Javascript Training

Case 5: Inheritance & Scoping

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Case 5

Inhoud

- Prototype
  - Class inheritance
  - Overridden methods
  - Aanroepen super constructor en methods
- Scoping

Case 5

Prototyping

Object.prototype

Key	Value
constructor	Object
toString	function() { [native code]}
toLocaleString	function() { [native code]}
valueOf	function() { [native code]}
hasOwnProperty	function() { [native code]}
isPrototypeOf	function() { [native code]}
propertyIsEnumerable	function() { [native code]}

Javascript

Prototype – Class inheritance

Object.prototype

Key	Value
toString	function() { [native code]}

Parent.prototype

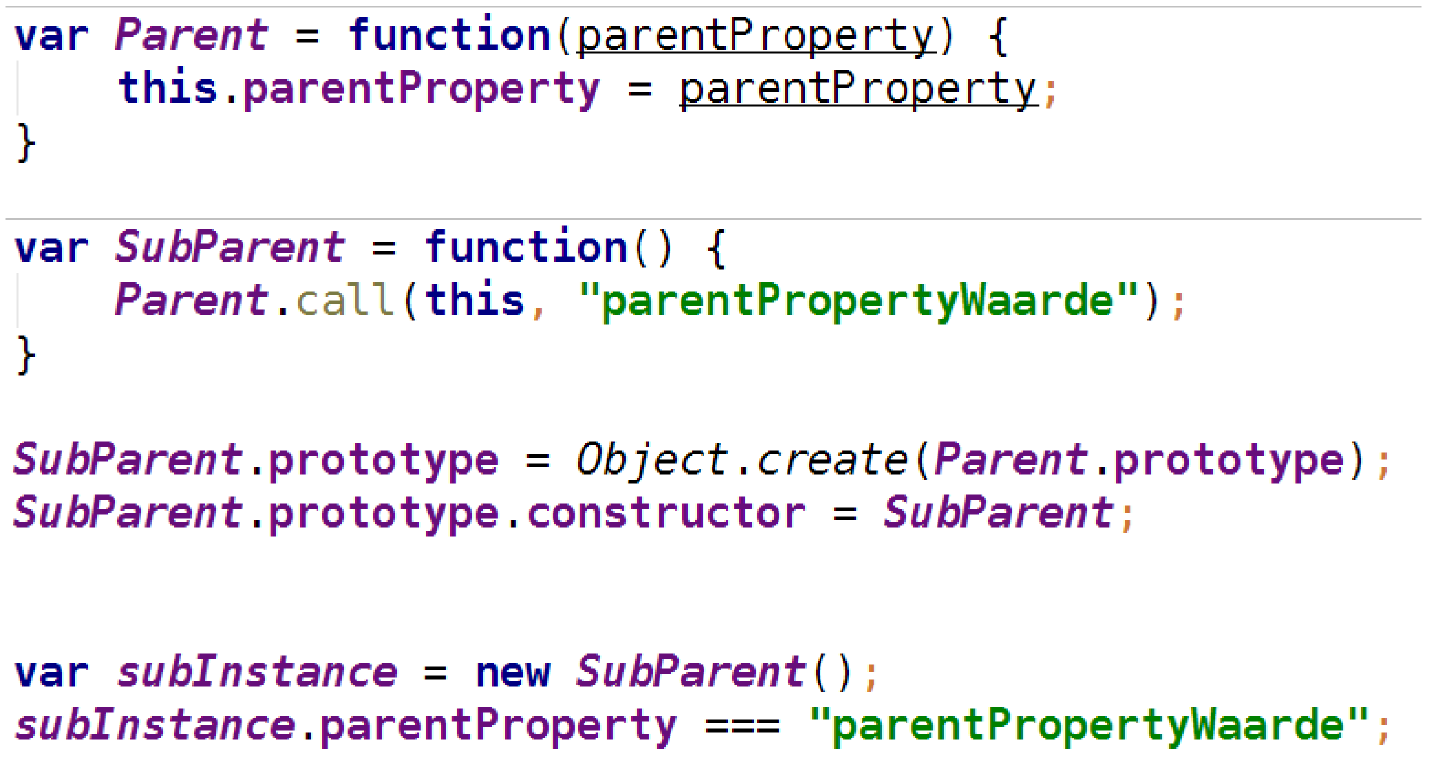
Key	Value
toString	function() { /* iets zinvols */ }
parentProperty	null

SubParent.prototype

Key	Value
constructor	SubParent

Javascript

Prototype – Class inheritance



```javascript
var Parent = function(parentProperty) {
    this.parentProperty = parentProperty;
}

var SubParent = function() {
    Parent.call(this, "parentPropertyWaarde");
}

SubParent.prototype = Object.create(Parent.prototype);
SubParent.prototype.constructor = SubParent;


var subInstance = new SubParent();
subInstance.parentProperty === "parentPropertyWaarde";
```

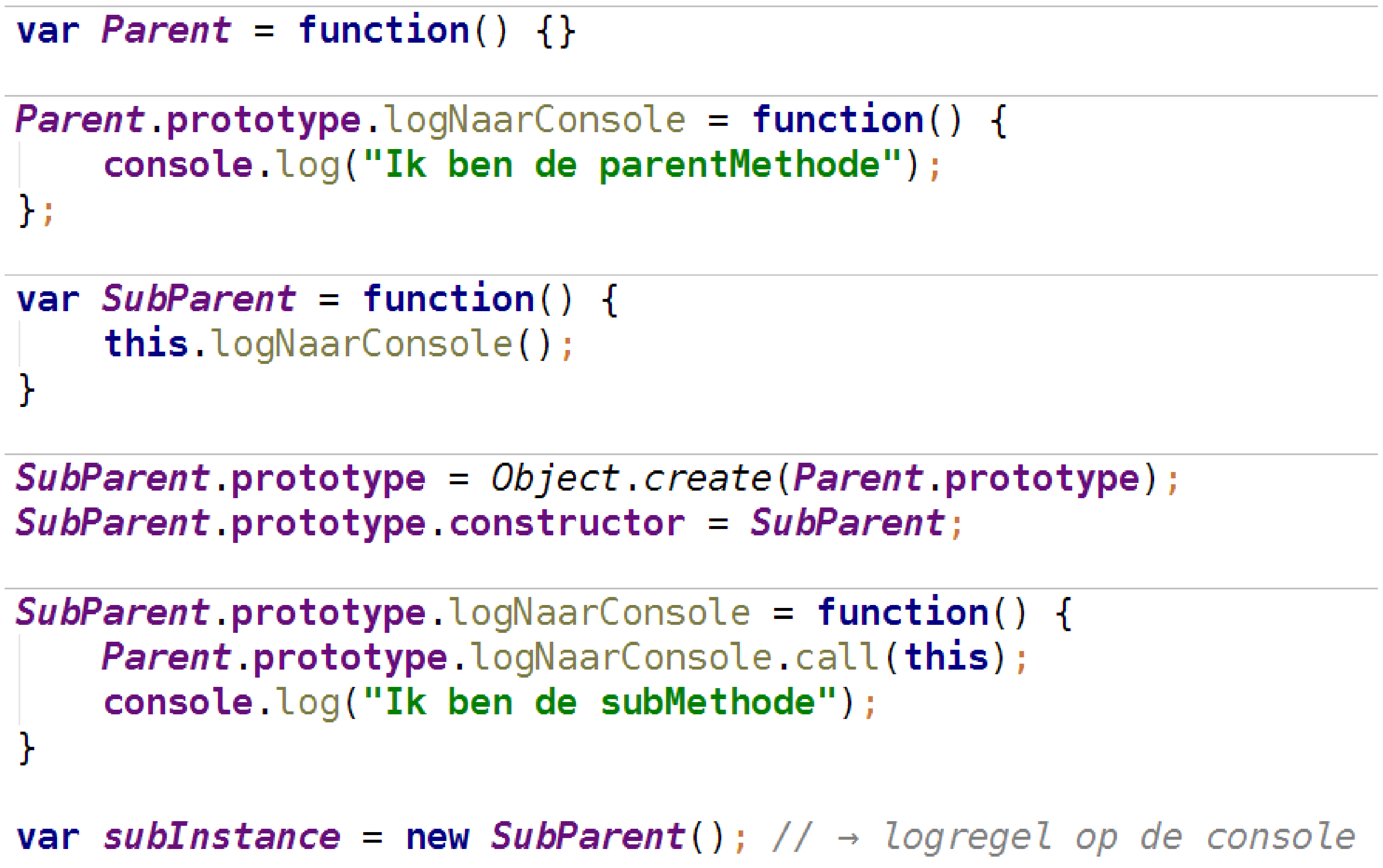
Javascript

Prototype – Class inheritance

```
var Parent = function() {}

Parent.prototype.logNaarConsole = function(){
    console.log("Ik ben de parentMethode");
};

var SubParent = function() {
    this.logNaarConsole();
}

SubParent.prototype = Object.create(Parent.prototype);
SubParent.prototype.constructor = SubParent;


var subInstance = new SubParent(); // → logregel op de console
```

Javascript

Prototype – Overridden method



```
var Parent = function() {}

Parent.prototype.logNaarConsole = function() {
    console.log("Ik ben de parentMethode");
};

var SubParent = function() {
    this.logNaarConsole();
}

SubParent.prototype = Object.create(Parent.prototype);
SubParent.prototype.constructor = SubParent;

SubParent.prototype.logNaarConsole = function() {
    Parent.prototype.logNaarConsole.call(this);
    console.log("Ik ben de subMethode");
}

var subInstance = new SubParent(); // → logregel op de console
```

Javascript

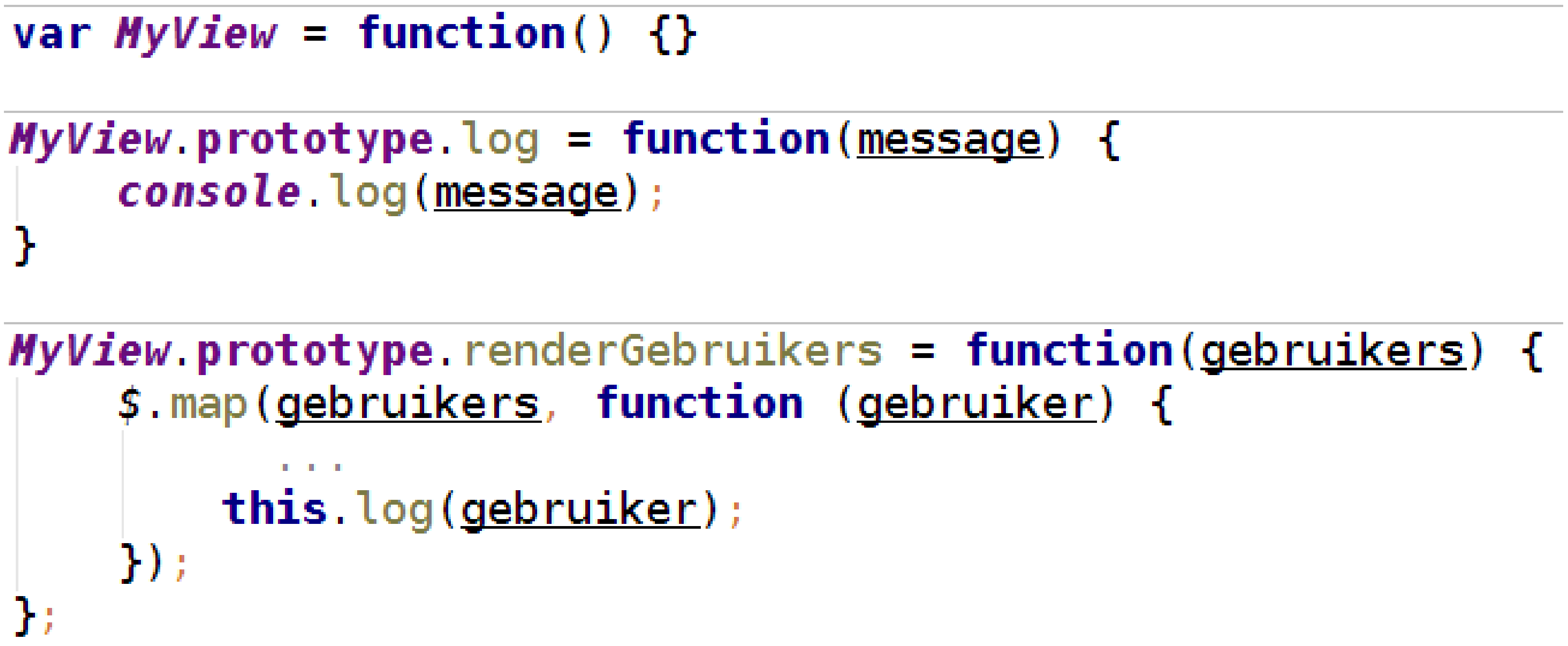
Scoping

- Global object

```
var mijnVar = "waarde";
window.mijnVar === mijnVar;

function mijnFunctie() {
    var mijnFunctieVar = "waarde"
    mijnGlobaleFunctieVar = "waarde"; // window.mijnGlobaleFunctieVar = "waarde"
}

mijnFunctie();

window.mijnFunctieVar === undefined
window.mijnGlobaleFunctieVar === "waarde"
window.mijnFunctie === undefined
```

Javascript

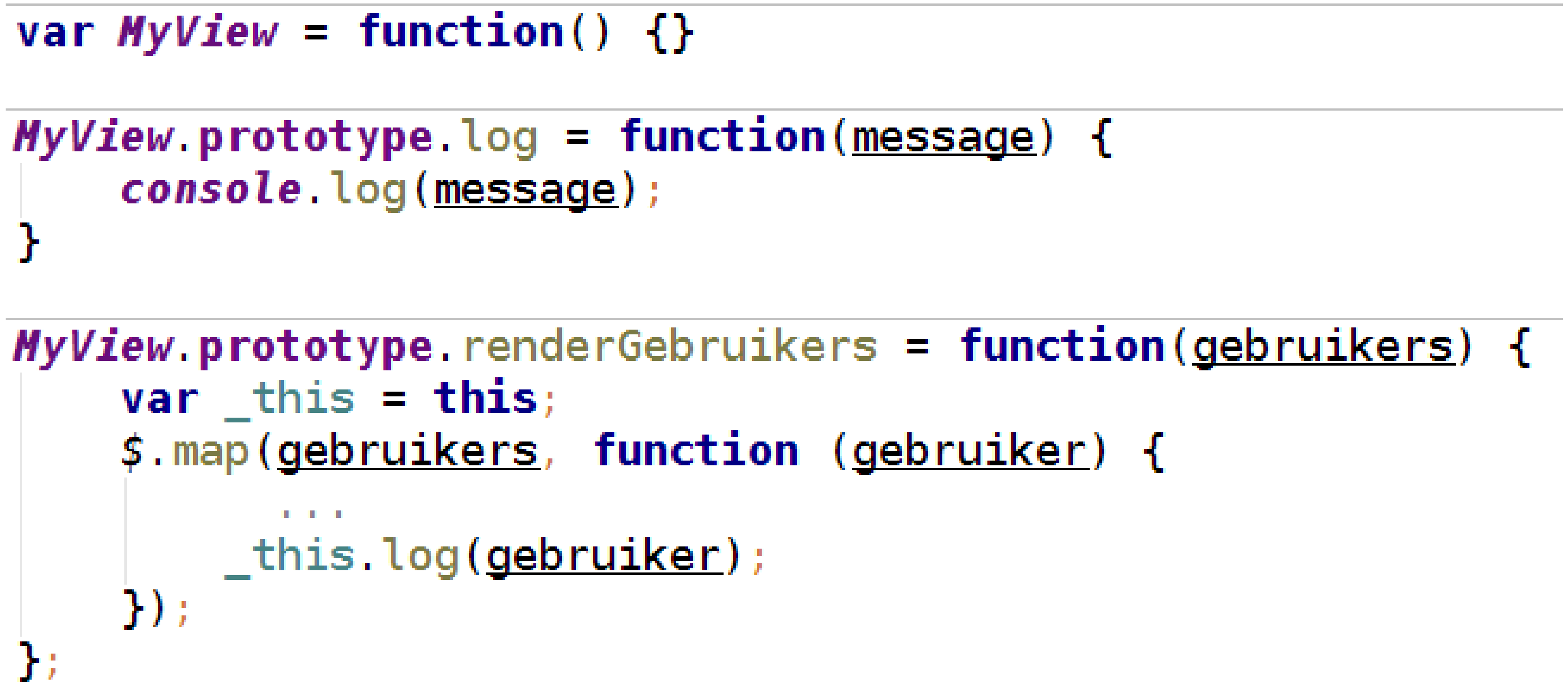
Scoping



```
var MyView = function() {}

MyView.prototype.log = function(message) {
    console.log(message);
}

MyView.prototype.renderGebruikers = function(gebruikers) {
    $.map(gebruikers, function (gebruiker) {
          ...
        this.log(gebruiker);
    });
};
```

Javascript

Scoping



```
var MyView = function() {}

MyView.prototype.log = function(message) {
    console.log(message);
}

MyView.prototype.renderGebruikers = function(gebruikers) {
    var _this = this;
    $.map(gebruikers, function (gebruiker) {
        ...
        _this.log(gebruiker);
    });
};
```

Javascript

Scoping – Module Pattern

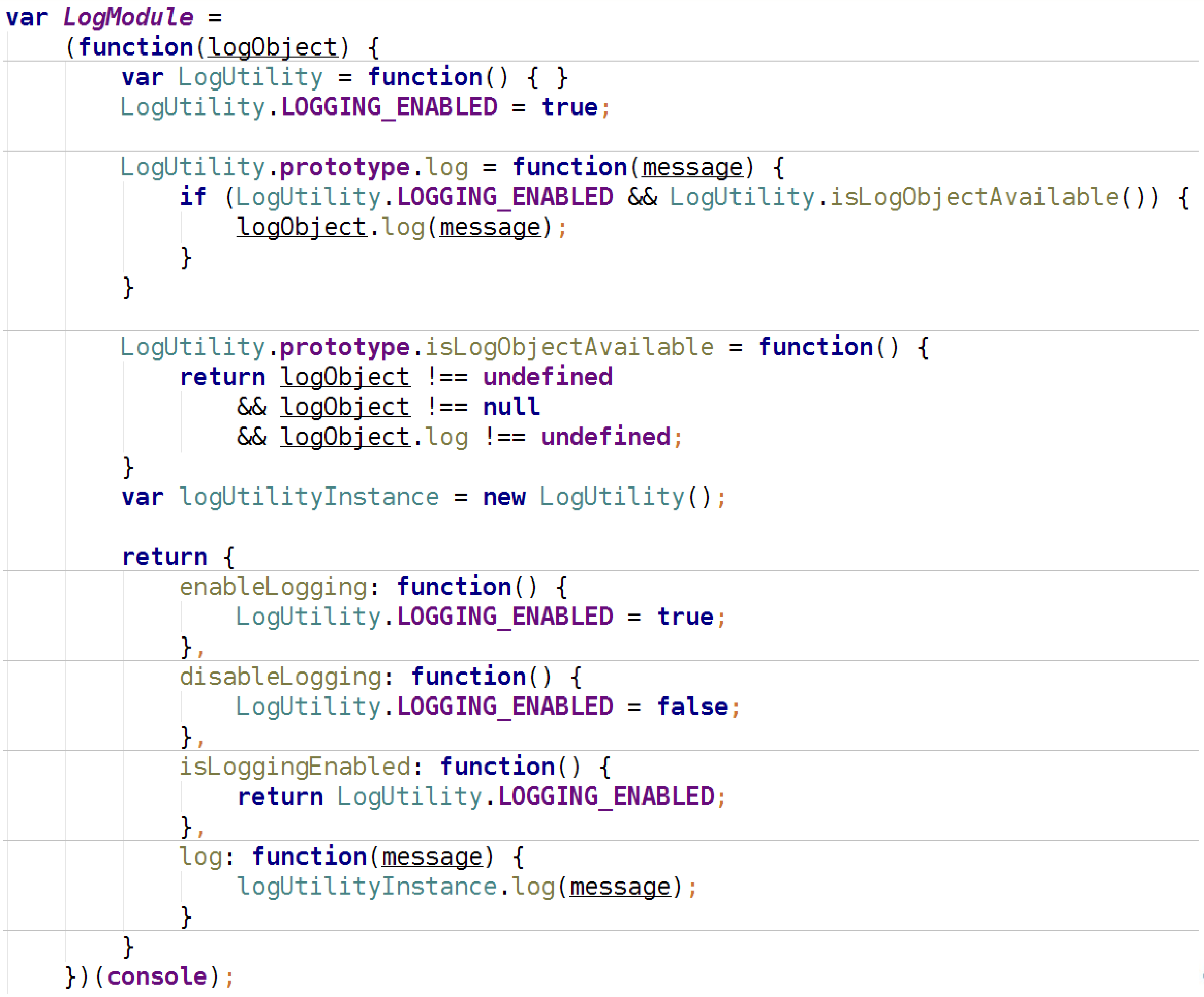
```
var LogUtility = function() { }
LogUtility.LOGGING_ENABLED = true;

LogUtility.prototype.log = function(message) {
    if (LogUtility.LOGGING_ENABLED && LogUtility.isConsoleAvailable()) {
        console.log(message);
    }
}

LogUtility.prototype.isConsoleAvailable = function() {
    return console !== undefined && console !== null;
}
```

Javascript

Scoping – Module Pattern

```
// self invoking function (module)

(function(/** externe dependencies voor intern gebruik */){

    // Inner module

    return {
        // publieke API
    }

}(/* externe dependencies */));
```

```
var LogModule =
    (function(console) {
        var LogUtility = function() { }
        LogUtility.LOGGING_ENABLED = true;

        LogUtility.prototype.log = function(message) {
            if (LogUtility.LOGGING_ENABLED && LogUtility.isConsoleAvailable()) {
                console.log(message);
            }
        }

        LogUtility.prototype.isConsoleAvailable = function() {
            return console !== undefined && console !== null;
        }

        var logUtilityInstance = new LogUtility();

        return {
            enableLogging: function() {
                LogUtility.LOGGING_ENABLED = true;
            },
            disableLogging: function() {
                LogUtility.LOGGING_ENABLED = false;
            },
            isLoggingEnabled: function() {
                return LogUtility.LOGGING_ENABLED;
            },
            log: function(message) {
                logUtilityInstance.log(message);
            }
        }
    })(console);
```



```javascript
var LogModule =
    (function(logObject) {
        var LogUtility = function() { }
        LogUtility.LOGGING_ENABLED = true;

        LogUtility.prototype.log = function(message) {
            if (LogUtility.LOGGING_ENABLED && LogUtility.isLogObjectAvailable()) {
                logObject.log(message);
            }
        }

        LogUtility.prototype.isLogObjectAvailable = function() {
            return logObject !== undefined
                && logObject !== null
                && logObject.log !== undefined;
        }
        var logUtilityInstance = new LogUtility();

        return {
            enableLogging: function() {
                LogUtility.LOGGING_ENABLED = true;
            },
            disableLogging: function() {
                LogUtility.LOGGING_ENABLED = false;
            },
            isLoggingEnabled: function() {
                return LogUtility.LOGGING_ENABLED;
            },
            log: function(message) {
                logUtilityInstance.log(message);
            }
        }
    })(console);
```