THA-7

1. Write a JavaScript program to list the properties of a JavaScript object. Sample object: var student = { name : "David Rayy", sclass : "VI", rollno : 12 }; Sample Output: name,sclass,rollno.

Solution

```
function _keys(color)
 {
    if (!isObject(color)) return [];
    if (Object.keys) return Object.keys(color);
    var keys = [];
    for (var key in color) if (_.has(color, key)) keys.push(key);
    return keys;
 }
function isObject(color)
{
    var type = typeof color;
    return type === 'function' || type === 'object' && !!color;
 }
console.log(_keys({red: "red", green: "green", white: "white"}));
```

2. Write a JavaScript program to delete the rollno property from the following object. Also print the object before or after deleting the property. Sample object: var student = { name : "David Rayy", sclass : "VI", rollno : 12 };

```
var Student = {
  name : "David Rayy",
  sclass : "VI",
  rollno : 12  };
console.log(Student);
delete Student.rollno;
console.log(Student);
```

3. Write a JavaScript program to get the length of a JavaScript object. Sample object : var student = { name : "David Rayy", sclass : "VI", rollno : 12 };

```javascript
Object.objsize = function(data) {
    var osize = 0, key;
    for (key in data) {
        if (data.hasOwnProperty(key)) osize++;
    }
    return osize;
};


var student = {
name : "David Rayy",
sclass : "VI",
rollno : 12 };


var objsize = Object.objsize(student);
console.log('Size of the current object : '+objsize);
```

4. Write a JavaScript program to display the reading status (i.e. display book name, author name and reading status) of the following books. var library = [{ author: 'Bill Gates', title: 'The Road Ahead', readingStatus: true }, { author: 'Steve Jobs', title: 'Walter Isaacson', readingStatus: true }, { author: 'Suzanne Collins', title: 'Mockingjay: The Final Book of The Hunger Games', readingStatus: false }];

```javascript
var library = [
    {
        title: 'Bill Gates',
        author: 'The Road Ahead',
        readingStatus: true
    },
    {
        title: 'Steve Jobs',
        author: 'Walter Isaacson',
        readingStatus: true
    },
    {
```

```javascript
        title: 'Mockingjay: The Final Book of The Hunger Games',
        author: 'Suzanne Collins',
        readingStatus: false
    }];


for (var i = 0; i < library.length; i++)
  {
    var book = "\"" + library[i].title + "\"" + ' by ' + library[i].author + ".";
    if (library[i].readingStatus) {
      console.log("Already read " + book);
    } else
    {
     console.log("You still need to read " + book);
    }
  }
```

5. Write a JavaScript program to get the volume of a Cylinder with four decimal places using object classes. Volume of a cylinder : V = πr2h where r is the radius and h is the height of the cylinder. Try To Attempt : Difficult Level Increased .

```javascript
function Cylinder(height, diameter) {
  this.height = height;
  this.diameter = diameter;
}


Cylinder.prototype.Volume = function () {
  var radius = this.diameter / 2;
  return this.height * Math.PI * radius * radius;
};


var cyl = new Cylinder(7, 4);
console.log('volume =', cyl.Volume().toFixed(4));
```

6. Write a JavaScript program to sort an array of JavaScript objects. Sample Object : var library = [{ title: 'The Road Ahead', author: 'Bill Gates', libraryID: 1254 }, { title: 'Walter Isaacson', author: 'Steve Jobs', libraryID: 4264 }, { title: 'Mockingjay: The Final Book of The Hunger Games', author: 'Suzanne Collins', libraryID: 3245 }]; Expected Output: [[object Object] { author: "Walter Isaacson", libraryID: 4264, title: "Steve Jobs" }, [object Object] { author: "Suzanne Collins", libraryID: 3245, title: "Mockingjay: The Final Book of The Hunger Games" }, [object Object] { author: "The Road Ahead", libraryID: 1254, title: "Bill Gates" }]

```javascript
var library = [

   { author: 'Bill Gates', title: 'The Road Ahead', libraryID: 1254},

   { author: 'Steve Jobs', title: 'Walter Isaacson', libraryID: 4264},

   { author: 'Suzanne Collins', title: 'Mockingjay: The Final Book of The Hunger Games',
libraryID: 3245}

   ];


function compare_to_sort(x,y)
 {
  if (x.title < y.title)
    return -1;
  if (x.title > y.title)
    return 1;
  return 0;
 }


console.log(library.sort(compare_to_sort));
```