

3.3.4 Add the End Game Function

The game currently restarts without providing any feedback to the player. For a better user experience, we should display some of the player's final stats and then ask if they want to play again.

Even though we could write this "end game" logic directly in `startGame()`, using another function is a better approach.

PAUSE

Why is it helpful to have an `endGame()` function?

It keeps the codebase organized, and we might need to call "end game" in other places as more conditions are added.

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Let's write this new function after the `startGame()` function:

```
else {  
  window.alert("You've lost your robot in battle.");  
}  
}
```

Finally, use a `confirm()` to ask the player if they want to play again. Add the following at the end of `endGame()`:

```
// ask player if they'd like to play again  
var playAgainConfirm = window.confirm("Would you like to play again?")  
  
if (playAgainConfirm) {  
  // restart the game  
  startGame();  
}  
else {  
  window.alert("Thank you for playing Robot Gladiators! Come back soon");  
}
```

PAUSE

Can you see anything in the code that might be affected by scope?

We declared a new variable (`var playAgainConfirm`) inside a function, so only that function has access to it.

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That wraps up the endgame logic, though we haven't actually used this function anywhere yet. Let's update `startGame()` to call `endGame()` instead:

```
// function to end the entire game
var endGame = function() {
  window.alert("The game has now ended. Let's see how you did!");
};
```

Note that we are still declaring functions as expressions with the `var` keyword. Sometimes, you might see functions declared as simply `function endGame()`. Even though this would also work, there are some subtle differences between the two syntaxes. For more information, watch the following video:

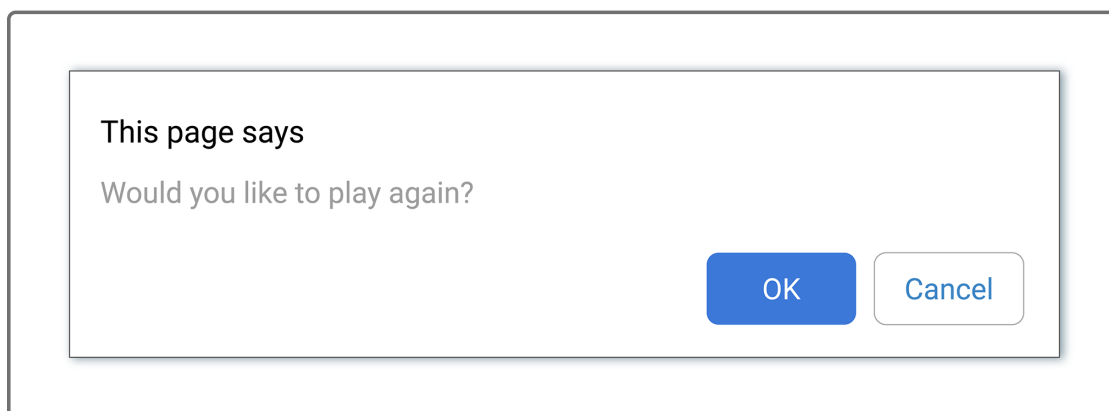


Now that you have an `endGame()` function, let's make it more useful by alerting a different message depending on the player's final health. Update `endGame()` so it looks like this:

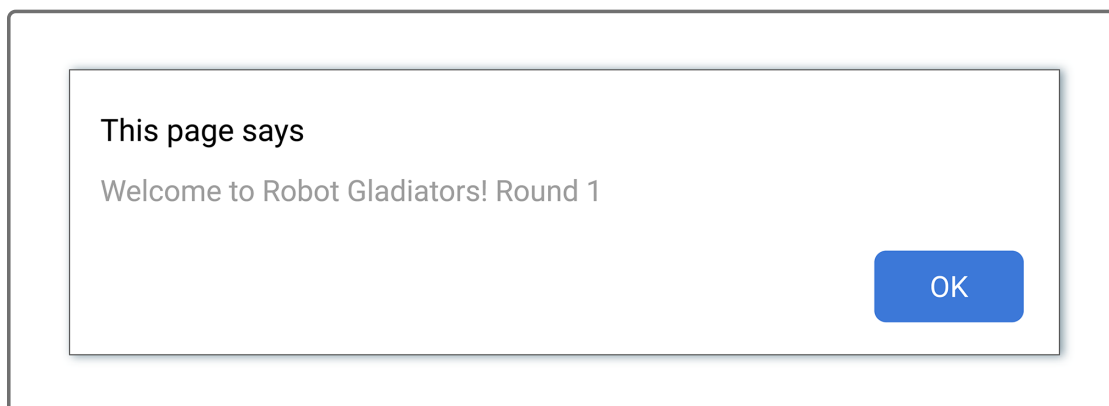
```
var endGame = function() {
  // if player is still alive, player wins!
  if (playerHealth > 0) {
    window.alert("Great job, you've survived the game! You now have a
  }
```

```
var startGame = function() {  
  for (var i = 0; i < enemyNames.length; i++) {  
    ...  
  }  
  
  // after the loop ends, player is either out of health or enemies to  
  endGame();  
};
```

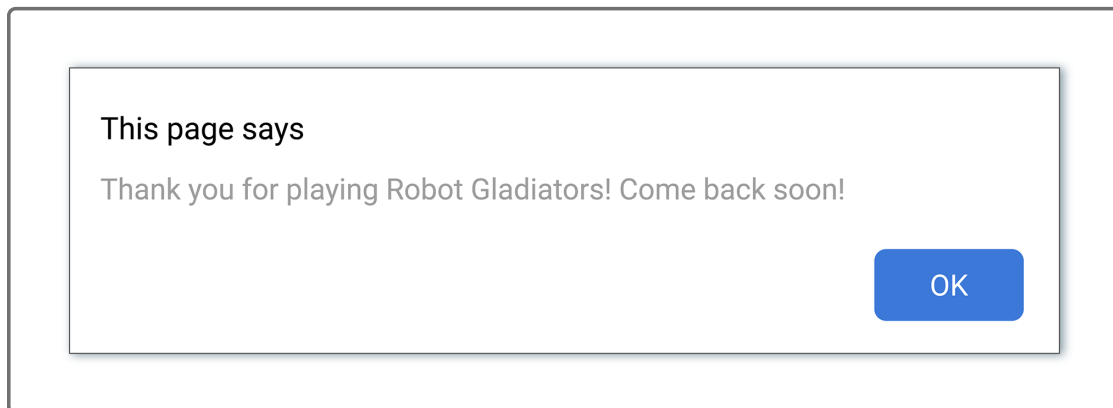
Save, refresh, and test the game in the browser. After looping over every enemy robot, the player should see the question, "Would you like to play again?" as seen below:



Clicking OK should restart the game and reset the player stats, then display the following welcome message:



Clicking Cancel should display the following message before ending the game:



If the game isn't working, check the DevTools console for errors. An error like `Uncaught ReferenceError: startgame is not defined` suggests that we accidentally used lowercase `startgame()` instead of `startGame()`. If there aren't errors, use `console.log()` and/or `debugger` statements to verify whether functions and `if` statements are being reached.