Object in JS

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Object

- What is Object
- How to defined object
- Object methods
- Different ways to create Object
- Function as a property value
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- Assignments
- Class
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A real world example - Object

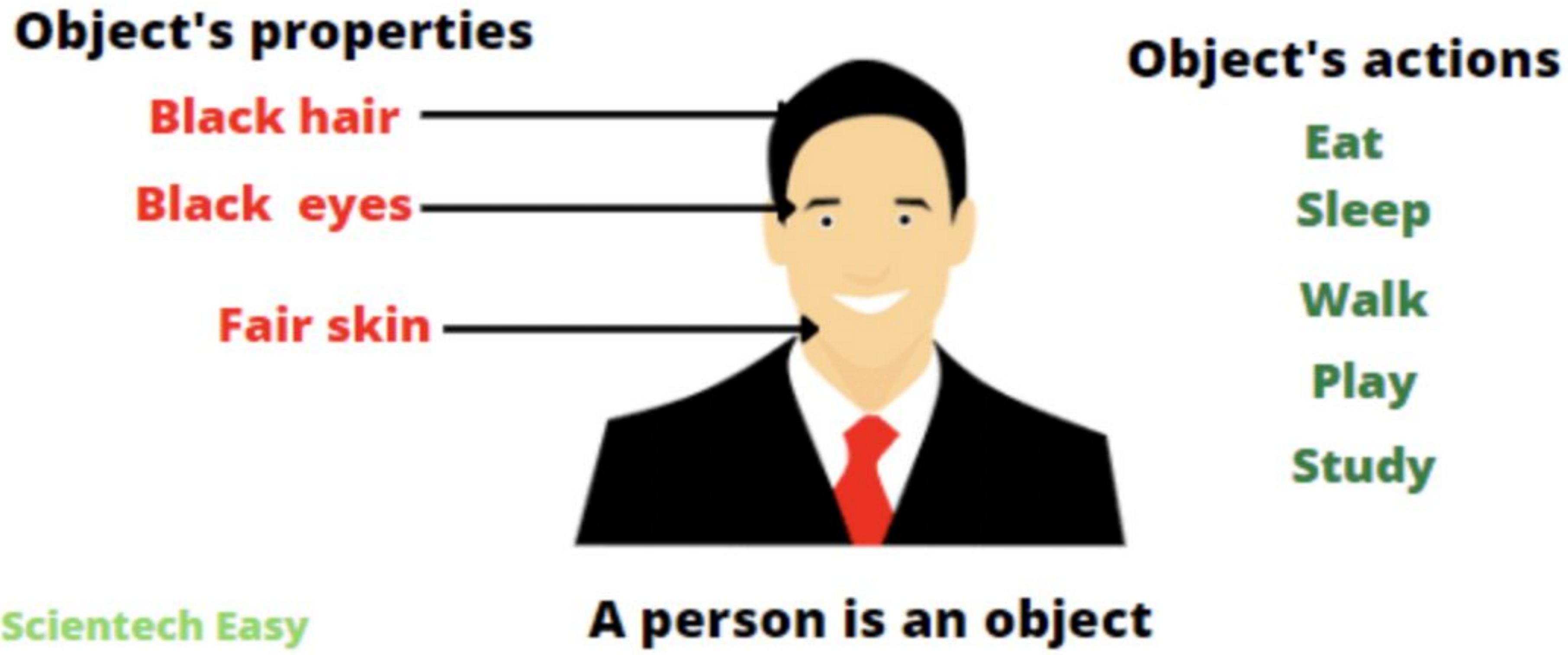


Fig: Example of an object in JavaScript

What is Object in JS

An object is a non-primitive data type in JavaScript which is used to store data in the form of key and value

There are different ways to create an object and few of them are

1. Using object literals
2. Using Class
3. Using function constructor

What is object in JS ?

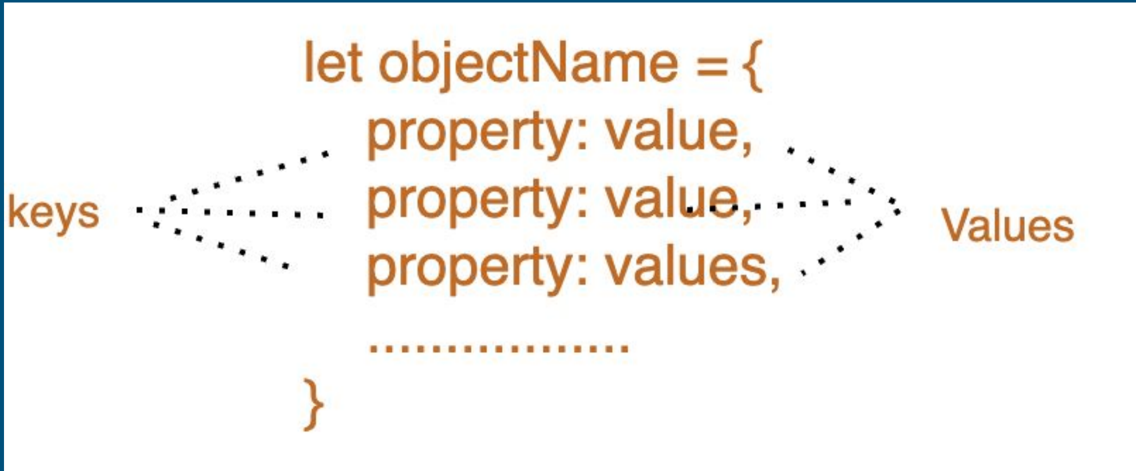
An object is a non-primitive data type in JavaScript which is used to store data in the form of key and value

Object is similar to variable means objects are also named container only difference is that it used to store collection of data

Note: we can use let, const, var reserved word to create object

But best practise is to use const

Syntax: --->



```
let objectName = {
    property: value,
    property: value,
    property: values,
    ..................
}
```

Accessing object properties

Using dot Notation

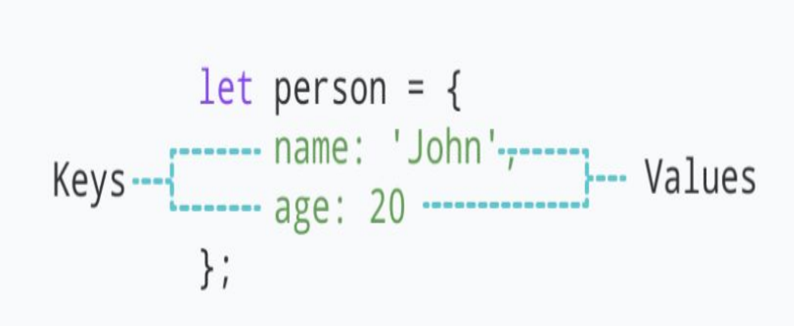
Syntax:

objectName.property_name

Using bracket Notation

Syntax:

objectName[“property_name”]



```
let person = {
  name: 'John',
  age: 20
};
```

Example:

person.name;

Example:

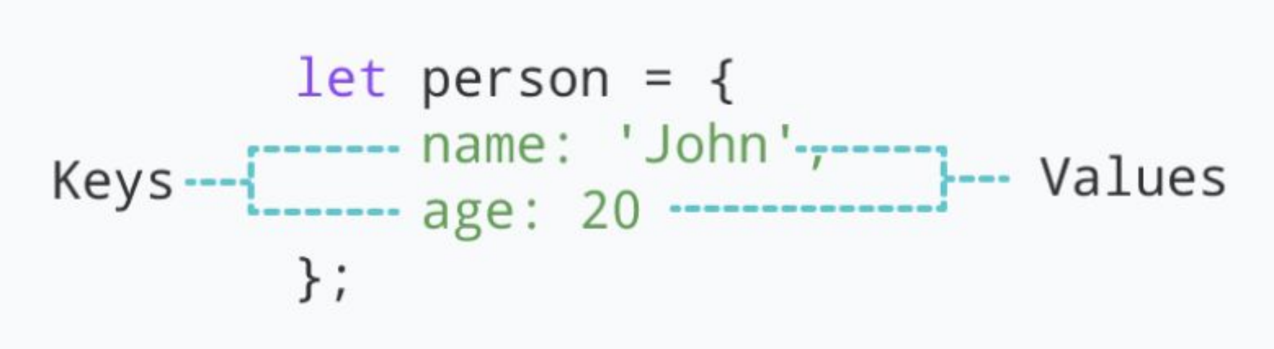
person[“name”]

How to add properties in object

Syntax: objectName.property_name = value;

OR

objectName[“property_name”] = value;



```
let person = {
    name: 'John',
    age: 20
};
```

Example →

person.company = “CODEMIND Technology”;

OR

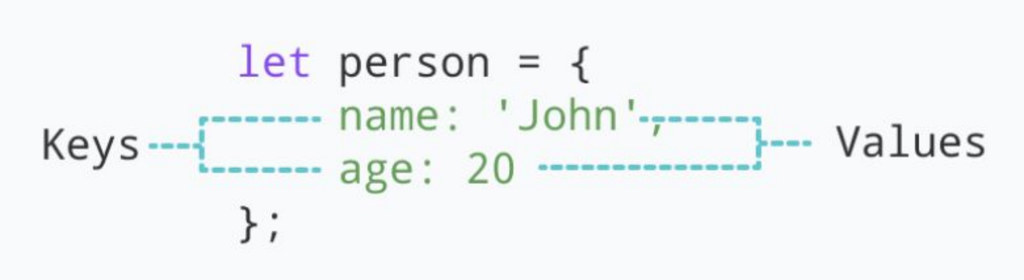
Person[“company”] = “CODEMIND Technology”;

Delete property from an object

Syntax: delete object_name.property_name;

Example →

delete person.age;



```
let person = {
    name: 'John',
    age: 20
};
```

How to update an object property:

Syntax: object_name.property_name = “new value”;

Person.name = “Mohit Sharma”;

Creating an empty object

Syntax: let objectName = { };

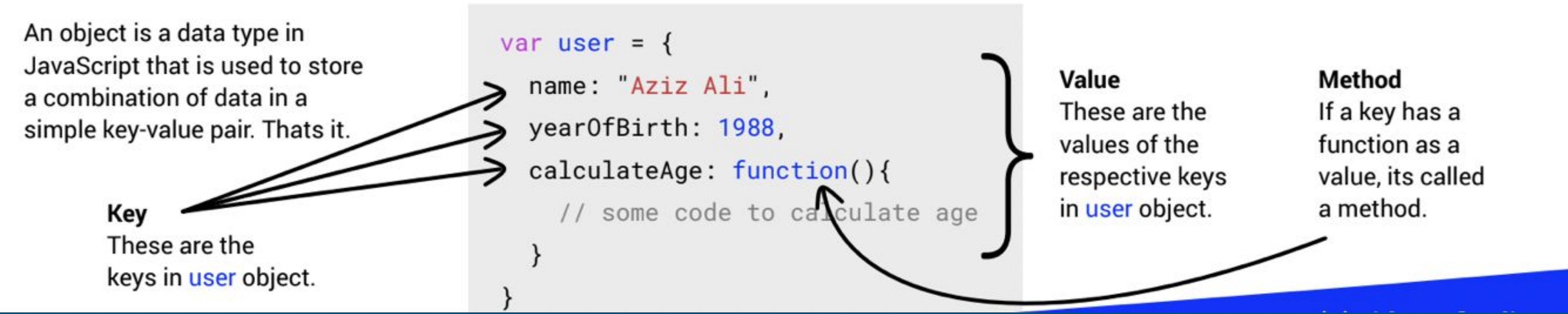
Example:

```
let employee = {  };
employee.name = “Mohit”;
```

What if we use const instead of let, Can we add properties then?

An object overview with properties, values and methods

A user object with keys, values and methods



An object is a data type in JavaScript that is used to store a combination of data in a simple key-value pair. Thats it.

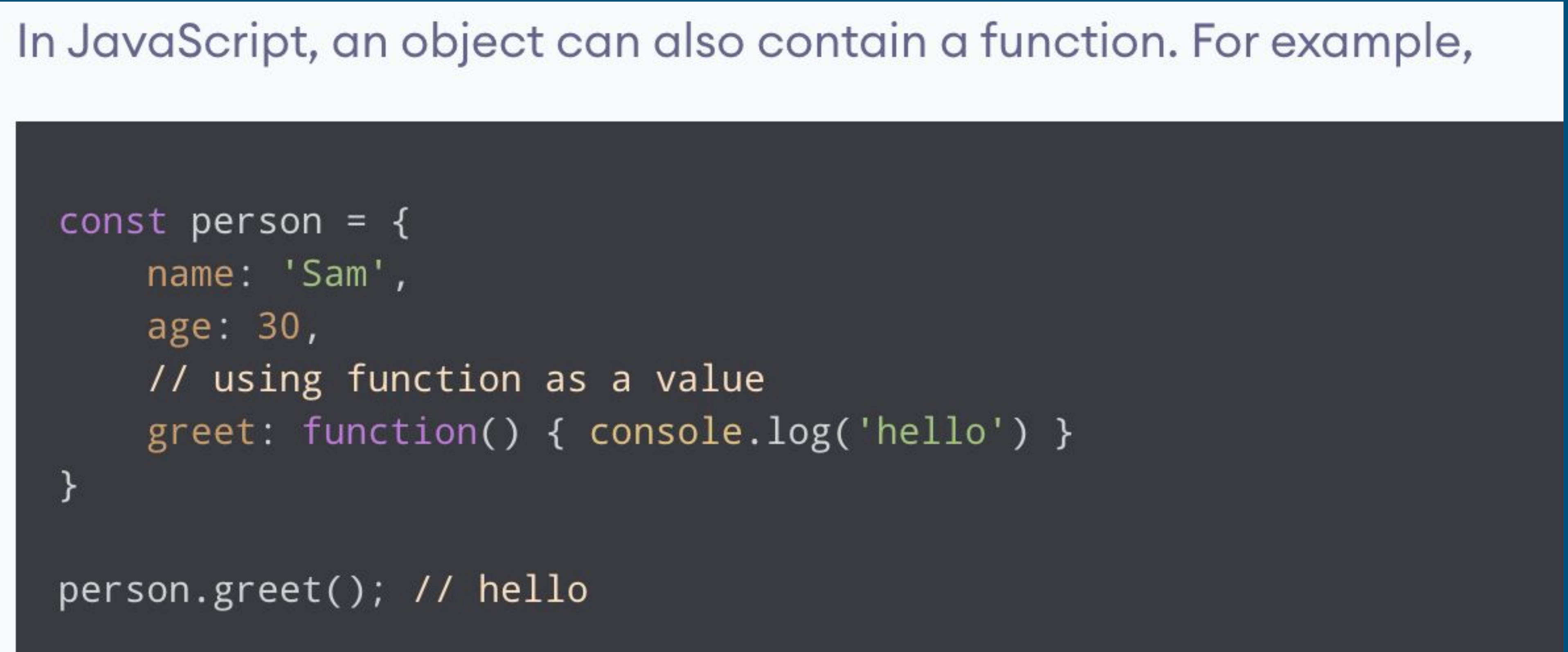
```
var user = {
  name: "Aziz Ali",
  yearOfBirth: 1988,
  calculateAge: function(){
    // some code to calculate age
  }
}
```

Key
These are the keys in user object.

Value
These are the values of the respective keys in user object.

Method
If a key has a function as a value, its called a method.

Object Methods in JS or Object method shorthand

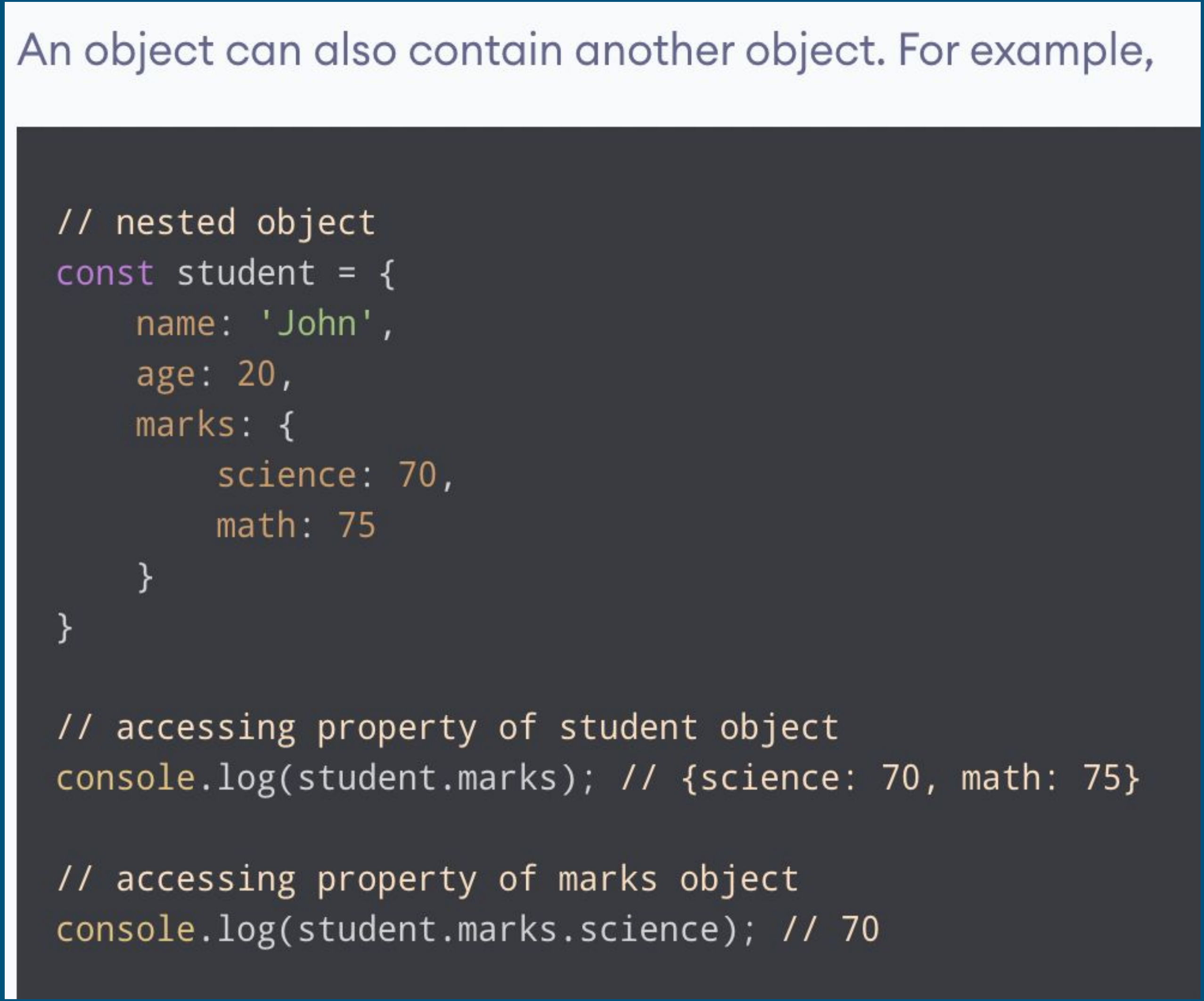


In JavaScript, an object can also contain a function. For example,

```
const person = {
    name: 'Sam',
    age: 30,
    // using function as a value
    greet: function() { console.log('hello') }
}

person.greet(); // hello
```

Nested Objects



An object can also contain another object. For example,

```
// nested object
const student = {
    name: 'John',
    age: 20,
    marks: {
        science: 70,
        math: 75
    }
}

// accessing property of student object
console.log(student.marks); // {science: 70, math: 75}

// accessing property of marks object
console.log(student.marks.science); // 70
```

Assignment 0D: File→ 11_object_assigD.js

Create an object with name → professor

1. Think of all the properties that you could add (Add minimum 5 properties)
2. Also include nested object 'degrees' like engineering: 'CSC', PHD: 'Adv Computing' and few more.
3. Also add one array → 'certificates' with his certificates like 'Hacker Rank Participation', 'Certificate in IFE course', 'Certificate in Adv Programming'
4. Add function as a value which should concat all degrees in step 2, please return as string and log on console with - Teacher degrees are total degrees are:
5. Try to add new property like totalExperience: "14 years" and log on console
6. Modify any existing property and log complete object on console
7. Add one new certificate → "Oracle Certified" at the end of array → certificates
8. Log the last element of the array certificates.

Assignment 0E: File→ 11_object_assigE.js Object with data member and member function

Create an objects → sbiBank, axisBank, hdfcBank, yesBank with data members or properties such as

A. Data members: bankName, location, accountNo, ifsc, interestRate
B. Set the values separately according to their bank details
C. Add a member function → showDetails( ), In this object log the data members of that object in one line. Note: This function doesn't have return value and no args
D. Invoke the function showDetails( ) on each object separately