

## Callback function

If you are writing any asynchronous function, and you want to pass a function as a parameter to it.

so that the function will get executed after the first function is over

<pre>function f1(){   console.log("in f1") }  function f2(num,function){   num=num+12;   console.log("in f2 "+num)   function() }</pre>	<p>in f2, function parameter is a callback function</p> <p>to call f2 function</p> <p>f2(10,f1) /// f1 is a callback function</p>
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If **lot of nesting of callback function** is there , then it will force us to change the definition of every function, this is called as **callback hell**.

To avoid this callback hell, javascript has introduced promise object

Promise Object:

It is useful to handle asynchronous functions, and removes drawback of callback functions

Promise is a object, which can be in any one of the following state

1. pending
2. fulfilled
3. Rejected

1. Pending

When the promise function is getting executed, it is in pending state

2. fulfilled

If the promise function finishes successfully, then it is in fulfilled state

3. Rejected

If the promise function finishes with error, then it is in Rejected state

To create a promise object

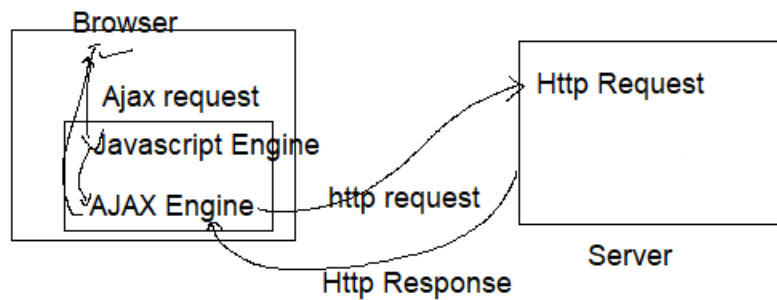
<pre>var promise1=new Promise((reject,resolve)=&gt;{   //some code })</pre>	<p>as soon as promise object is created, its function will start executing</p>
<pre>async function f1(){   return "hello" }</pre>	<p>every async function returns a promise</p>

## HTTP vs AJAX

If you handle HTTP request, then the entire page in the browser will be reloaded

if you handle AJAX request. then it will load the portion of the page, hence the web sites works faster.

1. To use AJAX(Asynchronous Javascript and XML) request in Javascript, It uses a object of XMLHttpRequest, It is also called as XHR



uses of AJAX request-→ When you need to update portion of the page, then use AJAX request

1. if on the form 2 dropdowns are there, and if in one dropdown, if we select country, then accordingly the states dropdown should be populated.
2. After Login , the message Welcome user should get populated on the page

The image shows two screenshots of a web form. The left screenshot displays a registration form with fields for 'Name', 'Mobile', 'country', 'state', 'district', and 'email', each with an input field. The 'country', 'state', and 'district' fields are dropdown menus. A 'Submit' button is at the bottom. A large curly bracket on the left groups the form fields. The right screenshot shows the form after submission. The 'country' dropdown is now populated with 'Welcome User1'. Below it, there is a box containing 'user' and 'password' fields, which are crossed out with a large 'X'.

## JQuery

If you want to use jQuery, then download jquery.js file from the following url,  
copy and paste the file in jquery.js, and place it inside jquerydemos/script folder

<https://code.jquery.com/jquery-3.7.1.min.js>

To use jQuery, include jQuery library in the html file, and write the code in document object ready event

<pre>&lt;html&gt; &lt;head&gt;   &lt;title&gt;Document&lt;/title&gt;   &lt;script src="./script/jquery.js"&gt;&lt;/script&gt;   &lt;script&gt;     \$(document).ready(function(){ //jQuery code goes here       alert("Hello")     })   &lt;/script&gt; &lt;/head&gt; &lt;body&gt;  &lt;/body&gt; &lt;/html&gt;</pre>	<pre>&lt;html&gt; &lt;head&gt;   &lt;title&gt;Document&lt;/title&gt;   &lt;script src="./script/jquery.js"&gt;&lt;/script&gt;   &lt;script&gt;     jQuery(document).ready(function(){ //jQuery code goes here       alert("Hello")     })   &lt;/script&gt; &lt;/head&gt; &lt;body&gt;  &lt;/body&gt; &lt;/html&gt;</pre>
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Using jQuery, -> by using CDN(Content delivery network)

<pre>&lt;html lang="en"&gt; &lt;head&gt;   &lt;meta charset="UTF-8"&gt;   &lt;meta name="viewport" content="width=device-width, initial-scale=1.0"&gt;   &lt;title&gt;Document&lt;/title&gt;   &lt;script src="https://code.jquery.com/jquery-3.7.1.min.js" integrity="sha256- /JqT3SQfawRcv/BIHPTthkBvs00EvtFFmqPF/lyl/Cxo=" crossorigin="anonymous"&gt;&lt;/script&gt;   &lt;script&gt;     \$(document).ready(function(){       alert("Hello ")     })   &lt;/script&gt; &lt;/head&gt; &lt;body&gt;  &lt;/body&gt; &lt;/html&gt;</pre>
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Why to use jQuery

1. It reduces the size of JavaScript code
2. It makes your code browser independent
3. It has multiple UI built-in plugin are available, to give good look and feel to the page

In jQuery to select elements from html page(DOM), we use all CSS selectors

Javascript	jQuery
To find the value of textbox with id=num1 var n1=document.getElemntById("num1").value	var n1=\$("#num1").val();
To display the value in div with id="mydiv" document.getElementById("mydiv").innerHTML="Hello"	\$('#mydiv').html("Hello")
To find the value of selected radio button var arr=document.getElementsByName("degree"); for(var i=0;i<arr.length;i++){ if(arr[i].checked){ var op=arr[i].value; break } }	var op=\$('#input[name=degree]:checked).val();
To find the value of selected option from the dropdown var city=document.getElementById("city") var pos=city.selectedIndex var v=city.options[pos].value	\$('#city option:selected').val()