Exercise-1 with Solution

Write a JavaScript function that reverse a number.
Sample Data and output:
Example x = 32243;
Expected Output : 34223

Sample Solution : -

```
<body onload="reverse()">
<script>
function reverse()
{
var r=prompt("ente the number");

var t=r.split('').reverse().join('');

document.write(t);
}</script>
</body>
</html>
```

Exercise-2 with Solution

Write a JavaScript function that returns a passed string with letters in alphabetical order.
Example string : 'webmaster'
Expected Output : 'abeemrstw'
Note: Assume punctuation and numbers symbols are not included in the passed string..

```
<body onload="alphabet_order()">
<script>
function alphabet_order(str)
 {
return str.split('').sort().join('');
 }
document.write(alphabet_order("webmaster"));</script>
</body>
</html>
```

Exercise-3 with Solution

Write a JavaScript function that accepts a string as a parameter and counts the number of vowels within the string.

Note : As the letter 'y' can be regarded as both a vowel and a consonant, we do not count 'y' as vowel here.
Sample Data and output:
Example string : 'The quick brown fox'
Expected Output : 5

```
1. function vowel_count(str1)
2. {
3.   var vowel_list = 'aeiouAEIOU';
4.   var vcount = 0;
5.
6.   for(var x = 0; x < str1.length ; x++)
7.   {
8.     if (vowel_list.indexOf(str1[x]) !== -1)
9.     {
10.      vcount += 1;
11.    }
12.
13.  }
14.  return vcount;
15.}
16.Document.write(vowel_count("The quick brown fox"));
```

Exercise-5 with Solution

Write a JavaScript function that accepts a string as a parameter and converts the first letter of each word of the string in upper case.
Example string : 'the quick brown fox'
Expected Output : 'The Quick Brown Fox '

JavaScript Code :

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```
1. //Write a JavaScript function that accepts a string as a parameter and con
   verts the first letter of each word of the string in upper case.
2.
```

```
function uppercase(str)
{
  var array1 = str.split(' ');
  var newarray1 = [];

  for(var x = 0; x < array1.length; x++){
      newarray1.push(array1[x].charAt(0).toUpperCase()+array1[x].slice(1))
;
  }
  return newarray1.join(' ');
}
document.write(uppercase("the quick brown fox"));
```

Exercise-6 with Solution

Write a JavaScript program to get the current date.
Expected Output :
mm-dd-yyyy, mm/dd/yyyy or dd-mm-yyyy, dd/mm/yyyy
Sample Solution : -
HTML Code :

JavaScript Code :

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```
var today = new Date();
var dd = today.getDate();

var mm = today.getMonth()+1;
var yyyy = today.getFullYear();
if(dd<10)
{
    dd='0'+dd;
}

if(mm<10)
{
    mm='0'+mm;
}
today = mm+'-'+dd+'-'+yyyy;
document.write(today);
today = mm+'/'+dd+'/'+yyyy;
document.write(today);
today = dd+'-'+mm+'-'+yyyy;
document.write(today);
today = dd+'/'+mm+'/'+yyyy;
```

```
22. document.write(today);
```

Exercise-7 with Solution

Write a JavaScript program to calculate number of days left until next Christmas.

Sample Solution :
JavaScript Code :

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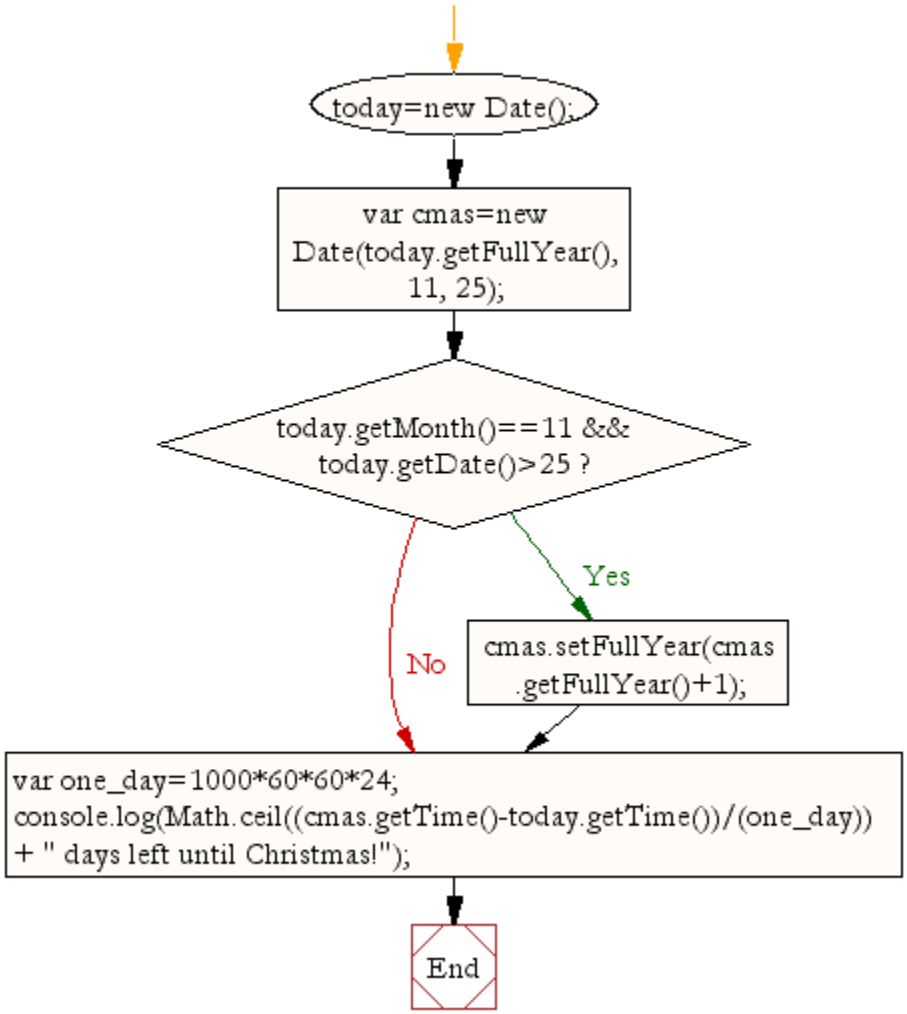
```
1. today=new Date();
2. var cmas=new Date(today.getFullYear(), 11, 25);
3. if (today.getMonth()==11 && today.getDate()>25)
4. {
5. cmas.setFullYear(cmas.getFullYear()+1);
6. }
7. var one_day=1000*60*60*24;
8. document.write(Math.ceil((cmas.getTime()-today.getTime())/(one_day))+
9. " days left until Christmas!");
```

Explanation :
Declaring a JavaScript date : In JavaScript Date objects are based on a time value that is the number of milliseconds since 1 January, 1970 UTC. You can declare a date in the following ways :

```
new Date();

new Date(value);

new Date(dateString);

new Date(year, month[, day[, hour[, minutes[, seconds[, milliseconds]]]]]);
```

The getFullYear() method is used to get the year of the specified date according to local time. The value returned by the method is an absolute number. For dates between the years 1000 and 9999, getFullYear() returns a four-digit number, for example, 1985.
The getMonth() method is used to get the month in the specified date according to local time, as a zero-based value. The value returned by getMonth() is an integer between 0 and 11. 0 corresponds to January, 1 to February, and so on.
The getDate() method is used to get the day of the month for the specified date according to local time. The value returned by getDate() is an integer between 1 and 31.

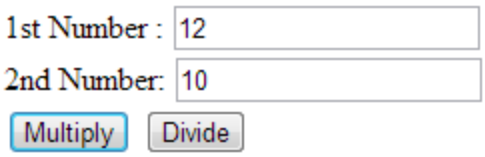
The getTime() method is used to get the numeric value corresponding to the time for the specified date according to universal time.
The Math.ceil() function is used to get the smallest integer greater than or equal to a given number.
Flowchart :



JavaScript Basic : Exercise-10 with Solution

Write a JavaScript program to calculate multiplication and division of two numbers (input from user).

Sample Form:



Sample Solution : -

HTML Code :

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```
1. <!DOCTYPE html>
2. <html>
3. <head>
4. <meta charset=utf-8 />
5. <title>JavaScript program to calculate multiplication and division of two
   numbers </title>
6. <style type="text/css">
7. body {margin: 30px;}
8. </style>
9. </head>
10.<body>
11.<form>
12.1st Number : <input type="text" id="firstNumber" /><br>
13.2nd Number: <inpot type="text" id="secondNumber" /><br>
14.<input type="button" onClick="multiplyBy()" Value="Multiply" />
15.<input type="button" onClick="divideBy()" Value="Divide" />
16.</form>
17.<p>The Result is : <br>
18.<span id = "result"></span>
19.</p>
20.</body>
21.</html>
```

JavaScript Code :

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```
1. function multiplyBy()
2. {
3.         num1 = document.getElementById("firstNumber").value;
4.         num2 = document.getElementById("secondNumber").value;
5.         document.getElementById("result").innerHTML = num1 * num2;
6. }
7.
8. function divideBy()
9. {
```

```
        num1 = document.getElementById("firstNumber").value;
        num2 = document.getElementById("secondNumber").value;
document.getElementById("result").innerHTML = num1 / num2;
}
```

Explanation :
document.getElementById(id).value : The value property sets or returns the value of the value attribute of a text field.
document.getElementById("result").innerHTM : The innerHTML property sets or returns the HTML content (inner HTML) of an element.

JavaScript Conditional Statement and loops: Exercise-1 with Solution

Write a JavaScript program that accept two integers and display the larger.

Sample Solution:-

JavaScript Code :

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```
var num1, num2;
num1 = window.prompt("Input the First integer", "0");
num2 = window.prompt("Input the second integer", "0");

if(parseInt(num1, 10) > parseInt(num2, 10))
  {
  document.write("The larger of "+ num1+ " and "+ num2+ " is "+ num1+ ".")
;
  }
else
  if(parseInt(num2, 10) > parseInt(num1, 10))
  {
  document.write("The larger of "+ num1+" and "+ num2+ " is "+ num2+ ".");

  }
else
  {
   document.write("The values "+ num1+ " and "+num2+ " are equal.");
  }
```

JavaScript Conditional Statement and loops: Exercise-2 with Solution

Write a JavaScript conditional statement to find the sign of product of three numbers. Display an alert box with the specified sign.
Sample numbers : 3, -7, 2
Output : The sign is -
Sample Solution:-

JavaScript Code :

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```
1. var x=3;
2. var y=-7;
3. var z=2;
4. if (x>0 && y>0 && z>0)
5. {
6.         alert("The sign is +");
7. }
8. else if (x<0 && y<0 && z>0)
9.          {
10.           document.write("The sign is +");
11.         }
12.         else if (x>0 && y<0 && z<0)
13.         {
14.           document.write("The sign is +");
15.         }
16.         else if (x<0 && y>0 && z<0)
17.         {
18.           document.write("The sign is +");
19.         }
20.         else
21.         {
22.           document.write("The sign is -");
23.         }
```

JavaScript Array : Exercise-1 with Solution

Write a JavaScript function to check whether an `input` is an array or not.

Test Data :
document.write(is_array('w3resource'));
document.write(is_array([1, 2, 4, 0]));
false
true

Sample Solution :
avaScript Code :
view plaincopy to clipboardprint?

```
1. is_array = function(input) {
2.   if (toString.call(input) === "[object Array]")
3.     return true;
4.   return false;
5.     };
6. document.write(is_array('w3resource'));
7. document.write(is_array([1, 2, 4, 0]))
```

JavaScript Array : Exercise-2 with Solution

Write a JavaScript function to clone an array.

Test Data :
document.write(array_Clone([1, 2, 4, 0]));
document.write(array_Clone([1, 2, [4, 0]]));
[1, 2, 4, 0]
[1, 2, [4, 0]]
Sample Solution : -

JavaScript Code :
view plaincopy to clipboardprint?

```
1. array_Clone = function(arra1) {
2.  return arra1.slice(0);
3.     };
4. document.write(array_Clone([1, 2, 4, 0]));
5. document.write(array_Clone([1, 2, [4, 0]]));
```

JavaScript Array: Exercise-5 with Solution

Write a simple JavaScript program to join all elements of the following array into a string.

Expected Output :
"Red,Green,White,Black"
"Red,Green,White,Black"
"Red+Green+White+Black"
Sample Solution : -

JavaScript Code :
view plaincopy to clipboardprint?

```
1. myColor = ["Red", "Green", "White", "Black"];
2. document.write(myColor.toString());
3. document.write(myColor.join());
4. document.write(myColor.join('+'));
```

JavaScript Array : Exercise-7 with Solution

Write a JavaScript program to sort the items of an array.

Sample array : var arr1 = [3, 8, 7, 6, 5, -4, 3, 2, 1];
Sample Output : -4,-3,1,2,3,5,6,7,8
Sample Solution :
JavaScript Code :
view plaincopy to clipboardprint?

```
1. var arr1=[-3,8,7,6,5,-4,3,2,1];
2. var arr2=[];
3. var min=arr1[0];
4. var pos;
5. max=arr1[0];
6. for (i=0; i<arr1.length; i++)
7. {
8.         if (max<arr1[i]) max=arr1[i];
9. }
10.
11.for (var i=0;i<arr1.length;i++)
12.{
13.        for (var j=0;j<arr1.length;j++)
14.        {
15.                if (arr1[j]!="x")
16.                {
17.                        if (min>arr1[j])
18.                        {
19.                                min=arr1[j];
20.                                pos=j;
21.                        }
22.                }
23.        }
24.        arr2[i]=min;
25.        arr1[pos]="x";
26.        min=max;
27.}
28.document.write(arr2);
```

JavaScript Array: Exercise-15 with Solution

Write a JavaScript program to display the colors in the following way :

Here is the sample array:
color = ["Blue ", "Green", "Red", "Orange", "Violet", "Indigo", "Yellow "];
o = ["th","st","nd","rd"]
Output
"1st choice is Blue ."
"2nd choice is Green."
"3rd choice is Red."

JavaScript Conditional Statement and loops: Exercise-5 with Solution

Write a JavaScript for loop that will iterate from 0 to 15. For each iteration, it will check if the current number is odd or even, and display a message to the screen.

Sample Output :
"0 is even"
"1 is odd"
"2 is even"

JavaScript Code :

```
1. for (var x=0; x<=15; x++) {
2.          if (x === 0) {
3.                  Document.write(x +  " is even");
4.          }
5.          else if (x % 2 === 0) {
6.                  Document.write (x + " is even");
7.          }
8.          else {
9.                  Document.write (x + " is odd");
10.         }
11.}
```

JavaScript Conditional Statement and loops: Exercise-4 with Solution

Write a JavaScript conditional statement to find the largest of five numbers. Display an alert box to show the result.

Sample numbers : -5, -2, -6, 0, -1

Output : 0
Sample Solution:-

```
a=-5;
b=-2;
c=-6;
d= 0;
f=-1;
if (a>b && a>c && a>d && a>f)
{
    document.write(a);
}
else if (b>a && b>c && b>d && b>f)
{
    document.write(b);
}
else if (c>a && c>b && c>d && c>f)
{
    document.write(c);
}
else if (d>a && d>c && d>b && d>f)
{
    document.write(d);
}
else
{
    document.write(f);
}
```

JavaScript Conditional Statement and loops: Exercise-3 with Solution

Write a JavaScript conditional statement to sort three numbers. Display an alert box to show the result.

Sample numbers : 3, -7, 2
Output : The sign is -
Sample Solution:-

JavaScript Code :

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```
var x= 0;
var y=-1;
var z= 4;
if (x>y && x>z)
```

```
{
        if (y>z)
        {
            document.write(x + ", " + y + ", " +z);
        }
        else
        {
            document.write(x + ", " + z + ", " +y);
        }
}
else if (y>x && y >z)
{
        if (x>z)
        {
             document.write(y + ", " + x + ", " +z);
        }
        else
        {
             document.write(y + ", " + z + ", " +x);
        }
}
else if (z>x && z>y)
{
        if (x>y)
        {
            document.write(z + ", " + x + ", " +y);
        }
        else
        {
            document.write(z + ", " + y + ", " +x);
        }
}
```

JavaScript Datetime : Exercise-8 with Solution

Write a JavaScript function to get difference between two dates in days.

Test Data :
document.write(date_diff_indays('04/02/2014', '11/04/2014'));
document.write(date_diff_indays('12/02/2014', '11/04/2014'));
Output :
216
-28

Sample Solution:-

JavaScript Code :

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```
1. var date_diff_indays = function(date1, date2) {
2. dt1 = new Date(date1);
3. dt2 = new Date(date2);
4. return Math.floor((Date.UTC(dt2.getFullYear(), dt2.getMonth(), dt2.getDate
   ()) -
    Date.UTC(dt1.getFullYear(), dt1.getMonth(), dt1.getDate()) ) /(1000 * 60
   * 60 * 24));
5. }
6. document.write(date_diff_indays('04/02/2014', '11/04/2014'));
7. document.write(date_diff_indays('12/02/2014', '11/04/2014'));
```

JavaScript Datetime : Exercise-9 with Solution

Write a JavaScript function to get the last day of a month.

Test Data :
document.write(lastday(2014,0));
document.write(lastday(2014,1));
document.write(lastday(2014,11));
Output :
31
28
31

JavaScript Code :

view plaincopy to clipboardprint?

```
1. var lastday = function(y,m){
2. return  new Date(y, m +1, 0).getDate();
3. }
4. document.write(lastday(2014,0));
5. document.write(lastday(2014,1));
6. document.write(lastday(2014,11));
```

JavaScript Datetime : Exercise-16 with Solution

Write a JavaScript function to count the number of days passed since beginning of the year.

Test Data :
document.write(days_passed(new Date(2015, 0, 15)));
15
document.write(days_passed(new Date(2015, 11, 14)));

366

Sample Solution:-

JavaScript Code :

view plaincopy to clipboardprint?

```
function days_passed(dt) {
  var current = new Date(dt.getTime());
  var previous = new Date(dt.getFullYear(), 0, 1);

  return Math.ceil((current - previous + 1) / 86400000);
}
document.write(days_passed(new Date(2015, 0, 15)));
document.write(days_passed(new Date(2015, 11, 14)));
```

JavaScript Datetime : Exercise-18 with Solution

Write a JavaScript program to calculate age.

Test Data :
document.write(calculate_age(new Date(1982, 11, 4)));
32
document.write(calculate_age(new Date(1962, 1, 1)));
53

Sample Solution:-

JavaScript Code :

view plaincopy to clipboardprint?

```
function calculate_age(dob) {
    var diff_ms = Date.now() - dob.getTime();
    var age_dt = new Date(diff_ms);

    return Math.abs(age_dt.getUTCFullYear() - 1970);
}

document.write(calculate_age(new Date(1982, 11, 4)));

document.write(calculate_age(new Date(1962, 1, 1)));
```

JavaScript Datetime: Exercise-46 with Solution

Write a JavaScript function to get time differences in days between two dates.

Test Data :
dt1 = new Date("October 13, 2014 08:11:00");
dt2 = new Date("October 19, 2014 11:13:00");
document.write(diff_days(dt1, dt2));
6

Sample Solution:-

JavaScript Code :

```
function diff_days(dt2, dt1)
 {

  var diff =(dt2.getTime() - dt1.getTime()) / 1000;
  diff /= (60 * 60 * 24);
  return Math.abs(Math.round(diff));

 }

dt1 = new Date(2014,10,2);
dt2 = new Date(2014,10,6);
document.write(diff_days(dt1, dt2));

dt1 = new Date("October 13, 2014 08:11:00");
dt2 = new Date("October 19, 2014 11:13:00");
document.write(diff_days(dt1, dt2));
```

JavaScript Datetime: Exercise-50 with Solution

Write a JavaScript function to get the week start date.

Sample Solution:-

JavaScript Code :

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```
function startOfWeek(date)
  {
    var diff = date.getDate() - date.getDay() + (date.getDay() === 0 ? -
6 : 1);

    return new Date(date.setDate(diff));

  }

dt = new Date();

document.write(startOfWeek(dt).toString());
```

JavaScript Datetime: Exercise-51 with Solution

Write a JavaScript function to get the week end date.

Sample Solution:-

JavaScript Code :

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```
1. function endOfWeek(date)
2.    {
3.
4.      var lastday = date.getDate() - (date.getDay() - 1) + 6;
5.      return new Date(date.setDate(lastday));
6.
7.    }
8.
9. dt = new Date();
10.
11.document.write(endOfWeek(dt).toString());
```

JavaScript Datetime: Exercise-52 with Solution

Write a JavaScript function to get the month start date.

Sample Solution:-

JavaScript Code :

view plaincopy to clipboardprint?

```
1. function startOfMonth(date)
2.    {
3.
4.     return new Date(date.getFullYear(), date.getMonth(), 1);
5.
6.    }
7.
8. dt = new Date();
9.
10.document.write(startOfMonth(dt).toString());
```

JavaScript String : Exercise-2 with Solution

Write a JavaScript function to check whether a string is blank or not.

Test Data :

document.write(is_Blank(''));
document.write(is_Blank('abc'));
true
false

Sample Solution:-

JavaScript Code :

view plaincopy to clipboardprint?

```
1. is_Blank =  function(input) {
2.          if (input.length === 0)
3.          return true;
4.          else
5.          return false;
6.        }
7. document.write(is_Blank(''));
8. document.write(is_Blank('abc'));
```

JavaScript String : Exercise-4 with Solution

Write a JavaScript function to remove specified number of characters from a string.

Test Data :
document.write(truncate_string("Robin Singh",4));
"Robi"

Sample Solution:-

JavaScript Code :

view plaincopy to clipboardprint?

```
1. truncate_string = function (str1, length) {
2.
3.     if ((str1.constructor === String) && (length>0)) {
4.         return str1.slice(0, length);
5.     }
6. };
7. document.write(truncate_string("Robin Singh",4));
```

JavaScript String : Exercise-9 with Solution

Write a JavaScript function to capitalize the first letter of each word in a string.

Test Data :
document.write(capitalize_Words('js string exercises'));
"Js String Exercises"

Sample Solution:-

JavaScript Code :

view plaincopy to clipboardprint?

```
1. //capitalize_Words
2. function capitalize_Words(str)
3. {
4.  return str.replace(/\w\S*/g, function(txt){return txt.charAt(0).toUpperCa
   se() + txt.substr(1).toLowerCase();});
5. }
6. document.write(capitalize_Words('js string exercises'));
```