# AngularJS Ajax

**Topics :** AngularJS
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In AngularJS, you can perform AJAX (Asynchronous JavaScript and XML) requests to retrieve data from a server and update your application dynamically. AngularJS provides the `$http` service to make HTTP requests and interact with web servers. Here's a guide on how to use AJAX with AngularJS:

### Basic AJAX Request:

```
<!DOCTYPE html>
<html lang="en" ng-app="myApp">
<head>
<meta charset="UTF-8">
<title>AngularJS AJAX</title>
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>
</head>
<body ng-controller="AjaxController">
<button ng-click="getData()">Get Data</button>

<div ng-if="responseData">
<h3>Data received:</h3>
<pre>{{ responseData | json }}</pre>
</div>

<script>
angular.module('myApp', []).controller('AjaxController', function($scope, $http) {
$scope.getData = function() {
$http.get('https://jsonplaceholder.typicode.com/posts/1')
.then(function(response) {
$scope.responseData = response.data;
})
.catch(function(error) {
console.error('Error fetching data:', error);
});
};
});
</script>
</body>
</html>
```

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In this example:

- The `$http.get` method is used to make a GET request to a sample JSONPlaceholder endpoint.
- The `then` method is used to handle the successful response.
- The `catch` method is used to handle errors.

## Sending Data with POST:

You can use the `$http.post` method to send data to the server using a POST request:

```
$scope.sendData = function() {
var dataToSend = { key: 'value' };

$http.post('https://jsonplaceholder.typicode.com/posts', dataToSend)
.then(function(response) {
$scope.responseData = response.data;
})
.catch(function(error) {
console.error('Error sending data:', error);
});
};
```

## Handling Headers:

You can include custom headers in your request:

```
$scope.getDataWithHeaders = function() {
var config = {
headers: {
'Authorization': 'Bearer yourAccessToken',
'Custom-Header': 'CustomValue'
}
};

$http.get('https://jsonplaceholder.typicode.com/posts/1', config)
.then(function(response) {
$scope.responseData = response.data;
})
.catch(function(error) {
console.error('Error fetching data:', error);
});
};
```

## Canceling Requests:

AngularJS allows you to cancel HTTP requests using the `$http` service and a cancellation token. This can be useful in scenarios where you want to cancel an ongoing request when a user navigates away from a page or takes some other action.

Here's a simplified example using the `timeout` property:

```
$scope.getDataWithCancellation = function() {
```

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```
var canceler = $q.defer();

$http.get('https://jsonplaceholder.typicode.com/posts/1', { timeout: canceler.promise })
.then(function(response) {
$scope.responseData = response.data;
})
.catch(function(error) {
if (error && error.status === -1) {
console.log('Request canceled');
} else {
console.error('Error fetching data:', error);
}
});

// Simulate canceling after 2 seconds
$timeout(function() {
canceler.resolve();
}, 2000);
};
```

In this example, the request will be canceled after 2 seconds.

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