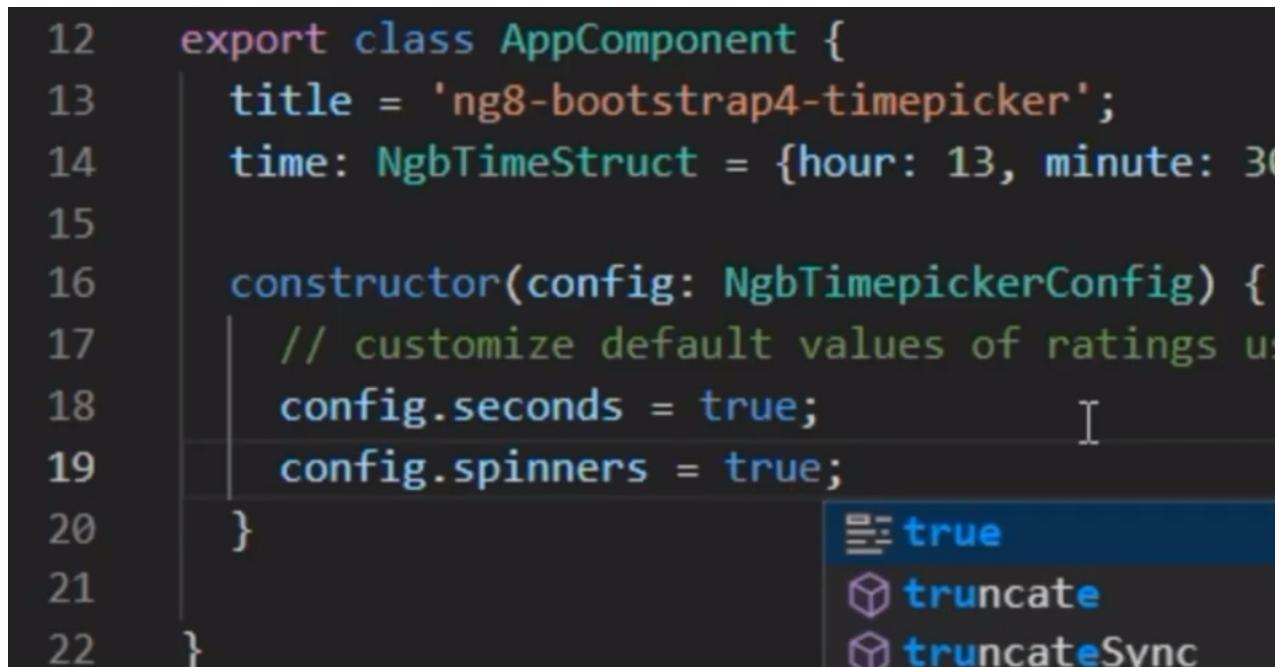
Display Spinner

However, it will be a little bit difficult to enter numbers, so we are going to display Spinner.

Return to VSCode, open the *app.component.ts* file, and change,

```
config.spinners = true.
```

```
12  export class AppComponent {  
13    title = 'ng8-bootstrap4-timepicker';  
14    time: NgbTimeStruct = {hour: 13, minute: 30, second: 0};  
15  
16    constructor(config: NgbTimepickerConfig) {  
17      // customize default values of ratings used in the rating bar  
18      config.seconds = true;  
19      config.spinners = true;  
20    }  
21  
22  }
```



Returning to the browser and confirming the display, the Spinner is now displayed.

Welcome to ng8-bootstrap4-timepicker!

This timepicker uses customized default values.



OK.

Hide Second Column

Next, hide the second column because we do not need to display it.

Return to VSCode, open the *app.component.ts* file, and change to

```
config.seconds = false.
```

```
16     constructor(config: NgbTimepickerConfig) {
17       // customize default values of ratings used by this component tree
18       config.seconds = false;
19       config.spinners = true; false
20     }
21   }
```

When we returns to the browser and confirmed the display, the second field is hidden.

Welcome to ng8-bootstrap4-timepicker!

This timepicker uses customized default values.



OK.

AM/PM display

Next, we are going to display the distinction of AM/PM.

Return to VSCode, open the *app.component.ts* file, and add the line,

```
config.meridian = true;
```

```
15
16     constructor(config: NgbTimepickerConfig) {
17       // customize default values of ratings used by this component tree
18       config.meridian = true; true
19       config.seconds = false; false
20       config.spinners = true; true
21     }
22   }
```

Go back to the browser and check the display, AM / PM button is added.

Welcome to ng8-bootstrap4-timepicker!

This timepicker uses customized default values.



OK.

Display the acquired time data

However, if we keep this, we do not know whether the time data can be acquired really.

Therefore, we are going to display acquisition time data on the screen.

Return to VSCode, open the *app.component.html* file, and change it to display acquired time data.

In particular, add a single line,

```
<pre> Selected time: {{time | json}} </pre>.
```

```
10
11  <p>This timepicker uses customized default values.</p>
12
13  <ngb-timepicker [(ngModel)]="time"></ngb-timepicker>  [
14    <pre>Selected time: {{time | json}}</pre>
15    <router-outlet></router-outlet>
16
```

Return to the browser and confirming the display, acquisition time data has been added.

Welcome to ng8-bootstrap4-timepicker!

This timepicker uses customized default values.



```
Selected time: {  
  "hour": 13,  
  "minute": 30,  
  "second": 0  
}
```

OK.

Modification of the display style

However, the Timepicker is left-justified, and the balance with the acquired time data is not good, so we are going to correct that.

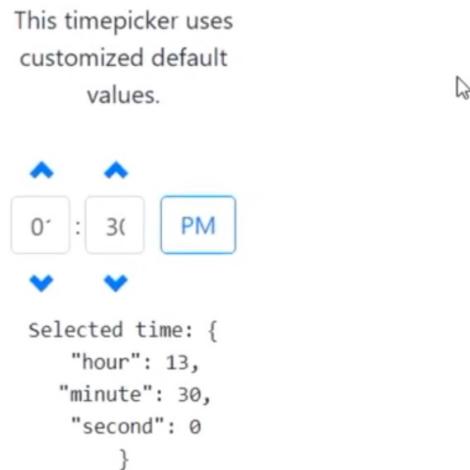
First, divide one line by the ratio of 5 to 2 to 5 and display it in the center.

Go back to VSCode, open the *app.component.html* file and add the div tag.

```
package.json      app.component.html • app.component.ts      app.module.ts  
src > app > app.component.html > div  
6   <br>  
7   <br>  
8   <br>  
9   <br>  
10  
11  <div class="row">  
12    <div class="col-5">  
13  
14    </div>  
15    <div class="col-2">  
16      <p>This timepicker uses customized default values.</p>  
17  
18      <ngb-timepicker [(ngModel)]="time"></ngb-timepicker>  
19      <pre>Selected time: {{time | json}}</pre>  
20  
21    </div>  
22    <div class="col-5">  
23
```

Return to the browser and confirm the display, the display of numerical data is missing.

Welcome to ng8-bootstrap4-timepicker!



Therefore, in order to widen the central display width, we are going to divide one line by the ratio of 4:4.

Return to VSCode, open the *app.component.html* file and change the ratio.

```
11  <div class="row">
12    <div class="col-4">
13
14    </div>
15    <div class="col-4">
16      <p>This timepicker uses customized default values.</p>
17
18      <ngb-timepicker [(ngModel)]="time"></ngb-timepicker>
19      <pre>Selected time: {{time | json}}</pre>
20
21    </div>
22    <div class="col-4">
23
24    </div>
25
26  </div>
```

Return to the browser and check the display.

Welcome to ng8-bootstrap4-timepicker!

This timepicker uses customized default values.



OK.

Reference

- "Angular8におけるBootstrap4環境の設定方法(Youtube)",
<https://youtu.be/gFxuSi4IZjM>
- "How to set up Bootstrap 4 environment in Angular 8",
<https://youtu.be/NoSkIVv5o8>
- "Angular8におけるBootstrap4環境の設定方法(Qiita)",
<https://qiita.com/SOhtsu/items/62253bb2309c9a4809fd>
- "Angular 7 Bootstrap 4 UIs: ng-bootstrap and ngx-bootstrap [Part 1]",
<https://www.techiediaries.com/angular-bootstrap-ui/>
- "Angular5, Angular6, Angular7 Custom Library: Step-by-step guide",
<https://www.udemy.com/angular5-custom-library-the-definitive-step-by-step-guide/>
- "Angular5, Angular6, Angular7用 カスタムライブラリの作成: 完全ステップ・バイ・ステップ・ガイド",
<https://www.udemy.com/angular5-l/>