

JavaScript Magic Eight Ball Instructions

You've learned a powerful tool in JavaScript: control flow! It's so powerful, in fact, that it can be used to tell someone's fortune.

In this project we will build a [Magic Eight Ball](#) using control flow in JavaScript.

The user will be able to input a question, then our program will output a random fortune.

1	In the first line of the program, define a variable called <code>userName</code> that is set to an empty string. If the user wants, they can enter their name in between the quotation marks.
Hint	An empty string is <code>"</code> in JavaScript.
2	Below this variable, create a ternary expression that decides what to do if the user enters a name or not. If the user enters a name — like <code>'Jane'</code> — use string interpolation to log <code>Hello, Jane!</code> to the console. Otherwise, simply log <code>Hello!</code> .
Hint	If the user doesn't enter a name, the condition <code>userName ?</code> will evaluate to <code>falsy</code> because it will be an empty string. For example: <code>userName ? console.log(`Hello, \${userName}!`) : console.log('Hello!');</code>
3	Create a variable named <code>userQuestion</code> . The value of the variable should be a string that is the question the user wants to ask the Magic Eight Ball.
Hint	You can use the <code>const</code> keyword to declare a variable, then assign a question to that variable that we want to ask the Magic Eight Ball.
4	Write a <code>console.log()</code> for the <code>userQuestion</code> , stating what was asked. You can include the user's name in the <code>console.log()</code> statement, if you wish!
Hint	Use the <code>console.log()</code> method to print the user's question.
5	Generate a random number between 0 and 7. Create another variable, and name it <code>randomNumber</code> . Set it equal to this expression, which uses two methods (<code>Math.floor()</code> and <code>Math.random()</code>) from the Math library. <pre>Math.floor(Math.random() * 8);</pre>
Hint	<code>Math.random()</code> returns a value between 0 (inclusive) and 1 (exclusive). In order to make this set of numbers range from 0 (inclusive) to 8 (exclusive) you can multiple the returned value by 8. Finally, to ensure you only have whole numbers from 0 to 7 we can round down using <code>Math.floor()</code> .
6	Create one more variable named <code>eightBall</code> , and set it equal to an empty string. You will save a value to this variable in the next steps, depending on the value of <code>randomNumber</code> .

Hint	An empty string is "" in JavaScript. You can use the let keyword to declare our variable, since you'll need to update the value of this variable later on.
7	<p>You need to create a control flow that takes in the <code>randomNumber</code> from step 5, and then assigns <code>eightBall</code> to a reply that a Magic Eight Ball would return. Think about utilising <code>if/else</code> or <code>switch</code> statements. Here are 8 Magic Eight Ball phrases that could be used and saved to the variable <code>eightBall</code>:</p> <ul style="list-style-type: none"> • 'It is certain' • 'It is decidedly so' • 'Reply hazy try again' • 'Cannot predict now' • 'Do not count on it' • 'My sources say no' • 'Outlook not so good' • 'Signs point to yes' <p>If the <code>randomNumber</code> is 0, then save an answer to the <code>eightBall</code> variable; if <code>randomNumber</code> is 1, then save the next answer, and so on. If you're feeling creative, make your own responses!</p>
Hint	You can chain together multiple <code>else if</code> statements, or use a <code>switch</code> statement instead.
8	Write a <code>console.log()</code> to print the Magic Eight Ball's answer, the value of the <code>eightBall</code> variable.
Hint	Use the <code>console.log()</code> method to print the Magic Eight Ball's response.
9	<p>Stretch & Challenge</p> <p>Run your program a few times to see random results appear in the console!</p> <p>If you want extra practice:</p> <ul style="list-style-type: none"> • If you started with a <code>switch</code> statement, convert it to <code>if/else if/else</code> statements. • If you started with <code>if/else if/else</code> statements, convert them to a <code>switch</code> statement.