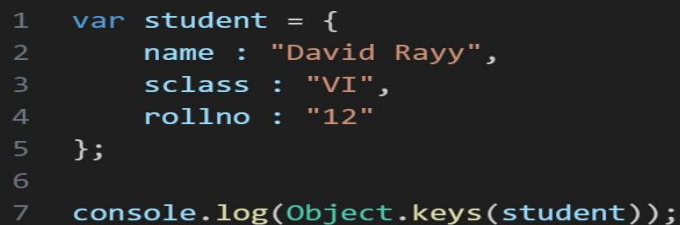# Teach2Give QA-QE PERN Stack Program

JavaScript Technical Test
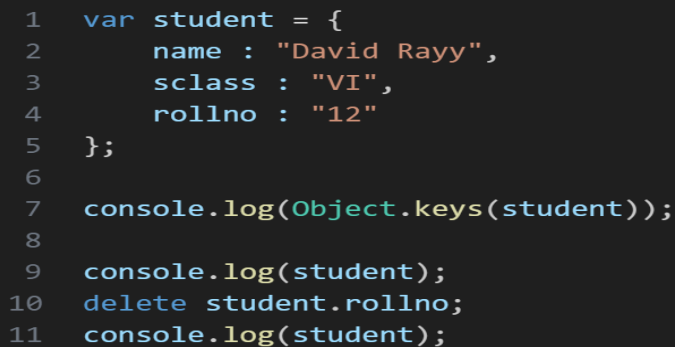
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1. Write a JavaScript program to list the properties of a JavaScript object.

```javascript
1   var student = {
2       name : "David Rayy",
3       sclass : "VI",
4       rollno : "12"
5   };
6
7   console.log(Object.keys(student));
```

2. Write a JavaScript program to delete the rollno property from the following object. Also print the object before or after deleting the property.

```javascript
1    var student = {
2        name : "David Rayy",
3        sclass : "VI",
4        rollno : "12"
5    };
6
7    console.log(Object.keys(student));
8
9    console.log(student);
10   delete student.rollno;
11   console.log(student);
```

3. Write a JavaScript program to get the length of a JavaScript object.
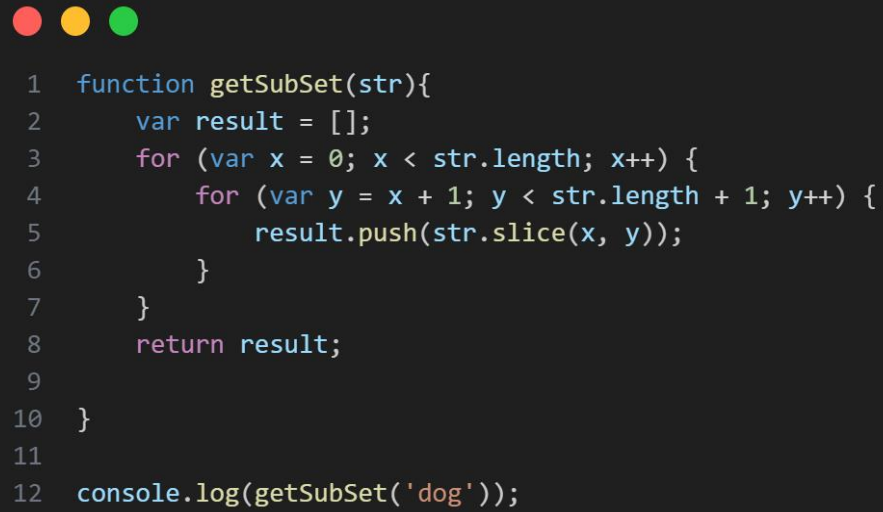
```
1    var student = {
2        name : "David Rayy",
3        sclass : "VI",
4        rollno : "12"
5    };
6    console.log(Object.keys(student).length);
```

4. Write a JavaScript program to display the reading status (i.e. display book name, author name and reading status) of the following books.

```javascript
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
    }
]


for (var i = 0; i < library.length; i++) {
    console.log(`Title: ${library[i].title}`);
    console.log(`Author: ${library[i].author}`);
    console.log(`Reading: ${library[i].readingStatus}`);
    console.log(`\n`);
}
```

5. Write a JavaScript program that returns a subset of a string.

```
1   function getSubSet(str){
2       var result = [];
3       for (var x = 0; x < str.length; x++) {
4           for (var y = x + 1; y < str.length + 1; y++) {
5               result.push(str.slice(x, y));
6           }
7       }
8       return result;
9
10  }
11
12  console.log(getSubSet('dog'));
```

6.   Write a JavaScript program to sort an array of JavaScript objects.

```javascript
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
    },
];

library.sort((a, b) => {
    return b.libraryID - a.libraryID;
});

for (var i = 0; i < library.length; i++) {
    console.log(`${library[i]}`);
    console.log(JSON.stringify(library[i]));
}
```

7. Write a JavaScript function to print all the methods in a JavaScript object.

```javascript
function all_properties(obj){

    var objectProperties = Object.getOwnPropertyNames(obj);
    var objectMethods = objectProperties.filter(function(property){
        return typeof obj[property] == 'function';
    });

    return objectMethods;

}

console.log(all_properties(Array));
```
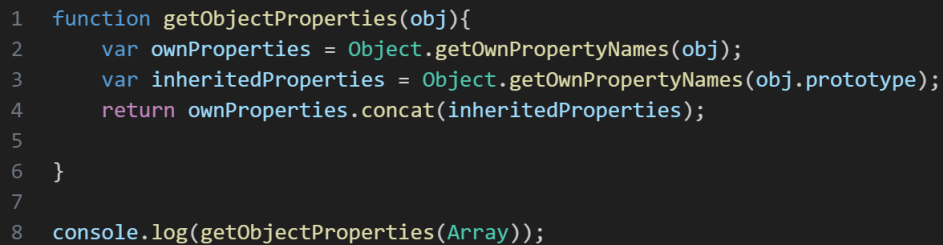
8. Write a JavaScript function to parse an URL.

```javascript
1   function parseURL(url){
2       const parsedURL = new URL(url);
3       return {
4           href: parsedURL.href,
5           protocol: parsedURL.protocol,
6           host: parsedURL.host,
7           hostname: parsedURL.hostname,
8           pathname: parsedURL.pathname,
9           origin: parsedURL.origin,
10      };
11  }
12
13  console.log(parseURL('https://teach2give.github.io/Javascript-Docs/introduction.html'));
```

9. Write a JavaScript function to retrieve all the names of an object's own and inherited properties.

```javascript
1   function getObjectProperties(obj){
2       var ownProperties = Object.getOwnPropertyNames(obj);
3       var inheritedProperties = Object.getOwnPropertyNames(obj.prototype);
4       return ownProperties.concat(inheritedProperties);
5
6   }
7
8   console.log(getObjectProperties(Array));
```

10. Write a JavaScript function to retrieve all the values of an object's properties.
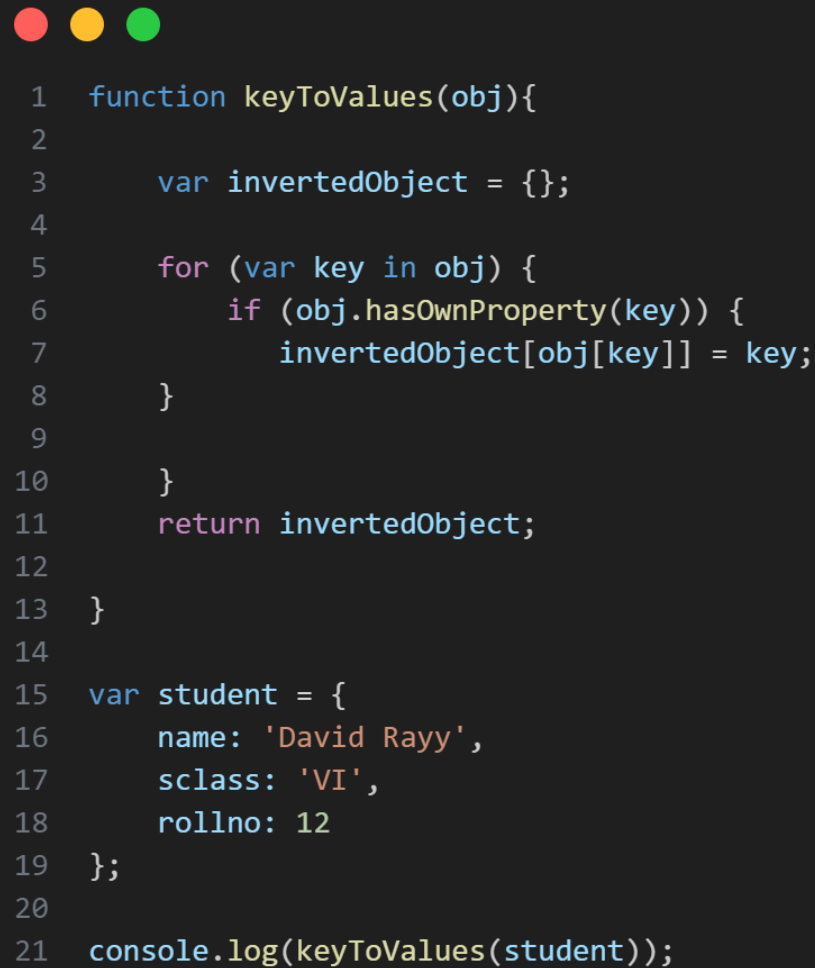
```
1    function getValues(obj){
2        return Object.values(obj);
3    }
4
5    var student = {
6        name: 'David Rayy',
7        sclass: 'VI',
8        rollno: 12
9    };
10
11   console.log(getValues(student));
```

11. Write a JavaScript function to convert an object into a list of `[key, value]` pairs.

```
1    function objectToList(obj){
2        return Object.entries(obj);
3    }
4
5    var student = {
6        name: 'David Rayy',
7        sclass: 'VI',
8        rollno: 12
9    };
10
11   console.log(objectToList(student));
```

12. Write a JavaScript function to get a copy of the object where the keys become the values, and the values are the keys.

```javascript
function keyToValues(obj){

    var invertedObject = {};

    for (var key in obj) {
        if (obj.hasOwnProperty(key)) {
            invertedObject[obj[key]] = key;
        }

    }
    return invertedObject;

}

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

console.log(keyToValues(student));
```

13. Write a JavaScript function to check whether an object contains a given property.

```
1  function getProperty(obj, key){
2      return obj[key];
3  }
4
5  var student = {
6      name: 'David Rayy',
7      sclass: 'VI',
8      rollno: 12
9  };
10
11 console.log(getProperty(student, 'name'));
```