input[time] DIRECTIVE IN ANGULARJS

- **input [time]** is one of the AngularJS input directive in **module ng.**

- AnguarJS directive **input [time]** is used to create a standard HTML time input with time validation and transformation.

- The input must be entered in the format ISO-8601. (i.e. local time format (HH : mm : ss)

    o For ex 17:00:25

- In browsers does not yet support the HTML5 time input, instead text element will be used in a valid ISO-8601 local time format.

- The data model must be date object.

- The timezones is used to read/write the **Date** instance in the model by using ngModelOptions.

- This directive executes at priority level 0.

Syntax for input [text] directive in AngularJS:

```
<input type="time"

 ng-model="string"

[name="string"]

[min ="string"]

[max ="string"]

[ng-min=" "]

[ng-max=" "]

[required ="string"]

[ng-required ="string"]

[ng-change ="string"]>
```

Parameter Values:

Parameters	Type	Description
ngModel	string	Defines angular expression to data-bind to.
name (optional)	string	Name of the form under which the control is available
min(optional)	string	To set the min validation error key if the value entered is shorter than min.

		(e.g "{{ minTime | date :'HH:mm:ss' }}")
max(optional)	string	To set the max validation error key if the value entered is greater than max. (e.g "{{ maxTime | date :'HH:mm:ss' }}")
ngMin (optional)	date, string	To set the min validation constraint to the Date/ISO week string the ngMin expression calculates to. Reminds that it does not set the min attribute.
ngMax (optional)	date, string	To set the max validation constraint to the Date/ISO week string the ngMax expression calculates to. Reminds that it does not set the max attribute.
required (optional)	string	Denotes the required validation error key if the value is not entered.
ngRequired (optional)	string	Sets the required attribute and required validation constraint to the element when the ngRequired expression sets to true. Instead of required use ngRequired when we want data-bind to the required attribute.
ngChange (optional)	string	An expression of Angular to be executed when input changes due to user interaction with the input element.

Sample coding for input[time] directive in AngularJS

```html
<!DOCTYPE html>
<html>
   <head>
      <title>Wikitechy AngularJS Tutorial</title>
      <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.5.6/angular.min.js">
      </script>
   </head>
   <body>
      <form ng-app="myApp" name="Form" ng-controller="TimeCtrl">
         <h3>input[time] directive example in AngularJS</h3>
         Display Time
         <input type="time" id="Input" name="input" ng-model="value"
            placeholder="HH:mm:ss" min="07:00:00" max="15:00:00"
required/>
         <span  ng-show="Form.input.$error.required">Required!</span>
         <span  ng-show="Form.input.$error.time">Not a valid date!</span>
         <p>value = {{value | date: "HH:mm:ss"}}</p>
         <p>Form.input.$valid = {{Form.input.$valid}}</p>
         <p>Form.input.$error = {{Form.input.$error}}</p>
         <p>Form.$valid = {{Form.$valid}}</p>
         <p>Form.$error.required = {{!!Form.$error.required}}</p>
      </form>
      <script>
         var app = angular.module('myApp', []);
         app.controller('TimeCtrl', function($scope) {
         });
      </script>
   </body>
</html>
```

Code Explanation input [time] directive in AngularJS:

```html
<!DOCTYPE html>
<html>
    <head>
        <title>Wikitechy AngularJS Tutorial</title>
        <script src="https://ajax.googleapis.com/ajax/libs/angularjs/
        1.5.6/angular.min.js"></script>
    </head>
    <body>
        <form ng-app="myApp" name="Form" ng-controller="TimeCtrl">
            <h3>input[time] directive example in AngularJS</h3>
            Display Time
            <input type="time" id="Input" name="input" ng-model="value"
                placeholder="HH:mm:ss" min="07:00:00" max="15:00:00" required />
            <span  ng-show="Form.input.$error.required">Required!</span>
            <span  ng-show="Form.input.$error.time">Not a valid date!</span>
            <p>value = {{value | date: "HH:mm:ss"}}</p>
            <p>Form.input.$valid = {{Form.input.$valid}}</p>
            <p>Form.input.$error = {{Form.input.$error}}</p>
            <p>Form.$valid = {{Form.$valid}}</p>
            <p>Form.$error.required = {{!!Form.$error.required}}</p>
        </form>
        <script>
            var app = angular.module('myApp', []);
            app.controller('TimeCtrl', function($scope) {
            });
        </script>
    </body>
</html>
```

1. The **ng-app** specifies the root element (**"myapp"**) to define AngularJS application.

2. Ng-controller specifies the application controller in AngularJS the controller value is given as **"TimeCtrl"**.

3. **"time"** is declare the **type** value of the <input> tag.

4. The **ng-model** bind an input field value to AngularJS application variable (**"value"**).

5. **Placeholder** is used to declare the time format (Like HH:mm:ss).

6. **min** parameter is used to declare the min time value**(07:00:00)**

7. **max** parameter is used to declare the max time value**(15:00:00)**

8. ng-show directive is used to hides HTML elements. If the required directive shows an error the content is displayed like **"Required"**

9. ng-show directive is used to hides HTML elements. If the required directive shows an error the content is displayed like **"Not a Valid date!".**

10. Here the date filter formats a date into specified format (HH:mm:ss) and the output will be updated in the <p> tag.

11. **Form.input.$valid** to checks the correct time format or not. If the time in the input field then the output will be displays as true otherwise false.

12. **Form.input.$error** to check whether the valid time format or not .If the time specified in error it through the exception (Like "required"="true) otherwise it is an empty curly braces ({ }).

13. **Form.$valid** is used to check whether the form is valid or not and output will be displayed in <p> tag.

14. **Form.error.$required** is used to time is required or not. If the time is required and output will be displays as false otherwise true.

Sample Output input[time] directive in AngularJS:
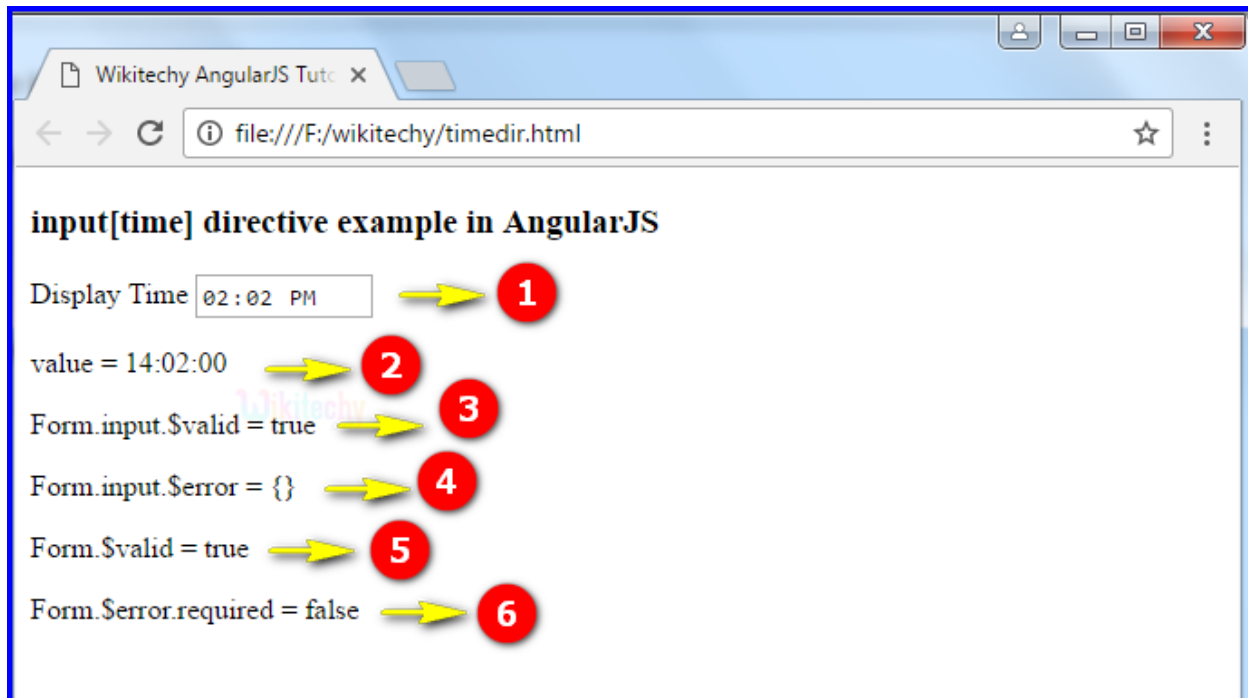
1. If the user scroll the time in the input field.

2. The output will be displays as **value=14:02:02**

3. The output displays true because it is consider as a time.

4. The output displays empty curly braces it means does not thrown any error.

5. The output displays true it is valid time.

6. If the text box does not empty so the output displays as false.

1. If the user does not type any time in the input field and the output shows an error **"Required".**
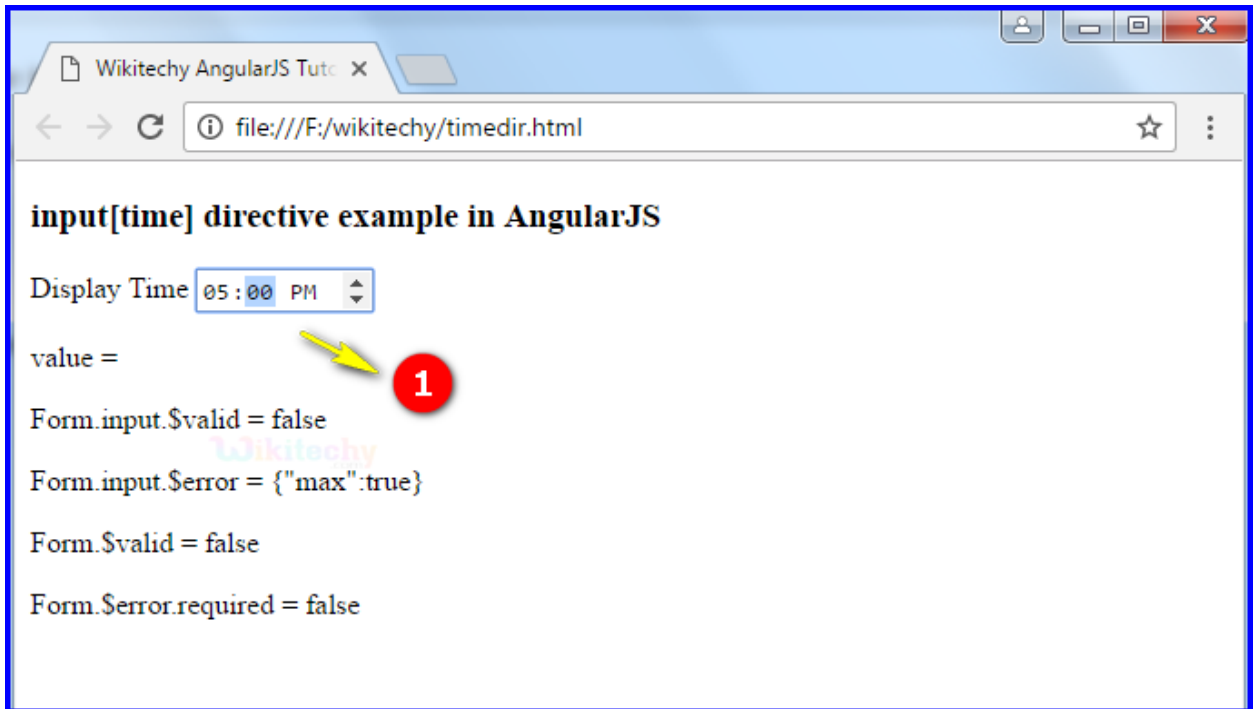
1. If the user scroll the time 5.00PM **(Max="15:00:00")** then the output displays as empty value(**i.e. value=**).