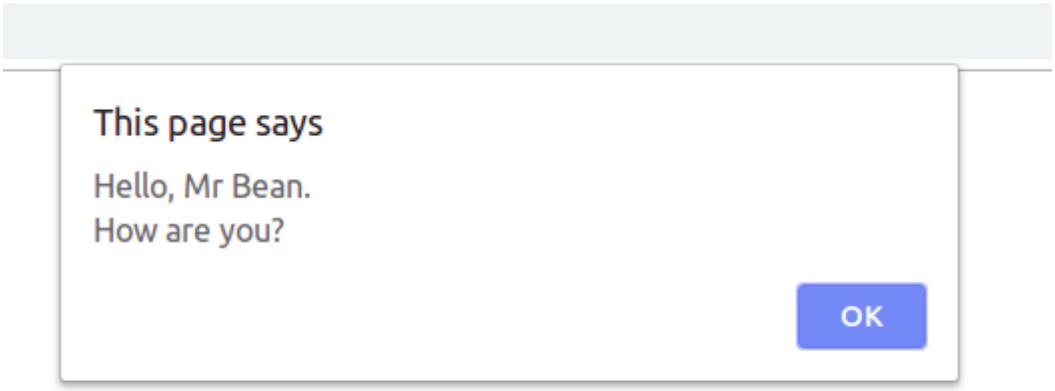
JavaScript Assignments

Alert

1. Write a script to greet your website visitor using JS alert box.
2. Write a script to display following message on your web page:
   (Hint : Use line break \n)



3. Generate the alert message through browser's developer Console.

Variables for Strings

1. Write script to
a) Declare a JS variable, titled message.
b) Assign "Hello World" to variable message
c) Display the message in alert box.

2. Declare a variable called book & give it the value "A smarter way to learn JavaScript". Display this in browser through JS.
(Hint: use document.write())

Variables for Number

1. Declare a variable called age & assign it your age. Show your age in an alert box.

2. Declare a variable called birthYear & assign to it your birth year. Display this in browser through JS. (Hint: use document.write())

Legal and Illegal Variables

Display this in your browser.
a) A heading stating “Rules for naming JS variables”
b) Variable names can only contain _____, _____, _____ and _____.
For example: $my_1stVariable
c) Variables must begin with a _____, _____ or _____.
For example: $name, _name or name
d) Variable names are case _____
e) Variable names should not be JS _____

Math Expressions: familiar operators

Do the following using JS Mathematic Expressions.
a. Declare a variable.
b. Show the value of variable in your browser like “Value after variable declaration is: ?”.
c. Initialize the variable with some number.
d. Show the value of variable in your browser like “Initial value: any number”.
e. Increment the variable.
f. Show the value of variable in your browser like “Value after increment is: ?”.
g. Add 7 to the variable.
h. Show the value of variable in your browser like “Value after addition is: ?”.

i. Decrement the variable.
j. Show the value of variable in your browser like “Value after decrement is: ?”.
k. Show the remainder after dividing the variable’s value by 3.
l. Output : “The remainder is : ?”.

Math Expressions: unfamiliar operators

What will be the output in variables a, b & result after execution of the following script:

```
var a = 2, b = 1;
var result = --a - --b + ++b + b--;
```

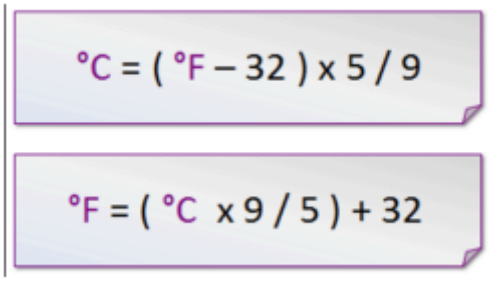
Break it on each step:

```
--a;
--a - --b;
--a - --b + ++b;
--a - --b + ++b + b--;
```

Math Expressions: eliminating ambiguity

The Temperature Converter: It’s hot out! Let’s make a converter based on the steps here.
a. Store a Celsius temperature into a variable.
b. Convert it to Fahrenheit & output “NN o C is NN o F”.
c. Now store a Fahrenheit temperature into a variable.
d. Convert it to Celsius & output “NN o F is NN o C”.

Conversion Formulae:



Prompts

1. Take user name form user on prompt and greet user by his name on the alert box.

if statements

1. Write a program to take “gender” as input from user. If the user is male, give the message: Good Morning Sir. If the user is female, give the message: Good Morning Ma’am.

2. Write a program that takes a character (i.e. string of length 1) and returns true if it is a vowel.

if...else and else if statements

1. Write a program to take input color of road traffic signal from the user & show the message according to this:

   Red = Must stop
   Yellow = Ready to move
   Green = Move now

Comparison Operators

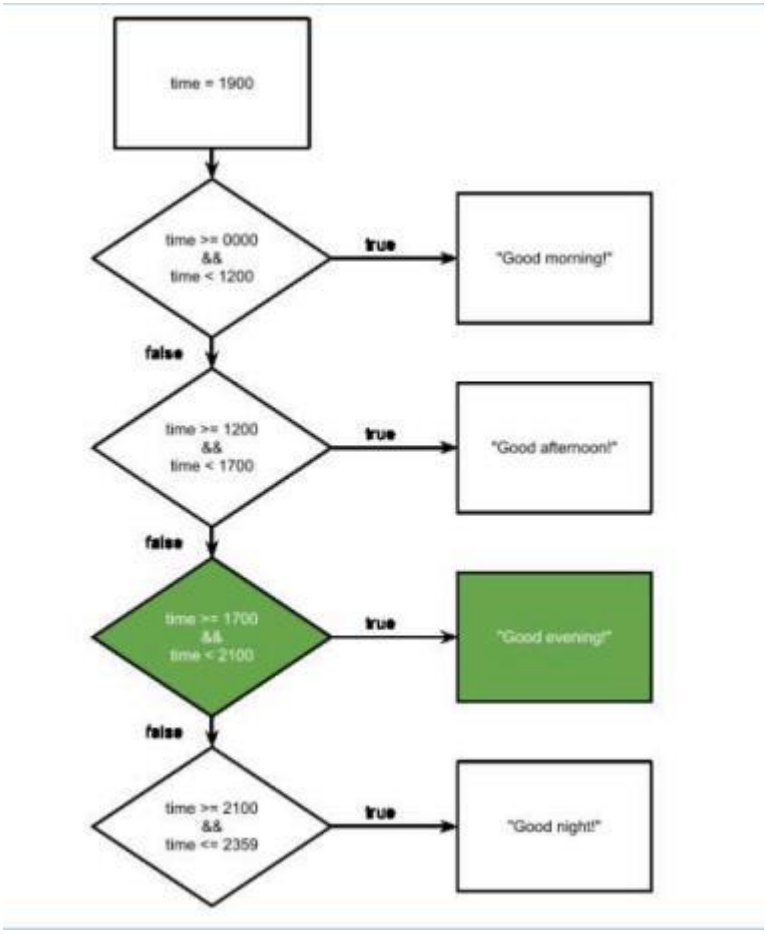
1. Write a program that takes input a number from user & state whether the number is positive, negative or zero.

2. Write a program that
   a. Store correct password in a JS variable.
   b. Asks user to enter his/her password
   c. Validate the two passwords:
      i. Check if user has entered password. If not, then give message “ Please enter your password”
      ii. Check if both passwords are same. If they are same, show message “Correct! The password

you entered matches the original password”. Show “Incorrect password” otherwise.

Testing sets of conditions

1. Write a program that takes time as input from user in 24 hours clock format like: 1900 = 7pm. Implement the following case using if, else & else if statements.



Arrays

1. Write a program to store 3 student names in an array.Take

another array to store score of these three students. Assume that total marks are 500 for each student, display the scores & percentages of students like.

Score of Michael is 320. Percentage: 64%
Score of John is 230. Percentage: 46%
Score of Tony is 480. Percentage: 96%

Arrays: adding and removing elements
Arrays: removing, inserting, and extracting elements

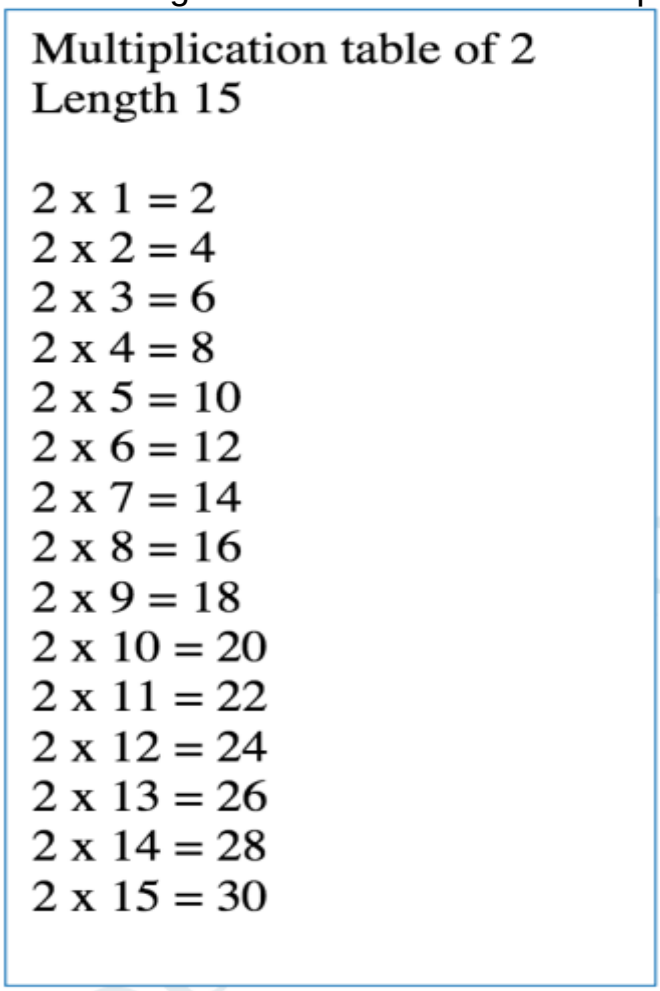
1. Initialize an array with color names. Display the array elements in your browser.
   a. Ask the user what color he/she wants to add to the beginning & add that color to the beginning of the array. Display the updated array in your browser.
   b. Ask the user what color he/she wants to add to the end & add that color to the end of the array. Display the updated array in your browser.
   c. Add two more color to the beginning of the array. Display the updated array in your browser.
   d. Delete the first color in the array. Display the updated array in your browser.
   e. Delete the last color in the array. Display the updated array in your browser.
   f. Ask the user at which index he/she wants to add a color & color name. Then add the color to desired position/index. . Display the updated array in your browser.
   g. Ask the user at which index he/she wants to delete color(s) & how many colors he/she wants to delete. Then remove the same number of color(s) from user-defined position/index. . Display the updated array in your browser.

2. Write a program to initialize an array with city names. Copy 3 array elements from cities array to selectedCities array.
3. Declare and initialize a multidimensional array representing the cities of different countries.

(Array of arrays)
Hint: [[],[],[]]

for loops

1. Write a program to print multiplication table of any number using for loop. Table number & length should be taken as an input from user.



2. Generate the following series in your browser. See example output.
   a. Counting: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
   b. Reverse counting: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
   c. Even: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20
   d. Odd: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19

e. Series: 2k, 4k, 6k, 8k, 10k, 12k, 14k, 16k, 18k, 20k

3. Write a program that prints fruits name from start of the array to desired stop value. Given array:
var fruits = [apple, orange, banana, graps, mango];
(Hint: take stop value from user)
E.g. if user gives 3 as input value print apple, orange, banana.

for loops: flags, Booleans, array length, and breaks

1. You have an array
[“cake”, “apple pie”, “cookie”, “chips”, “patties”]
Write a program to enable “search by user input” in an array. After searching, prompt the user whether the given item is found in the list or not.

for loops nested

1. Write a program to identify the largest number and smallest number in the given array. [24, 53, 78, 91, 12]

Challenge

Note: Challenge is not included in Assignments.

1. Write a program that will write out a wedge of stars. The user will enter the initial number of stars, and the program will write out lines of stars where each line has one few star than the previous line. Initial number of stars: 7

Hints: i) use decrement
ii) use document.write
iii) use br tag in strings in document.write for line break

Output:

****
******
*****
****
***

**
*

2. Write a program to create the following patterns in your browser. Take number of lines as an input.

a.

*****
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b.

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c.

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d.

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