

Working with Geolocation in HTML

CAPTURE A USER'S LOCATION USING THE
GEOLOCATION OBJECT



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Course Goals



Use the geolocation object

Get latitude and longitude

Display location on a map

Embed maps using Google Maps

Display markers on maps

Get directions to an address

Place boundaries around an address



I Assume You Are...



A JavaScript programmer



Familiar with HTML and CSS



Familiar with Visual Studio Code



Related Pluralsight Courses

JavaScript: Getting Started

**JavaScript Variables and
Types**

**JavaScript Syntax and
Operators**

**JavaScript Arrays and
Collections**



Modules in This Course



Modules



Capture a User's Location Using the Geolocation Object

- Get latitude and longitude
- Watch your current position

Display Locations on a Map

- Display locations
- Embed a map on web page

Modules



Embed Maps Using the Google Maps API

- Getting started with Google Maps
- Add markers to a map
- Add an informational window

Getting Directions with Google Maps

- Get directions to address
- Display text directions

Modules



Geocoding with Google Maps

- Place Boundaries Around an Address
- Search for Address
- Is address within delivery address?



Demo



Bethany's Pie Shop application



Geolocation Overview



The Geolocation Object

**User can provide
their location**

**User must
approve**

Access through...

`navigator.geolocation;`

Two methods...

```
getCurrentPosition();  
watchPosition();
```

Two callbacks...

```
success(position)  
error(errorObject)
```



The GeolocationPosition Object

'coords' property

latitude
longitude
altitude
accuracy
altitudeAccuracy
heading
speed

Timestamp property



Using the Geolocation Object

```
window.onload = function () {  
    if (navigator.geolocation) {  
        navigator.geolocation.getCurrentPosition(displayPosition);  
    }  
    else {  
        displayError("Update your browser to use Geolocation.");  
    }  
};  
  
function displayPosition(pos) {  
    // Display coordinates  
}
```



Sample Code

<https://github.com/PaulDSheriff/Pluralsight-Samples>

or

Under the Exercise Files tab



Demo



Get current latitude and longitude



Demo



Handling errors



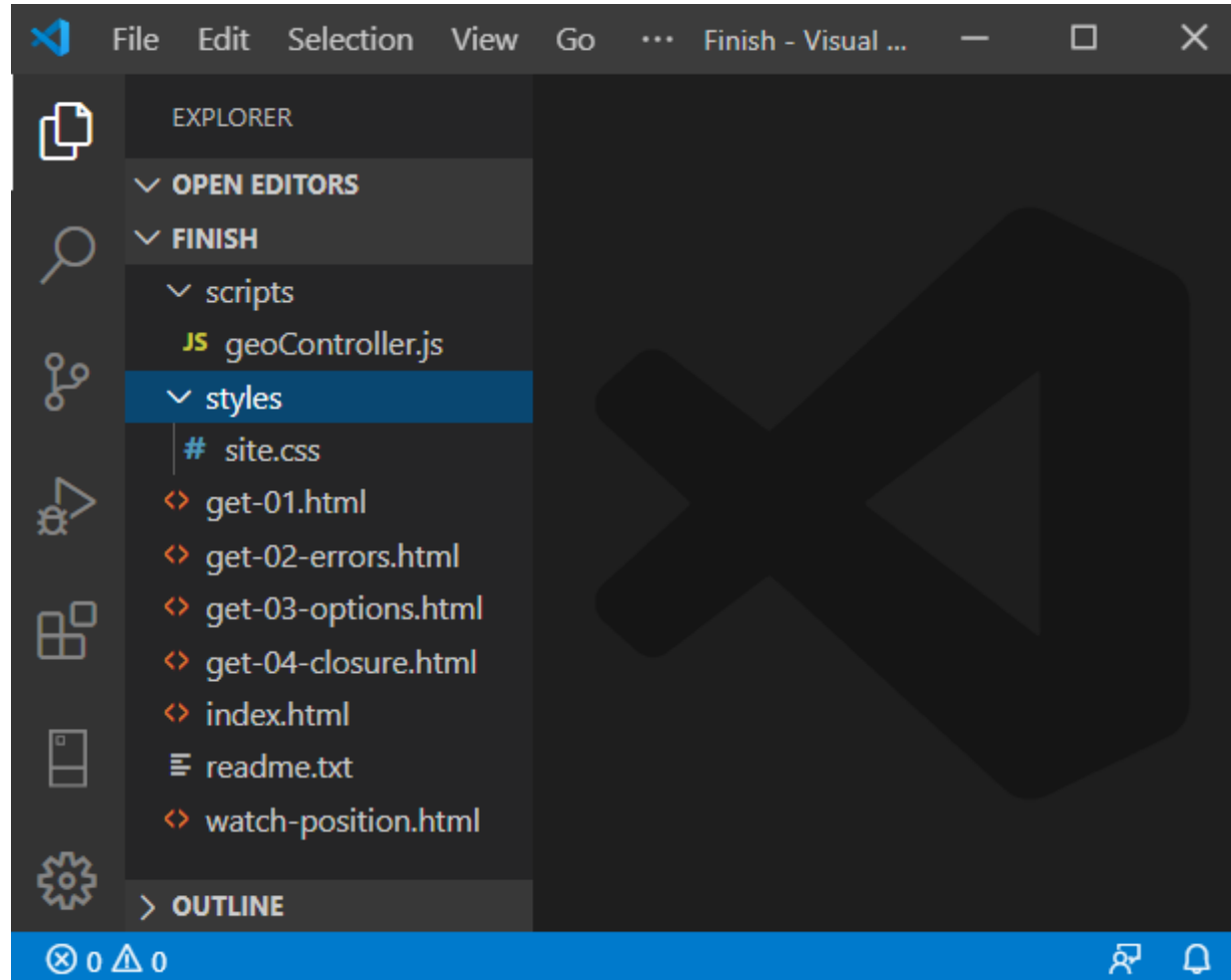
Demo



Geolocation options



Finished Sample for this Module



Demo



Create a geolocation closure



Watching Your Position

For mobile devices

Use `watchPosition()` method

The properties, heading and speed, show up on mobile devices

Can start and stop watching



Demo



Watch your position on mobile device



Results From Watch Position

Geolocation Watch Position Sample

Timestamp:

Fri Mar 27 2020 08:19:17 GMT-0500 (CDT)

Latitude:

36.03025323251147

Longitude:

-86.79371278864048

Lat/Long Accuracy (in meters):

7.088111541499478

Altitude (in meters above sea level):

211.2880824888125

Altitude Accuracy (in meters):

6.511059800373029

Heading (Degress from true north):

359.6408498022799

Speed (in meters/second):

0.27891710400581327

Stop Watching

Geolocation Watch Position Sample

Timestamp:

Fri Mar 27 2020 08:19:20 GMT-0500 (CDT)

Latitude:

36.03025926904237

Longitude:

-86.79371782873912

Lat/Long Accuracy (in meters):

7.501195584554802

Altitude (in meters above sea level):

211.2606073813513

Altitude Accuracy (in meters):

6.856341381978956

Heading (Degress from true north):

12.909492357501076

Speed (in meters/second):

0.33192539215087846

Stop Watching



Try Out Watch Position

<https://www.pdsa.com/GeoWatch>



Module Summary



Geolocation is built-in to browsers

User is required to accept geolocation

Be sure to trap exceptions

**Create a geolocation closure for
reusability**

Mobile devices give you more info





Coming up next...

Display Locations on a Map

- Display a map from coordinates
- Different mapping sites

