

Coding for Journalists

UC Berkeley Graduate School of Journalism

Review

Multi-dimensional Arrays

```
var people = [  
  ["edward", "leona", "carlos", "arnold"],  
  [47, 85, 62, 22],  
  ["CA", "NE", "DC", "FL"]  
]
```

What's the value of `people[0][0]`?

Answer: "edward"

Multi-dimensional Arrays

```
var people = [  
  ["edward", "leona", "carlos", "arnold"],  
  [47, 85, 62, 22],  
  ["CA", "NE", "DC", "FL"]  
]
```

What's the value of `people[1][0]`?

Answer: 47

Multi-dimensional Arrays

```
var people = [  
  ["edward", "leona", "carlos", "arnold"],  
  [47, 85, 62, 22],  
  ["CA", "NE", "DC", "FL"]  
]
```

What's the value of `people[2][0]`?

Answer: "CA"

Multi-dimensional Arrays

```
var people = [  
  ["edward", "leona", "carlos", "arnold"],  
  [47, 85, 62, 22],  
  ["CA", "NE", "DC", "FL"]  
]
```

What's the value of `people[1][2]`?

Answer: 62

Multi-dimensional Arrays

```
var people = [  
  ["edward", "leona", "carlos", "arnold"],  
  [47, 85, 62, 22],  
  ["CA", "NE", "DC", "FL"]  
]
```

What's the value of `people[0][3]`?

Answer: "arnold"

Multi-dimensional Arrays

```
var people = [  
  ["edward", "leona", "carlos", "arnold"],  
  [47, 85, 62, 22],  
  ["CA", "NE", "DC", "FL"]  
]
```

What's the value of `people[0]`?

Answer: `["edward", "leona", "carlos", "arnold"]`

Multi-dimensional Arrays

```
var people = [  
  ["edward", "leona", "carlos", "arnold"],  
  [47, 85, 62, 22],  
  ["CA", "NE", "DC", "FL"]  
]
```

What's the value of `people[1]`?

Answer: `[47, 85, 62, 22]`

DataTypes Review

Numbers

```
var total = 80;
```

Strings

```
var name = "Joe";
```

Booleans

```
var verified = true;
```

Arrays

```
var scores = [2, 4, 0];
```

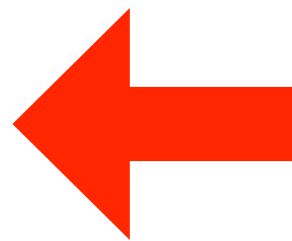
Objects

Objects

- An object is a **datatype** which allows us to store multiple values into a single variable.
- Each piece of data has a keyword, which identifies it, and can be used to recall that data.
- Very similar to Arrays, except *instead* of **index** numbers, we use keywords called **properties**.

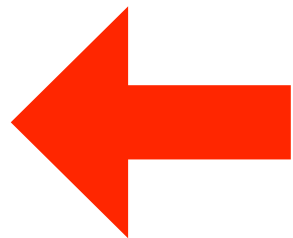
Three ways to write objects

1. Object Literals



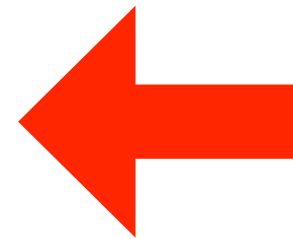
set data

2. Dot notation



retrieve data

3. Square bracket notation



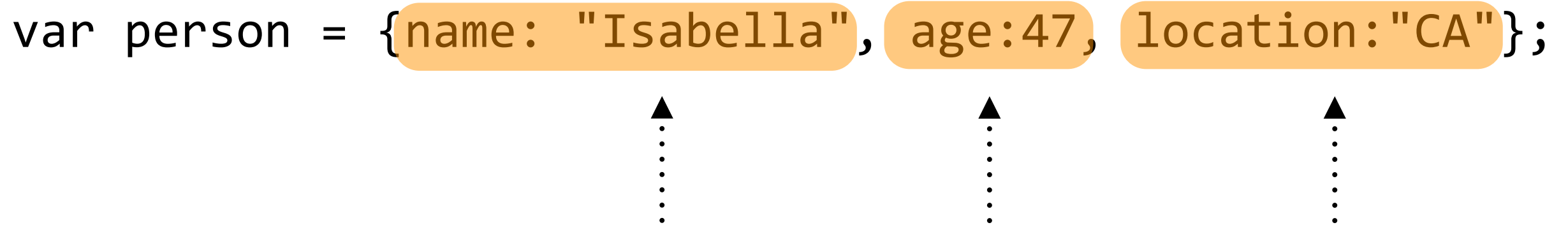
retrieve data

Object Literal

```
var person = {name: "Isabella", age:47, location:"CA"};
```

Object Literal

```
var person = {name: "Isabella", age:47, location:"CA"};
```

The image shows a code snippet for an object literal. The object is enclosed in curly braces and contains three items: 'name: "Isabella"', 'age:47', and 'location:"CA"'. Each of these three items is highlighted with a light orange rounded rectangular background. Below each of these three items, there is a vertical dotted line ending in a small black triangle pointing upwards, indicating that these are the items being referred to in the text below.

Three items in this object,
called key/value pairs.

Object Literal

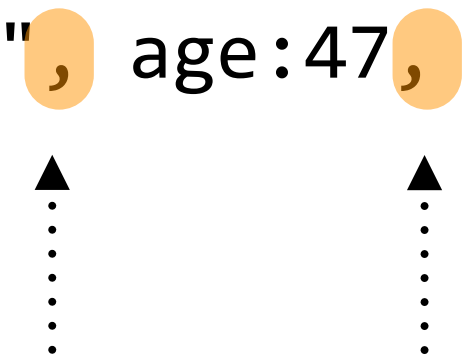
..... Curly Brackets



```
var person = {name: "Isabella", age:47, location:"CA"};
```

Object Literal

```
var person = {name: "Isabella", age:47, location:"CA"};
```

The diagram highlights the two commas in the object literal. Each comma is enclosed in a light orange circle. A vertical dashed line with a solid black arrowhead at the top points from each circle down to the text 'Separate each section by commas'.

Separate each section by commas

Object Literal

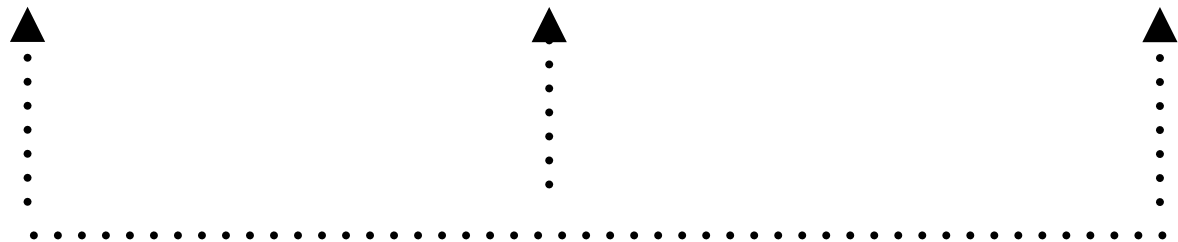
```
var person = {name: "Isabella", age: 47, location: "CA"};
```



Properties

Object Literal

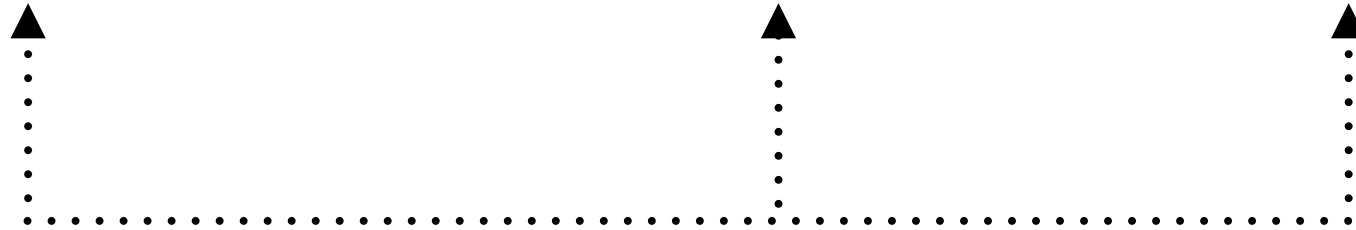
```
var person = {name: "Isabella", age: 47, location: "CA"};
```



Values

Object Literal

```
var person = {name: "Isabella", age: 47, location: "CA"};
```



colon

Object Literal vs Arrays

Object

```
var person = {name: "Isabella", age:47, location:"CA"};
```

Array

```
var person = ["Isabella", 47, "CA"];
```

Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```

Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

What is the name of **cat2**?

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

Oreo

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```

Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

What is the age of **cat3**?

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

1

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```

Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

What is the breed of **cat1**?

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

tabby

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```


Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

What is the housebroken status of **cat2**?

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

true

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```

Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

What is the name of **cat3**?

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

Spark

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```

Dot Syntax

Dot Syntax

Object Literal

```
var person = {name: "Isabella", age:47, location:"CA"};
```

Dot Syntax

```
person.name
```

```
person.age
```

```
person.location
```

Dot Syntax

Object Literal

```
var person = {name: "Isabella", age:47, location:"CA"};
```

Dot Syntax

```
person.name  
person.age  
person.location
```

Dot Syntax

Object Literal

```
var person = {name: "Isabella", age: 47, location: "CA"};
```

Dot Syntax

```
person.name
```

```
person.age
```

```
person.location
```

Dot Syntax

Object Literal

```
var person = {name: "Isabella", age:47, location:"CA"};
```

Dot Syntax

```
person.name
```

```
person.age
```

```
person.location
```

Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```


Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

What is the value of
cat1.age?

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

2

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```

Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```

What is the value of
cat3.housebroken?

false

Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```

What is the value of
cat3.breed?

bobtail

Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

What is the value of
cat3.name?

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

Spark

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```

Pop Quiz

```
var cat1 = {  
  name      : "Peaches",  
  age       : 2,  
  breed     : "tabby",  
  housebroken : true  
};
```

What is the value of
cat1.breed?

```
var cat2 = {  
  name      : "Oreo",  
  age       : 5,  
  breed     : "persian",  
  housebroken : true  
};
```

tabby

```
var cat3 = {  
  name      : "Spark",  
  age       : 1,  
  breed     : "bobtail",  
  housebroken : false  
};
```

Square Bracket Syntax

Square Bracket Syntax

Object Literal

```
var person = {name: "Isabella", age:47, location:"CA"};
```

Square Bracket Syntax

```
person["name"]
```

```
person["age"]
```

```
person["location"]
```

Square Bracket Syntax

Object Literal

```
var person = {name: "Isabella", age:47, location:"CA"};
```

Square Bracket Syntax

```
person["name"]
```

```
person["age"]
```

```
person["location"]
```


Square Bracket Syntax

Object Literal

```
var person = {name: "Isabella", age:47, location:"CA"};
```

Square Bracket Syntax

```
person["name"]
```

```
person["age"]
```

```
person["location"]
```

Square Bracket Syntax

Object Literal

```
var person = {name: "Isabella", age:47, location:"CA"};
```

Square Bracket Syntax

```
person["name"]
```

```
person["age"]
```

```
person["location"]
```

Square Bracket vs Arrays

Square bracket syntax

```
someObject["property"]
```

Array

```
someObject[9]
```

It depends, what is i? A number or string?

```
someObject[i]
```

Square Bracket vs Dot Notation

```
var person = {name: "Morgan", "wears a tie":true};
```

Dot notation cannot have spaces

```
person.name
```

```
person.wears a tie
```

Square Bracket vs Dot Notation

```
var person = {name: "Morgan", "wears a tie": true};
```

Dot notation cannot have spaces

```
person.name
```

```
person.wears a tie
```

```
person["wears a tie"];
```

Pop Quiz

```
var dog1 = {
  name      : "Rex",
  age       : 10,
  "favorite bark" : "ruff",
  "favorite call" : "here boy",
  housebroken : true
};

var dog2 = {
  name      : "Fido",
  age       : 5,
  "favorite bark" : "arf",
  "favorite call" : "hey!",
  housebroken : true
};

var dog3 = {
  name      : "Chompers",
  age       : 3,
  "favorite bark" : "grrrrrrrr",
  "favorite call" : "ow-ow-owww",
  housebroken : false
};
```

Pop Quiz

```
var dog1 = {
  name      : "Rex",
  age       : 10,
  "favorite bark" : "ruff",
  "favorite call" : "here boy",
  housebroken : true
};

var dog2 = {
  name      : "Fido",
  age       : 5,
  "favorite bark" : "arf",
  "favorite call" : "hey!",
  housebroken : true
};

var dog3 = {
  name      : "Chompers",
  age       : 3,
  "favorite bark" : "grrrrrrrr",
  "favorite call" : "ow-ow-owww",
  housebroken : false
};
```

What is the value of
dog1["name"]?

Rex

Pop Quiz

```
var dog1 = {  
  name      : "Rex",  
  age       : 10,  
  "favorite bark" : "ruff",  
  "favorite call" : "here boy",  
  housebroken : true  
};
```

```
var dog2 = {  
  name      : "Fido",  
  age       : 5,  
  "favorite bark" : "arf",  
  "favorite call" : "hey!",  
  housebroken : true  
};
```

```
var dog3 = {  
  name      : "Chompers",  
  age       : 3,  
  "favorite bark" : "grrrrrrrr",  
  "favorite call" : "ow-ow-owww",  
  housebroken : false  
};
```

What is the value of
dog2["housebroken"]?

true

Pop Quiz

```
var dog1 = {
  name      : "Rex",
  age       : 10,
  "favorite bark" : "ruff",
  "favorite call" : "here boy",
  housebroken : true
};

var dog2 = {
  name      : "Fido",
  age       : 5,
  "favorite bark" : "arf",
  "favorite call" : "hey!",
  housebroken : true
};

var dog3 = {
  name      : "Chompers",
  age       : 3,
  "favorite bark" : "grrrrrrrr",
  "favorite call" : "ow-ow-owww",
  housebroken : false
};
```

What is the value of **dog3["name"]**?

Chompers

Pop Quiz

```
var dog1 = {
  name      : "Rex",
  age       : 10,
  "favorite bark" : "ruff",
  "favorite call" : "here boy",
  housebroken : true
};

var dog2 = {
  name      : "Fido",
  age       : 5,
  "favorite bark" : "arf",
  "favorite call" : "hey!",
  housebroken : true
};

var dog3 = {
  name      : "Chompers",
  age       : 3,
  "favorite bark" : "grrrrrrrr",
  "favorite call" : "ow-ow-owww",
  housebroken : false
};
```

What is the value of
dog1["favorite call"]?

here boy

Pop Quiz

```
var dog1 = {
  name      : "Rex",
  age       : 10,
  "favorite bark" : "ruff",
  "favorite call" : "here boy",
  housebroken : true
};

var dog2 = {
  name      : "Fido",
  age       : 5,
  "favorite bark" : "arf",
  "favorite call" : "hey!",
  housebroken : true
};

var dog3 = {
  name      : "Chompers",
  age       : 3,
  "favorite bark" : "grrrrrrrr",
  "favorite call" : "ow-ow-owww",
  housebroken : false
};
```

What is the value of
dog3["favorite call"]?

OW-OW-OWWW

Pop Quiz

```
var dog1 = {
  name      : "Rex",
  age       : 10,
  "favorite bark" : "ruff",
  "favorite call" : "here boy",
  housebroken : true
};

var dog2 = {
  name      : "Fido",
  age       : 5,
  "favorite bark" : "arf",
  "favorite call" : "hey!",
  housebroken : true
};

var dog3 = {
  name      : "Chompers",
  age       : 3,
  "favorite bark" : "grrrrrrrr",
  "favorite call" : "ow-ow-owww",
  housebroken : false
};
```

What is the value of
dog3["favorite bark"]?

grrrrrr

Pop Quiz

```
var dog1 = {  
  name      : "Rex",  
  age       : 10,  
  "favorite bark" : "ruff",  
  "favorite call" : "here boy",  
  housebroken : true  
};  
  
var dog2 = {  
  name      : "Fido",  
  age       : 5,  
  "favorite bark" : "arf",  
  "favorite call" : "hey!",  
  housebroken : true  
};  
  
var dog3 = {  
  name      : "Chompers",  
  age       : 3,  
  "favorite bark" : "grrrrrrrr",  
  "favorite call" : "ow-ow-owww",  
  housebroken : false  
};
```

What is the value of
dog2["favorite bark"]?

arf

Pop Quiz

```
var dog1 = {
  name      : "Rex",
  age       : 10,
  "favorite bark" : "ruff",
  "favorite call" : "here boy",
  housebroken : true
};

var dog2 = {
  name      : "Fido",
  age       : 5,
  "favorite bark" : "arf",
  "favorite call" : "hey!",
  housebroken : true
};

var dog3 = {
  name      : "Chompers",
  age       : 3,
  "favorite bark" : "grrrrrrrr",
  "favorite call" : "ow-ow-owww",
  housebroken : false
};
```

What is the value of
dog2["name"]?

Fido

Square Bracket Properties

```
var person = {  
  name      : "Morgan",  
  age       : 47,  
  "wears a tie" : true,  
  "is a nice person" : true,  
  "can dance"   : false  
};
```

Properties with spaces must have quotes.

Square Bracket Properties

```
var person = {  
  "name"      : "Morgan",  
  "age"       : 47,  
  "wears a tie" : true,  
  "is a nice person" : true,  
  "can dance"  : false  
};
```

Sometimes ALL properties have quotes,
to make things easier.

Setting data dot syntax

```
var person = {};
```

```
person.name = "Isabella";
```

```
person.age = 47;
```

```
person.location = "CA";
```

```
person.tall = true;
```

Setting data dot syntax

```
var person = {};
```

```
person.name = "Isabella";
```

```
person.age = 47;
```

```
person.location = "CA";
```

```
person.tall = true;
```



properties

Setting data square bracket

```
var person = {};
```

```
person["name"] = "Isabella";
```

```
person["age"] = 47;
```

```
person["location"] = "CA";
```

```
person["tall"] = true;
```

Setting data square bracket

```
var person = {};
```

```
person["name"] = "Isabella";
```

```
person["age"] = 47;
```

```
person["location"] = "CA";
```

```
person["tall"] = true;
```



properties

Pop Quiz

```
var person = {};
```

```
person["name"] = "Isabella";
```

```
person["age"] = 47;
```

```
person["location"] = "CA";
```

```
person["tall"] = true;
```

What is the value of `person["tall"]`?

`true`

Pop Quiz

```
var person = {};
```

```
person["name"] = "Isabella";
```

```
person["age"] = 47;
```

```
person["location"] = "CA";
```

```
person["tall"] = true;
```

```
var x = "tall";
```

What is the value of person[x]?

true

Pop Quiz

```
var person = {};
```

```
person["name"] = "Isabella";
```

```
person["age"] = 47;
```

```
person["location"] = "CA";
```

```
person["tall"] = true;
```

```
var x = "tall";
```

What is the value of `person["name"]`?

Isabella

Pop Quiz

```
var person = {};
```

```
person["name"] = "Isabella";
```

```
person["age"] = 47;
```

```
person["location"] = "CA";
```

```
person["tall"] = true;
```

```
var x = "age";
```

What is person[x]?

47

Pop Quiz

```
var person = {};
```

```
person["name"] = "Isabella";
```

```
person["age"] = 47;
```

```
person["location"] = "CA";
```

```
person["tall"] = true;
```

```
var x = "location";
```

What is person[x]?

CA

Objects inside objects

```
var people = {  
    ivan    : { location:"CA", age:40, employed:true  },  
    albert  : { location:"NV", age:38, employed:false },  
    rita    : { location:"GA", age:32, employed:false },  
    mona    : { location:"CA", age:33, employed:true  }  
}
```

```
people.ivan.employed
```

```
people["ivan"]["employed"]
```

Objects inside objects

```
var people = {  
    ivan    : { location:"CA", age:40, employed:true  },  
    albert  : { location:"NV", age:38, employed:false },  
    rita    : { location:"GA", age:32, employed:false },  
    mona    : { location:"CA", age:33, employed:true  }  
}
```

```
people.ivan.employed
```

```
people["ivan"]["employed"]
```

Objects inside objects

```
var people = {  
    ivan    : { location:"CA", age:40, employed:true },  
    albert  : { location:"NV", age:38, employed:false },  
    rita    : { location:"GA", age:32, employed:false },  
    mona    : { location:"CA", age:33, employed:true }  
}
```

```
people.ivan.employed
```

```
people["ivan"]["employed"]
```

Objects inside objects

```
var people = {  
  ivan    : { location:"CA", age:40, employed:true  },  
  albert  : { location:"NV", age:38, employed:false },  
  rita    : { location:"GA", age:32, employed:false },  
  mona    : { location:"CA", age:33, employed:true  }  
}
```

```
people.ivan.employed
```

```
people["ivan"]["employed"]
```

Objects inside objects

```
var people = {  
    ivan    : { location:"CA", age:40, employed:true  },  
    albert  : { location:"NV", age:38, employed:false },  
    rita    : { location:"GA", age:32, employed:false },  
    mona    : { location:"CA", age:33, employed:true  }  
}
```

```
people.ivan.employed
```

```
people["ivan"]["employed"]
```

Objects inside objects

```
var people = {  
  
    ivan    : { location:"CA", age:40, employed:true },  
    albert  : { location:"NV", age:38, employed:false },  
    rita    : { location:"GA", age:32, employed:false },  
    mona    : { location:"CA", age:33, employed:true }  
  
}
```

```
people.ivan.employed
```

```
people["ivan"]["employed"]
```

Objects inside objects

```
var people = {  
    ivan    : { location:"CA", age:40, employed:true },  
    albert  : { location:"NV", age:38, employed:false },  
    rita    : { location:"GA", age:32, employed:false },  
    mona    : { location:"CA", age:33, employed:true }  
}
```

```
people.ivan.employed
```

```
people["ivan"]["employed"]
```


Objects inside objects

```
var people = {  
    ivan    : { location:"CA", age:40, employed:true  },  
    albert  : { location:"NV", age:38, employed:false },  
    rita    : { location:"GA", age:32, employed:false },  
    mona    : { location:"CA", age:33, employed:true  }  
}
```

```
people.ivan.employed  
people.rita.age
```

```
people["ivan"]["employed"]  
people["rita"]["age"]
```

Pop Quiz

```
var photos = {  
  "title" : "A walk on the beach",  
  "file" : "beach.jpg",  
  "sizes" : {  
    s : "small-beach.jpg",  
    m : "medium-beach.jpg",  
    l : "large-beach.jpg"  
  }  
}
```

What's the notation for the medium size photo?

`photos.sizes.m` or `photos["sizes"]["m"]`

Pop Quiz

```
var photos = {  
  "title" : "A walk on the beach",  
  "file" : "beach.jpg",  
  "sizes" : {  
    s : "small-beach.jpg",  
    m : "medium-beach.jpg",  
    l : "large-beach.jpg"  
  }  
}
```

What's the notation for the file name?

photos.file or photos["file"]

Pop Quiz

```
var photos = {  
  "title" : "A walk on the beach",  
  "file" : "beach.jpg",  
  "sizes" : {  
    s : "small-beach.jpg",  
    m : "medium-beach.jpg",  
    l : "large-beach.jpg"  
  }  
}
```

What's the notation for the large image?

`photos.sizes.l` or `photos["sizes"]["l"]`

Pop Quiz

```
var photos = {  
  "title" : "A walk on the beach",  
  "file" : "beach.jpg",  
  "sizes" : {  
    s : "small-beach.jpg",  
    m : "medium-beach.jpg",  
    l : "large-beach.jpg"  
  }  
}
```

What's the notation for the title?

photos.title or photos["title"]

Pop Quiz

```
var photos = {  
  "title" : "A walk on the beach",  
  "file" : "beach.jpg",  
  "sizes" : {  
    s : "small-beach.jpg",  
    m : "medium-beach.jpg",  
    l : "large-beach.jpg"  
  }  
}
```

What's the notation for the small image?


`photos.sizes.s` or `photos["sizes"]["s"]`

Pop Quiz

```
var photos = {  
  "title" : "A walk on the beach",  
  "file" : "beach.jpg",  
  "sizes" : {  
    s : "small-beach.jpg",  
    m : "medium-beach.jpg",  
    l : "large-beach.jpg"  
  }  
}
```

What's the notation for the *sizes object*?

`photos.sizes` or `photos["sizes"]`



Objects & Arrays

Objects + Arrays

```
var people = [  
  {name: "joe",    occupation: "plumber"    },  
  {name: "suzy",  occupation: "CEO"        },  
  {name: "debby", occupation: "firefighter"},  
  {name: "paul",  occupation: "prisoner"   }  
];
```

Pop Quiz

```
var people = [  
  {name: "joe",    occupation: "plumber"    },  
  {name: "suzy",  occupation: "CEO"        },  
  {name: "debby", occupation: "firefighter"},  
  {name: "paul",  occupation: "prisoner"    }  
];
```

What's the notation for suzy's occupation?

```
people[1].occupation  
people[1]["occupation"]
```

Pop Quiz

```
var people = [  
  {name: "joe",    occupation: "plumber"    },  
  {name: "suzy",  occupation: "CEO"        },  
  {name: "debby", occupation: "firefighter"},  
  {name: "paul",  occupation: "prisoner"   }  
];
```

What's the notation for paul's name?

```
people[3].name  
people[3]["name"]
```

Pop Quiz

```
var people = [  
  {name: "joe",    occupation: "plumber"    },  
  {name: "suzy",  occupation: "CEO"        },  
  {name: "debby", occupation: "firefighter"},  
  {name: "paul",  occupation: "prisoner"   }  
];
```

What's the notation for joe's name?

```
people[0].name  
people[0]["name"]
```

Pop Quiz

```
var people = [  
  {name: "joe",    occupation: "plumber"    },  
  {name: "suzy",  occupation: "CEO"        },  
  {name: "debby", occupation: "firefighter"},  
  {name: "paul",  occupation: "prisoner"   }  
];
```

What's the notation for Debby's occupation?

```
people[2].occupation  
people[2]["occupation"]
```

Pop Quiz

```
var people = [  
  {name: "joe",    occupation: "plumber"    },  
  {name: "suzy",  occupation: "CEO"        },  
  {name: "debby", occupation: "firefighter"},  
  {name: "paul",  occupation: "prisoner"   }  
];
```

What's the notation for suzy's name?

```
people[1].name  
people[1]["name"]
```

Pop Quiz

```
var people = [  
  {name: "joe",    occupation: "plumber"    },  
  {name: "suzy",  occupation: "CEO"        },  
  {name: "debby", occupation: "firefighter"},  
  {name: "paul",  occupation: "prisoner"   }  
];
```

What's the notation for joe's occupation?

```
people[0].occupation  
people[0]["occupation"]
```

JavaScript Object Notation

JSON