Exercise #1: Conditional Expressions (total 3 minutes)

a. (1 minutes) Use the console to output the value of a JS expression that evaluates to true when your age equals your number of years to graduation.  Create and set your own variables as needed. For example: age = 25; num\_years\_grad = 4; console.log(age >= num\_years\_grad);

b. (1 minute) Use the console to output the value of an expression that evaluates to true when your age does not equal the number of years to graduation

 // a

var age = 26;

var num\_years\_grad = 4;

console.log(age >= num\_years\_grad);

if (age = num\_years\_grad) {

document.write(true);

}

c. (1 minute) Use the console to output the value of an expression that evaluates to  true when your age is greater than the number of years to graduation.

// b

if (age != num\_years\_grad) {

document.write(true);

}

Exercise #2: Boolean expressions (total 3 minutes)

a. (3 minutes) Write an expression that checks if your age is greater than 19 **and** less than 25

 var age = 26;

var num\_years\_grad = 4;

console.log(age > 19 && age <25)

Exercise #3: if statements (total 10 minutes)

Try out the following code then answer the questions below:

name = <your name>;

likesBeer = <true if you like beer, false if you do not>;

document.write(name + ' does ');

if ( !likesBeer )

    document.write('not ');

document.write('like beer!');

<script>

name = "David";

likesBeer = true;

document.write(name + ' does ');

if ( !likesBeer )

document.write('not ');

document.write('like beer!');

</script>

1. (4 minutes) Verify that the if-statement works by trying possible values for likesBeer. What data type is the variable likesBeer ?  Must you always use this data type with the if statement?

It worked when I replaced the variable likesBeer to lovesBeer. This is an example of a string

Answer here: <script>

name = "David";

lovesBeer = true;

document.write(name + ' does ');

if ( !lovesBeer )

document.write('not ');

document.write('love beer!');

</script>

b. (3 minutes) If line 4 in the program were changed to:

if ( likesBeer = false )

would the program still work as desired? Why or why not?

Answer here: <script>

name = "David";

lovesBeer = false;

document.write(name + ' does ');

if ( !lovesBeer )

document.write('not ');

document.write('love beer!');

The program still worked as I got “David does not love beer”. This worked because the if statement had two logical solutions that respond to the true or false.

c. (3 minutes) Use {}’s in the if-statement in the above program to another document.write() statement to output 'ever ' on line 6 after the document.write('not '); Be sure not to include the last line inside your {}’s

<script>

name = "David";

likesBeer = false;

document.write(name + ' does ');

if (likesBeer == false) {

document.write('not ');

document.write('ever ');

}

document.write('I like beer!');

</script>

I get “David does not ever I like beer!” which doesn’t really make sense. ex

Exercise #4: if-else (5 minutes)

Rewrite (and test) the program in exercise #3 using if-else statements that result in two different echo statements I like beer! and beer is something I dislike

Paste source code here

 <script>

name = "David";

likesBeer = false;

document.write(name + ' does ');

if (likesBeer == false) {

document.write('not ');

document.write('ever ');

document.write('like beer!');

} else {

document.write('I like beer!');

}

</script>

 Answer here: I got “David does not ever like beer” with the liveserver.

Exercise #5: if-else if (5 minutes)

A product that you are selling is discounted depending on the number purchased. Try out the following “nested if-statement” code that sets the price for the product, given a number of different quantities:

// -- Price depends on quantity

quantity = <choose a quanity> ;

if ( quantity > 0 ) {

    price = 100;

    if ( quantity >= 10 ) {

        price = 50 ;

        if ( quantity >= 25 ) {

            price = 35;

        }

    }

}

else

    price = "no purchase" ;

console.log( quantity + ' products will cost ' + price + ' each.' ) ;

Rewrite the above program using if-elseif-else statements to remove the nested if-statements. Hint: don’t just replace “if” statements with “if-else” in the above. You will have to move the end }’s too! Consider example quantities of 1, 10, and 25 and make sure that the correct price is set for each.

Paste source code here

 <script>

quantity = 25;

if (quantity >= 25) {

price = 100;

} else if (quantity >= 10) {

price = 50;

} else if (quantity > 0) {

price = 35;

} else {

price = "no purchase";

}

console.log(quantity + ' products will cost ' + price + ' each.');

</script>

</script>

 25 products will cost 100 each.

Extra Credit:

Create a switch statement that switches on the value of a variable called month.  The value of month will be a string containing the name of the month, e.g. “January”, “February”, etc.  Use the switch statement to set the value of the variable num\_days, which should contain the correct number of days in the month.  Make sure that your switch contains a “default” branch, in case the value of month is not set correctly.  Output an error in the default branch and set the value of month to -1 (i.e., a value that indicates that an error has occurred).

Paste source code here