**MiniApps:**

**Mini Project: Kelvin to Fahrenheit**

In this mini-project we are going to create a mini application in the console that converts the temperature from kelvin to fahrenheit. If you don't understand the difference between fahrenheit and kelvin that is ok. I'll share with you the formula as we walk through the steps.

A thermometer with orange and blue text

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I will list out the 6 steps below that you need to take to build out this mini-application. In the following video I will walk through all 6 steps myself so you can see a possible solution.

You can build out this application in any coding environment of your choice.*If you are brand new to coding you may want to skip to the next video and watch the first couple minutes to see the coding environment I set up and would suggest you use.*

I will create snippets using the sources tab in the Chrome Dev Tools (The user interface of Chrome Dev Tools changes from over time. Please reach out in the Q & A if you feel these pictures don't reflect the current user experience):

A screenshot of a computer

Description automatically generated

A screenshot of a computer

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Because this is our first mini-challenge you also may just want to watch me solve this challenge from start to finish to see how we solve these mini challenges then try the next mini challenge on your own.

**Challenge: Convert any given temperature in Kelvin to Fahrenheit**

1. Let's imagine that the weather reports says that the temperature today will be  301 Kelvin. How should you dress for the day? Let's create an app that lets us know the temperature in fahrenheit. To start, create a variable named kelvinTemp, and set it equal to 301. Write a comment above that explains this line of code.

2. Finding the temperature in Celsius is similar to Kelvin — the only difference is that Celsius is 273.15 degrees less than Kelvin.

Let's convert Kelvin to Celsius by subtracting 273.15 from the kelvinTemp variable. Store the result in another variable, named celsiusTemp.

Write a comment above that explains this line of code.

3. Use this equation to calculate Fahrenheit, then store the answer in a variable named fahrenheitTemp.

*Fahrenheit = Celsius \* (9/5) + 32*

In the next step we will round the number saved to fahrenheitTemp. Write a comment above that explains this line of code.

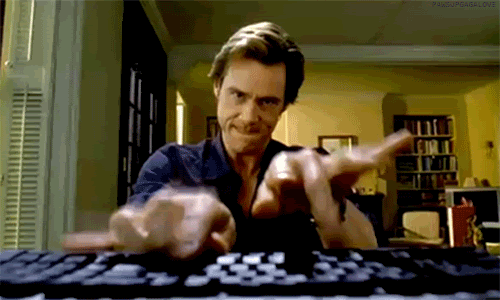
4. Log to the console the value of  fahrenheitTemp. In our next step we are going to see what we can do to make sure that our number is a whole number by rounding down. The value you logged to the console should begin with 82.13

5. As we have just seen, when you convert from Celsius to Fahrenheit, you often get a decimal number. Go ahead and delete the console log code from step 4.

Use the .floor() method from the Math library to round down the Fahrenheit temperature. Save the result to the fahrenheitTemp variable. Check out the documentation for Math.floor() here: http://bit.ly/javascript-math-floor. Because this is a new concept we haven't covered yet, you may want to watch the next video if you get stuck at this point. This will round your decimal down no matter what the value. Other methods from the Math library you might try out are .round() and ceil(). Write a comment above that explains this line of code.

6. Use console.log and string concatenation to log the temperature in fahrenheitTemp to the console to create the message as follows: The temperature is TEMPERATURE degrees Fahrenheit. TEMPERATURE should be determined by the value of fahrenheitTemp.

**Great job! I'll walk through these steps in the next video!**

[](https://blog.skillenza.com/2017/06/21/5-easy-steps-to-honing-your-coding-skills/)

Completed Code:

1. // Temperature in kelvin stored in variable `kelvin`
2. var kelvinTemp = 301;
4. // temperature in celsius stored in variable `celsius`
5. var celsiusTemp = kelvinTemp - 273.15;
7. // convert celsius to fahrenheit stored in variable `fahrenheit`
8. var fahrenheitTemp = celsiusTemp \* (9/5) + 32;
10. // round the value of fahrenheit down and assign to `fahrenheit`
11. fahrenheitTemp = Math.floor(fahrenheitTemp);
13. // use string concatenation to leave a message
14. // "The temperature is `fahrenheit` degrees Fahrenheit."
15. console.log('The temperature is ' + fahrenheitTemp + ' degrees Fahrenheit.');

**Mini Project: Cat Years**

Cats mature at a faster rate than human beings. We often say a cat's age can be calculated in "cat years" to account for their growth compared to a human of the same age. In some ways we could say, time moves quickly for cats — 8 years in a human's life equates to 64 years in a cat's life. While there's no reliable scientific way to calculate the relationship between human and ***cat years***we are going to work with a recommended formula to find out how old would you be if you were a cat.

A cartoon of a cat next to a calendar

Description automatically generated

**Challenge: Convert Your Age to Cat Years**

Here's how you convert your age from "human years" to "cat years":

* The first two years of a cat's life count as 25 cat years each.
* Each year following equates to 4 cat years.

Instead of trying to do this math in your head, let's create an application that does this for us! With your knowledge of math **operators** and **variables**, use JavaScript to convert your human age into cat years. If at any point you get stuck during this challenge feel free to skip ahead to the next video to see the solution I implement.

1. Begin by creating a variable named myAge, and set it equal to your age as a number. Write a comment that explains this line of code.

2. Next, create a variable named earlyYears and save the value 2 to it. Note, the value saved to this variable will change. Write a comment that explains this line of code.

3. Use the multiplication assignment operator \*= to multiply the value saved to earlyYears by 25 and reassign it to earlyYears. This will account for the first two years of a cats life where they experience accelerated growth. Write a comment that explains this line of code.

4. Since we already accounted for the first two years, take the myAge variable, and subtract 2 from it. Set the result equal to a variable called laterYears. We'll be changing this value later. Write a comment that explains this line of code.

5. Multiply the laterYears variable by 4 to calculate the number of cat years accounted for by your later years. Use the multiplication assignment operator \*= to multiply and assign in one step. Write a comment that explains this line of code.

6. If you'd like to check your work at this point, log to the console  earlyYears and laterYears. Are the values what you expected?

7. Go ahead and delete the console logs from step 6. Add earlyYears and laterYears together, and store that in a variable named myAgeInCatYears.

Write a comment that explains this line of code.

8. Save the value of your name to the variable myName. Write your name as a string and store the result in a variable called myName. Write a comment that explains this line of code.

9. Write a console.log statement that displays your name and age in cat years. Use string concatenation to display the value in the following sentence:

1. My name is NAME. I am HUMAN AGE years old in human years which is CAT AGE years old in cat years.

Replace  "NAME" with myName, "HUMANE AGE" with myAge, and  "CAT AGE" with myAgeInCatYears in the sentence above.

Write a comment that explains this line of code.

**That's it! Congratulations.** Here are a couple of images of cats shooting lasers out of their eyes for all your hard work :) If you got stuck or would like to see my solution please check out the next video.

[](https://tenor.com/search/laser-cat-gifs)[](https://giphy.com/gifs/cat-lasers-cucumber-3oEduQAsYcJKQH2XsI)

Code Solution:

1. // assign my age to the variable `myAge`
2. var myAge = 20;
4. // assign value of `2` to variable `earlyYears`
5. var earlyYears = 2;
7. // multiply `earlyYears` by `25` to account for early growth rate
8. earlyYears \*= 25;
10. // subtract `2` years from `myAge` and assign to `laterYears` to account for growth rate of a
11. // cat after the first two years
12. var laterYears = myAge -2;
14. laterYears \*= 4;
16. // add value of `earlyYears` and `laterYears` for the total age and assign to `myAgeInCatYears`
17. var myAgeInCatYears = earlyYears + laterYears;
19. // assign the value of my name to the variable `myName`
20. var myName = 'Rob';
22. console.log('My name is ' + myName + '. I am ' + myAge
23. + ' years old in human years which is ' + myAgeInCatYears
24. + ' years old in cat years.');

**Mini Project: Random Insult Generator**

In this mini challenge we are going to create a random insult generator. Hopefully, this will be a little fun app to build and not something that you would actually use to insult people :) You will create three different arrays of body parts, adjectives and random words and your mini app will turn them into a string that creates a random insult.

A blue background with black text

Description automatically generated

**Challenge: Random Insult Generator**

1. Create an array with four different body parts and assign the array to the variable randomBodyParts. Some examples of body parts would be: head, arms, legs, feet, toes, hips.

2. Create an array with four adjectives and assign the array to the variable randomAdjectives.

3. Create an array with five random words and assign to the array to the variable randomWords.

4. Use the Math.floor() method and the Math.random() method to choose a random item from your randomBodyParts array and assign it to the variable randomBodyPart. Here is an example of how we might choose a random name from a list of names. If you get stuck you can watch me walk through this in the solution video.

1. var randomNames = ['John', 'Sally', 'Alex'];
2. var randomName = randomNames[Math.floor(Math.random() \* 3)];

5. Use the Math.floor() method and the Math.random() method to choose a random item from your randomAdjectives array and assign it to the variable randomAdjective. Here is an example of how we might choose a random name from a list of names.

6. Use the Math.floor() method and the Math.random() method to choose a random item from your randomWords array and assign it to the variable randomWord. Here is an example of how we might choose a random name from a list of names.

7. Write a console.log statement that displays your randomly generated insult:

1. Your BODY PART is like a ADJECTIVE WORD!!!

Replace  "BODY PART" with randomBodyPart, "ADJECTIVE" with randomAdjective, and  "WORD" with randomWord in the sentence above.

**Congratulations! Great job. If you got stuck please feel free to check out my walkthrough of this in the next video.**

[](https://giphy.com/gifs/insult-BiBi86v2atwyc)

**Mini App: Bear, Human, Gun Game**

**Bear, Human, or Gun**

Bear human gun is just like Rock paper scissors. Each player chooses either bear, human, or gun. The items are compared, and whichever player chooses the more powerful item wins.

A person with glasses and a bear

Description automatically generated

The possible outcomes are:

* bear mauls human.
* human disarms gun.
* gun shoots bear.
* If there's a tie, then the game ends in a draw.

**Challenge: Our code will break the game into four parts:**

1. Get the user's choice.
2. Get the computer's choice.
3. Compare the two choices and determine a winner.
4. Start the program and display the results.

If you get stuck during this project, check out the **project walkthrough video** which can be found in the next lesson(s) or look at the code snippets for each step at the **bottom** of this challenge.

1. The user should be able to choose 'bear', 'human', or 'gun' when the game starts.

Create a function named getUserChoice that takes a single parameter userInput.

2. Since a user can pass in a parameter, such as 'Bear' or 'bear' with different capitalizations, begin by utilizing JavaScript's toLowerCase() function to make the userInput all lowercase.

You can use code like this:

1. userInput = userInput.toLowerCase();

3. When getting the user's choice, you should also check to make sure that the user typed a valid choice: 'bear', 'human', or 'gun'.

Inside getUserChoice(), write an if/elsestatement that makes sure the userInput is either 'bear', 'human', or 'gun'. If it does, then return the userInput. If not, use console.log to print an error message to the console.

We haven't covered if / else statements yet in this course. In the following walkthrough video you can watch me implement this step! However, you could also pause for a moment and take a quick look at the if / else [whiteboard video](https://www.udemy.com/course/javascript-the-basics-for-beginners/learn/lecture/5317662) and [lab](https://www.udemy.com/course/javascript-the-basics-for-beginners/learn/lecture/5319534) then continue on with this step. Those lessons are titled "Loops" but fundamentally teach on if / else statements.

4. Test the function by calling it with valid and invalid input, and printing the results to the console.

You can delete this when you know your function works.

5. Now we need to have the computer make a choice.

Create a new function named getComputerChoice with no parameters. Inside its block, utilize Math.random() and Math.floor() to get a whole number between 0 and 2 and assign to variable randomNumber. Then, depending on the number, return either 'bear', 'human', or 'gun'. Again, you can use if/else or switch for this logic.

6.

Test the function by calling it multiple times and printing the results to the console.

You can delete this when you know your function works.

7. Now it's time to determine a winner.

Create a function named determineWinnerthat takes two parameters named userChoice and computerChoice. This function will compare the two choices played and then return if the human player won, lost, or tied.

Let's deal with the tie condition first. Within the determineWinner() function, write an if statement that checks if the userChoice parameter equals the computerChoice parameter. If so, return a string that the game was a tie.

8. If the game is not a tie, you'll need to determine a winner.

Begin by writing an if statement that checks if the userChoice is 'human'. Inside the if statement's block, write another if/else statement. The inner if/elseshould check if the computerChoice is 'bear'. If so, return a message that the computer won. If not, return a message that the user won.

9. Next, write another if statement for if the userChoice is 'bear'. The inner if/elseshould check if the computerChoice is 'gun'.

If so, return a message that the computer won. If not, return a message that the user won.

10. Next, write yet another if statement for if the userChoice is 'gun'.

The inner if/elseshould check if the computerChoice is 'human'. If so, return a message that the computer won. If not, return a message that the user won.

11. Test your function by logging it to the console!

12. Everything is set up. Now you need to start the game and log the results.

Create a function named playGame.

Inside the playGame() function, create a variable named promptUserChoice and assign the value of prompt("Please choose bear, human or gun"); This will allow the user to provide their input.

Now pass in promptUserChoice as an argument to the function getUserChoice(),  and assign to the variable userChoice.

Create another variable named computerChoice, and set it equal to the result of calling getComputerChoice().

Under both of these variables, use console.log to print them to the console.

13. Let's determine who won.

Inside the playGame() function, call the determineWinner() function. Pass in the userChoice and computerChoice variables as its parameters. Make sure to put this function call inside of a console.log() statement so you can see the result.

14. Finally, to start the game, call the playGame()function on the last line of your program.

**Congratulations**! You did it. If you got stuck anywhere you can check out the following **video** where I walk through the steps or you can look at the code snippets **below** for each challenge.

1.

1. function getUserChoice(userInput) {
2. }

2.

1. function getUserChoice(userInput) {
2. userInput = userInput.toLowerCase();
3. }

3.

1. function getUserChoice(userInput) {
2. userInput = userInput.toLowerCase();
3. if (userInput === 'bear' || userInput === 'human' || userInput === 'gun') {
4. return userInput;
5. } else {
6. return 'Please enter valid option';
7. }
8. }

4.

1. console.log(getUserChoice('Bear'); // 'bear'
2. console.log(getUserChoice('bear'); // 'bear'
3. console.log(getUserChoice('duck'); // 'Please enter valid option'

5.

1. function getComputerChoice() {
2. var randomNumber = Math.floor(Math.random() \* 3);
3. if (randomNumber === 0) {
4. return 'bear';
5. } else if (randomNumber === 1) {
6. return 'human';
7. } else {
8. return 'gun';
9. }
10. }

6.

console.log(getComputerChoice();

7.

1. function determineWinner(userChoice, computerChoice) {
2. if (userChoice === computerChoice) {
3. return 'It is a tie';
4. }
5. }

8.

1. function determineWinner(userChoice, computerChoice) {
2. if (userChoice === computerChoice) {
3. return 'It is a tie';
4. }
5. if (userChoice === 'human') {
6. if (computerChoice === 'bear') {
7. return 'You have been mauled by a bear';
8. } else {
9. return 'You have disarmed a gun';
10. }
11. }
12. }

9.

1. function determineWinner(userChoice, computerChoice) {
2. if (userChoice === computerChoice) {
3. return 'It is a tie';
4. }
5. if (userChoice === 'human') {
6. if (computerChoice === 'bear') {
7. return 'You have been mauled by a bear';
8. } else {
9. return 'You have disarmed a gun';
10. }
11. }
12. if (userChoice === 'bear') {
13. if (computerChoice === 'gun') {
14. return 'You have been shot by a gun';
15. } else {
16. return 'You have mauled a human';
17. }
18. }
19. }

10.

1. function determineWinner(userChoice, computerChoice) {
2. if (userChoice === computerChoice) {
3. return 'It is a tie';
4. }
5. if (userChoice === 'human') {
6. if (computerChoice === 'bear') {
7. return 'You have been mauled by a bear';
8. } else {
9. return 'You have disarmed a gun';
10. }
11. }
12. if (userChoice === 'bear') {
13. if (computerChoice === 'gun') {
14. return 'You have been shot by a gun';
15. } else {
16. return 'You have mauled a human';
17. }
18. }
19. if (userChoice === 'gun') {
20. if (computerChoice === 'human') {
21. return 'Your gun has been disarmed';
22. } else {
23. return 'You have shot a bear';
24. }
25. }
26. }

11.

1. console.log(determineWinner('bear', 'human'));
2. console.log(determineWinner('bear', 'gun'));

12.

1. function playGame() {
2. var promptUsesChoice = prompt("Please choose bear, human or gun");
3. var userChoice = getUserChoice(promptUsesChoice);
4. var computerChoice = getComputerChoice();
5. console.log(userChoice);
6. console.log(computerChoice);
7. }

13.

1. function playGame() {
2. var promptUsesChoice = prompt("Please choose bear, human or gun");
3. var userChoice = getUserChoice(promptUsesChoice);
4. var computerChoice = getComputerChoice();
5. console.log(userChoice);
6. console.log(computerChoice);
7. console.log(determineWinner(userChoice, computerChoice));
8. }

14.

playGame();

**Mini App: Calorie Calculator**

Calorie Calculator

Did you know that food label calorie percentages are based off a 2,000 calorie a day diet? Well, depending on many factors the amount of calories you should consume on a daily basis may be much higher or lower than this.

Let's create a fun mini app that let's you set a weekly calorie goal and tells you at the end of the week whether you are right on target, need to build more exercise into your week or whether you should head back to the dinner table to get seconds!

A weight scale with footprints on it

Description automatically generated

**Challenge: The program will determine the actual and ideal calories you consumed last week. It will return a message based on if you ate too much or too little.**

If you get stuck during this project, check out the **project walkthrough video** which can be found in the next video or I have the code listed for each step at the **bottom** of this challenge.

1. The first problem to solve is determining how many calories you consumed each day of the week.

You can create a function that returns any given day's number of calories consumed. Instead of writing seven different functions (one for each day of the week), let's write one function with a parameter for the day.

Create a function named inputCaloriesByDay with a single parameter named day.

2. The function should accept a day as an argument and return the number of calories you consumed.

For instance, if you consumed 3500 calories on Monday night, calling inputCaloriesByDay('monday') should return 3500.

Use an if/else or switch statement to implement this.

**Next section of our course covers if/else and switch statements in depth. Please jump to those videos if you don't know how those statements work, then come back to this mini app challenge.**

You can check out if/else docs here:  http://bit.ly/if-else-statement

You can check out switch docs here: http://bit.ly/javascript-switch

3. Test the function by calling it multiple times on different days and printing the results to the console.

You can remove the tests when you know your function works.

4. Now that you've written a function to get the calories consumed for each day, we need to do three things:

* Get the total calories you actually consumed
* Get the ideal calories that you preferred to consume
* Calculate if you ate too much or too little

To get the total calories consumed, create a new function named getTotalCalories that takes no parameters.

5. Inside the getTotalCalories() function, call the inputCaloriesByDay() function for each day of the week. Add the results together and return the sum.

6. To get the ideal calorie total for the week, create a function named getIdealCalories with no parameters.

Inside the function, declare a variable named idealDailyCalories and set its value to your ideal calories consumed per day. Then return the idealDailyCalories multiplied by 7.

You'll want to multiply by 7 to get the total calories you prefer per week.

7. Test your two new functions by calling them and printing the results to the console.

You can remove the tests when you know your functions works.

8. Now that you can get the actual calories consumed and the ideal calories consumed, it's time to calculate whether you should exercise more or eat more.

Create a function named calculateHealthPlan with no parameters.

Inside of its block, create a variable named actualCalories set equal to the getTotalCalories() function call.

Then, create another variable named idealCalories, set equal to the getIdealCalories() function call.

9. Now that you have actualCalories and idealCalories, you can write a few if/else statements to output the result to the console. The function should fulfill this logic:

* If actual actual calories consumed equals ideal calories consumed, log to the console: "You ate just the right amount of food!"
* If the actual calories consumed is greater than the ideal calories consumed, log to the console: "Time to head to the gym!"
* If the actual calories consumed is less than the ideal calories consumed, log to the console: "Time for seconds!"

10. On the last line of the program, start the program by calling the calculateHealthPlan() function.

**Congratulations!** You did it. If you ran into any troubles you can watch the next lesson where I walkthrough the code. Or, you can check your code step by step below.

[](https://imgur.com/gallery/IENwqZp)

1.

1. function inputCaloriesByDay(day) {
2. }

2. if/else option

1. function inputCaloriesByDay(day) {
2. if (day === 'Monday') {
3. return 3500;
4. } else if (day === 'Tuesday') {
5. return 1500;
6. } else if (day === 'Wednesday') {
7. return 1800;
8. } else if (day === 'Thursday') {
9. return 2300;
10. } else if (day === 'Friday') {
11. return 2400;
12. } else if (day === 'Saturday') {
13. return 1500;
14. } else if (day === 'Sunday') {
15. return 1500;
16. } else {
17. return 'Please choose valid day';
18. }
19. }

switch option

1. function inputCaloriesByDay(day) {
2. switch(day) {
3. case 'Monday':
4. return 3500;
5. break;
6. case 'Tuesday':
7. return 1500;
8. break;
9. case 'Wednesday':
10. return 1800;
11. break;
12. case 'Thursday':
13. return 2300;
14. break;
15. case 'Friday':
16. return 2400;
17. break;
18. case 'Saturday':
19. return 1500;
20. break;
21. case 'Sunday':
22. return 1500;
23. break;
24. default:
25. return 'Please choose a valid day';
26. }
27. }

3.

1. console.log(inputCaloriesByDay('Monday');
2. console.log(inputCaloriesByDay('Tuesday');

4.

1. function getTotalCalories() {
2. }

5.

1. function getTotalCalories() {
2. return inputCaloriesByDay('Monday') +
3. inputCaloriesByDay('Tuesday') +
4. inputCaloriesByDay('Wednesday') +
5. inputCaloriesByDay('Thursday') +
6. inputCaloriesByDay('Friday') +
7. inputCaloriesByDay('Saturday') +
8. inputCaloriesByDay('Sunday');
9. }

6.

1. function getIdealCalories() {
2. }

7.

1. function getIdealCalories() {
2. var idealDailyCalories = 2000;
3. return idealDailyCalories \* 7;
4. }

8.

1. function calculateHealthPlan() {
2. var actualCalories = getTotalCalories();
3. var idealCalories = getIdealCalories();
4. }

9.

1. function calculateHealthPlan() {
2. var actualCalories = getTotalCalories();
3. var idealCalories = getIdealCalories();
4. if (actualCalories === idealCalories) {
5. return 'You ate just the right amount!';
6. }
7. if (actualCalories > idealCalories) {
8. return 'Time to head to the gym!';
9. } else {
10. return 'Time for seconds!';
11. }
12. }

10.

console.log(calculateHealthPlan());

**Magic Eight Ball**

**Magic Eight Ball**

Did you know that you can predict the future with JavaScript? You can...kind of. We are going to take the classic [Magic Eight Ball](https://en.wikipedia.org/wiki/Magic_8-Ball) and combine it with control flow in JavaScript to tell the future.

A black and white billiard ball with a white number on it

Description automatically generated

**Challenge: the user will be able to input a question, then our program will output a random fortune.**

If you get stuck during this project, check out the **project walkthrough video** which can be found at the bottom of the page after the final step of the project.

1. In the first line of the program, define a variable called userName that is set to the value of a prompt command asking "What is your name?".

2. Below this variable, create a conditional to check if a userName exists. If so, log to the console with a template literal "Hello USER" where USER is the value of userName.  If a userName does not exist then log a message "Hello!"

3. Create a variable named userQuestion. Store to it the value a prompt with the question "Please ask a question!". The value of the variable should now be a string that is the question the user wants to ask the Magic Eight Ball.

4. Write a console.log() for the userQuestion, stating what was asked. You can include the user's name in the console.log() statement, if you wish!

5. We need to generate a random number between 0 and 7.

Create another variable, and name it randomNumber. Set it equal to this expression, which uses two methods from the Math library.

1. Math.floor(Math.random() \* 8);

6. Create one more variable named eightBall, and set it equal to an empty string. We will save a value to this variable in the next steps, depending on the value of randomNumber.

7. We need to create a control flow that takes in the randomNumber we made in step 4, and then assigns eightBall to a reply that a Magic Eight Ball would return. Think about utilizing if/else or switch statements. Here are 8 Magic Eight Ball phrases that we'd like to save to the variable eightBall. You can find the master source with more ideas here: https://en.wikipedia.org/wiki/Magic\_8-Ball

* 'Better not tell you now.'
* 'Concentrate and ask again.'
* 'Reply hazy try again'
* 'Cannot predict now'
* 'My reply is no.'
* 'My sources say no'
* 'Outlook not so good'
* 'Signs point to yes'

If the randomNumber is 0, then save an answer to the eightBall variable; if randomNumber is 1, then save the next answer, and so on. If you're feeling creative, make your own responses!

8. Write a console.log() to print the Magic Eight Ball's answer, the value of the eightBall variable.

9. Run your program a few times to see random results appear in the console!

If you want extra practice:

* If you started with a switch statement, convert it to if/else if/elsestatements.
* If you started with if/else if/else statements, convert them to a switchstatement.

**Congratulations**! You did it. If you got stuck anywhere you can watch the next **video** where I walk through the challenge myself or you can check out the code snippets **below** for each step.

[](https://giphy.com/explore/magic)

1.

var userName = prompt('What is your name?');

2.

1. if (userName) {
2. console.log('Hello, ' + userName + '.');
3. } else {
4. console.log('Hello!');
5. }

3.

var userQuestion = prompt('Please ask a question!');

4.

console.log('User question: ' + userQuestion);

5.

var randomNumber = Math.floor(Math.random() \* 8);

6.

var eightBall = '';

7.

1. switch (randomNumber){
2. case 0:
3. eightBall = 'Better not tell you now.';
4. break;
5. case 1:
6. eightBall = 'Concentrate and ask again.';
7. break;
8. case 2:
9. eightBall = 'Reply hazy try again';
10. break;
11. case 3:
12. eightBall = 'Cannot predict now';
13. break;
14. case 4:
15. eightBall = 'Dont count on it';
16. break;
17. case 5:
18. eightBall = 'My reply is no.';
19. break;
20. case 6:
21. eightBall = 'Outlook not so good';
22. break;
23. case 7:
24. eightBall = 'Signs point to yes';
25. break;
26. }

8.

console.log('The eight ball answer: ' + eightBall);

9.

1. if (randomNumber === 0) {
2. return 'Better not tell you now.';
3. } else if (randomNumber === 1) {
4. return 'Concentrate and ask again.';
5. } else if (randomNumber === 2) {
6. return 'Reply hazy try again';
7. } else if (randomNumber === 3) {
8. return 'Cannot predict now';
9. } else if (randomNumber === 4) {
10. return 'Dont count on it';
11. } else if (randomNumber === 5) {
12. return 'My reply is no.';
13. } else if (randomNumber === 6) {
14. return 'Outlook not so good';
15. } else if (randomNumber === 7) {
16. return 'Reply hazy try again';
17. } else {
18. return 'Signs point to yes';
19. }