

FOR LOOPS

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AFTER THIS PRESENTATION

 You'll be able to create different kinds of for loop

WE WILL LOOK AT

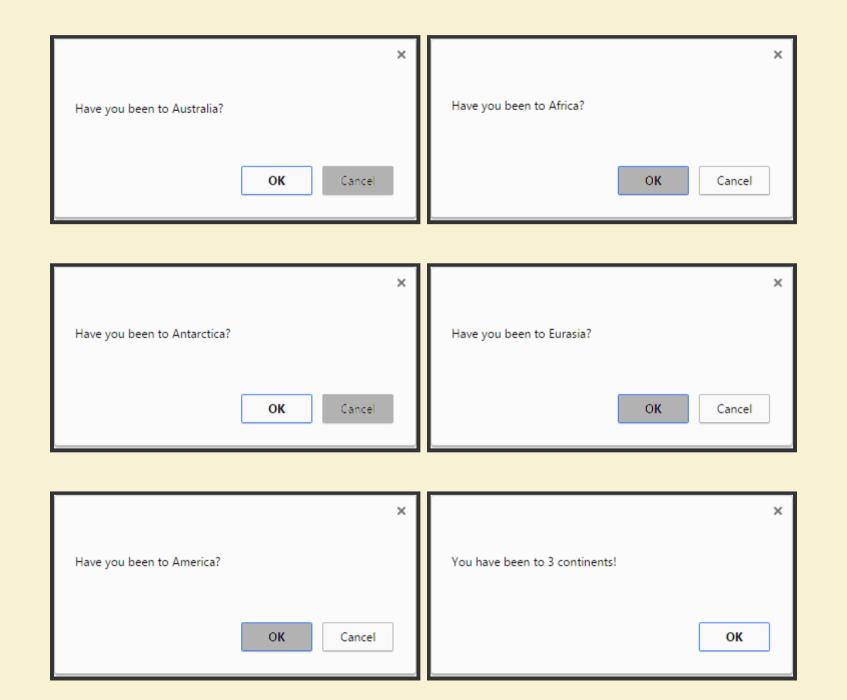
```
for...in
```

FOR LOOPS

- for clearly shows the start and end values
- for is especially good for handling a series of data

• (data_structure.length tells you how many items data_structure contains)

```
<html><head>
  <script>
  var continents=["Australia", "Africa",
      "Antarctica", "Eurasia", "America"];
  var response, count=0;
    for (var index=0; index < continents.length;</pre>
                       index++) {
      response = confirm("Have you been to " +
                          continents[index] + "?");
      if (response) count++;
    alert("You have been to " + count +
          " continents!");
  </script>
</head></html>
```



用在数组里 for...in: 用做index

FOR ... IN LOOPS

• for ... in gives you the index of each item

```
<!doctype html>
<html><head>
  <script>
    var continents=["Australia", "Africa",
      "Antarctica", "Eurasia", "America"];
                                             可以用在数组里
   var response, count=0;
    for (var index in continents) {
                                            但此处的变量是index
     response=confirm("Have you been to "
              + continents[index] + "?");
     if (response) count++;
    alert("You have been to " + count +
         " continents!");
  </script>
</head></html>
```

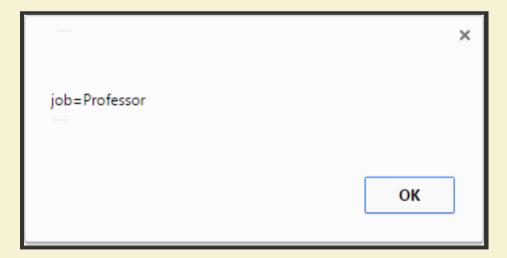
用在有多个成员变量的数据结构 里,可以用做遍历其成员变量 for...in: 用做index

FOR ... IN LOOPS

 This example shows how for ... in can be used to access the content of a data structure

```
<!doctype html>
<html><head>
  <title>Example of for in</title>
  <script>
  var response, count=0;
  var onePerson = { initials:"DR", age:40,
                                                注意这里也是用做index
                   job:"Professor" };
  for (var property in onePerson) {
    alert(property + "=" + onePerson[property]);
  </script>
</head></html>
```





for...of: 用做变量

FOR ... OF LOOPS

• for ... of gives you each item

```
<!doctype html>
<html><head>
  <title>Example of for of</title>
  <script>
  var continents=["Australia", "Africa",
      "Antarctica", "Eurasia", "America"];
                                                   用做变量
  var response, count=0;
  for (var continent of continents)
    response = confirm("Have you been to " +
                       continent + "?");
    if (response) count++;
  alert("You have been to " + count + " continents!");
  </script>
</head></html>
```

OMITTING PARTS

- The 3 parts of the for can be omitted
- E.g. this will make an infinite loop:

```
for (;;) {
    alert("Welcome!");
}
```

This is OK:

```
var number=1;
for ( ; number <= 12; number++ ) {
    alert(number + " times 9 = ", number * 9);
}</pre>
```

So is this:



LOOP CONTROL

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AFTER THIS PRESENTATION

 You'll be able to control loops in two new ways

WE WILL LOOK AT

break

continue

LOOP CONTROL

- break totally stops the loop
- continue stops the current iteration

These apply to both types of loop

```
<!doctype html>
<html><head><script>
  var total amount=0;
  while (true) {
  this amount=prompt("How much in this account?");
  this amount=parseFloat(this amount);
  if (this amount>0)
    total amount+=this amount;
  else
    break;
  alert("Your total savings: " + total amount);
</script></head></html>
```

| How much in this account? 10.5 OK Cancel | How much in this account? 30 OK Cancel |
|--|--|
| How much in this account? OK Cancel | Your total savings: 40.5 |

CONTINUE

 continue skips the current iteration of the loop

• (array.push() adds an item to the end of array)

```
<!doctype html>
<html><head>
  <script>
    var year, great years = [];
    for (year = 2014; year <= 2016; year++) {
      correct=confirm(year + " was great for you?")
      if (!correct) continue;
      great years.push(year)
    alert("Your great years were: " + great years);
  </script>
</head></html>
```

