

Introduction to Programming

Class 7, 23 January 2017

Jack Phillips <jack_phillips@asl.org>

Goals

Goal 1: You will understand how computers make decisions.

Goal 2: You will know how to implement an if-statement in JavaScript.

Vocabulary

Selection

If-statement

Code block

Code

```
if () {}  
string.toLowerCase()  
+=  
==
```

Practice Assessment

- **Complete Task12-SimpleInterest (Haiku)**
- **Turn in to Google Drive**
- **Begin Code Academy (Haiku Link)**

Task: **Welcome to School**

Create a flowchart

What is your name?

Cancel OK

Are you new to ASL (y/n)?

Cancel OK

Are you new to ASL (y/n)?

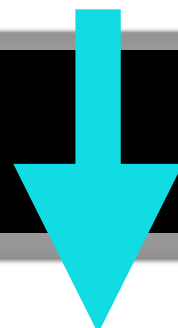
Cancel OK

Welcome to ASL!

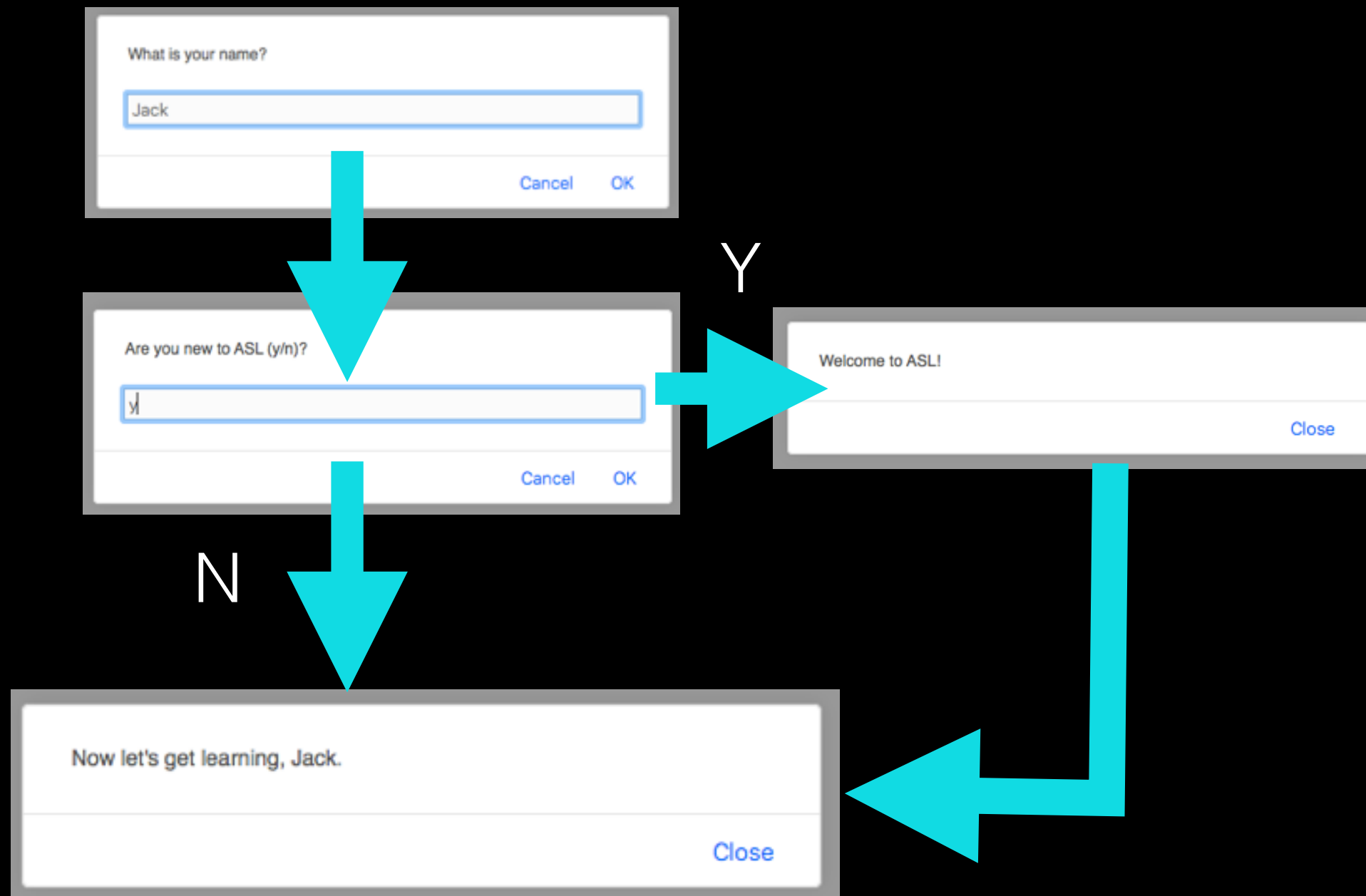
Close

Now let's get learning, Jack.

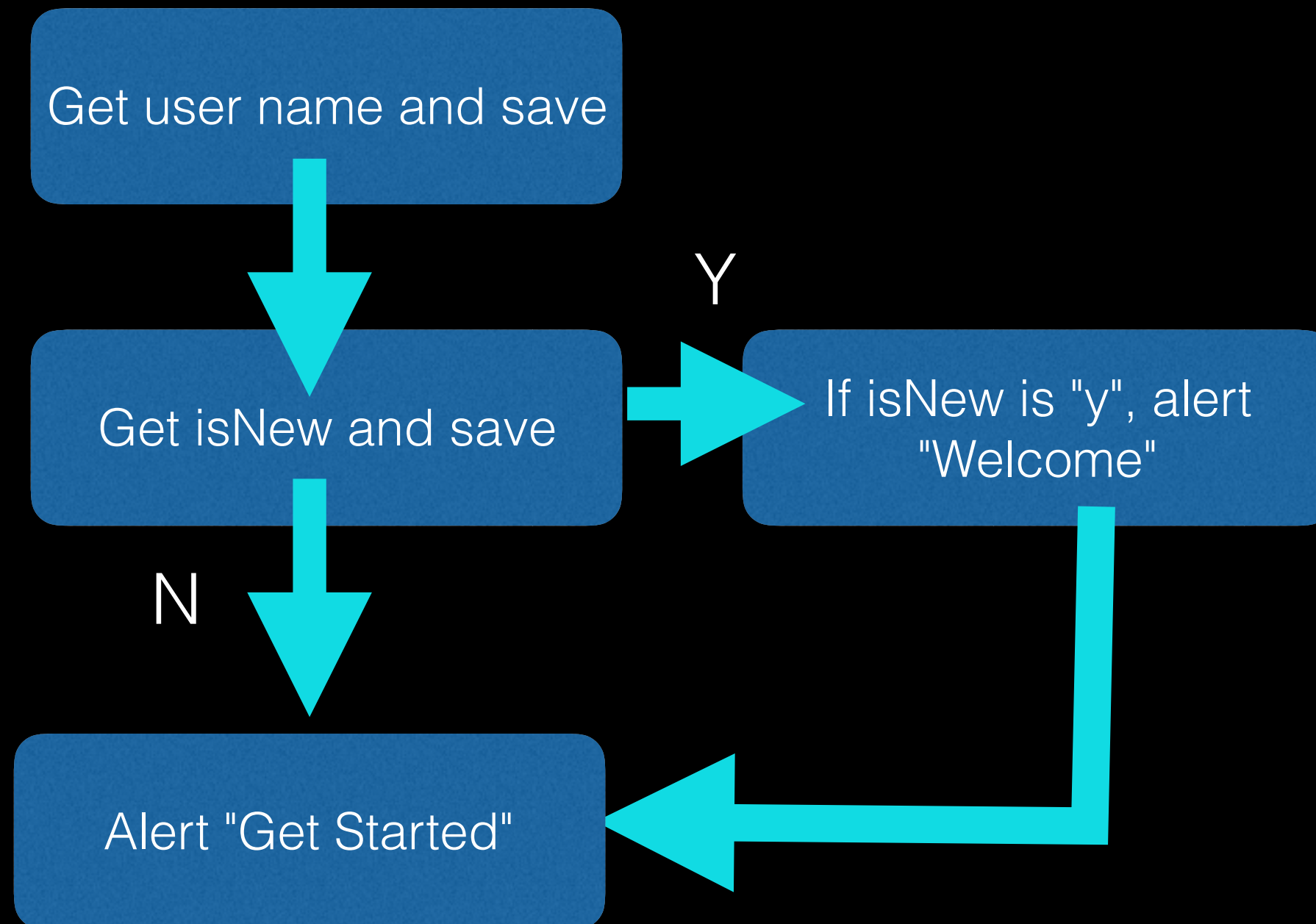
Close



Task: **Welcome to School**



Task: **Welcome to School**

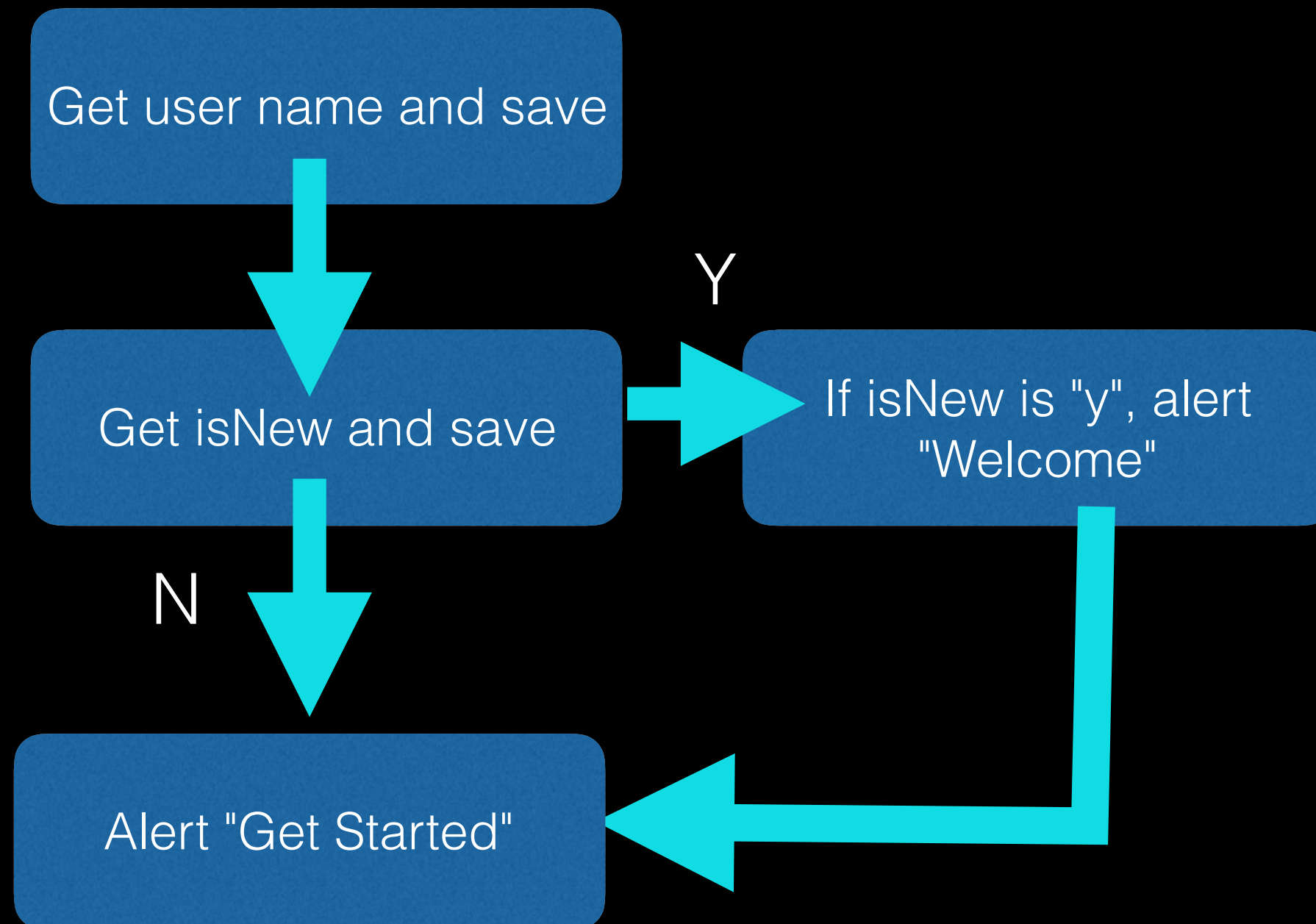


Task: **Welcome to School**

Get user name and save

```
var name = prompt("What is your name");
```

Task: **Welcome to School**

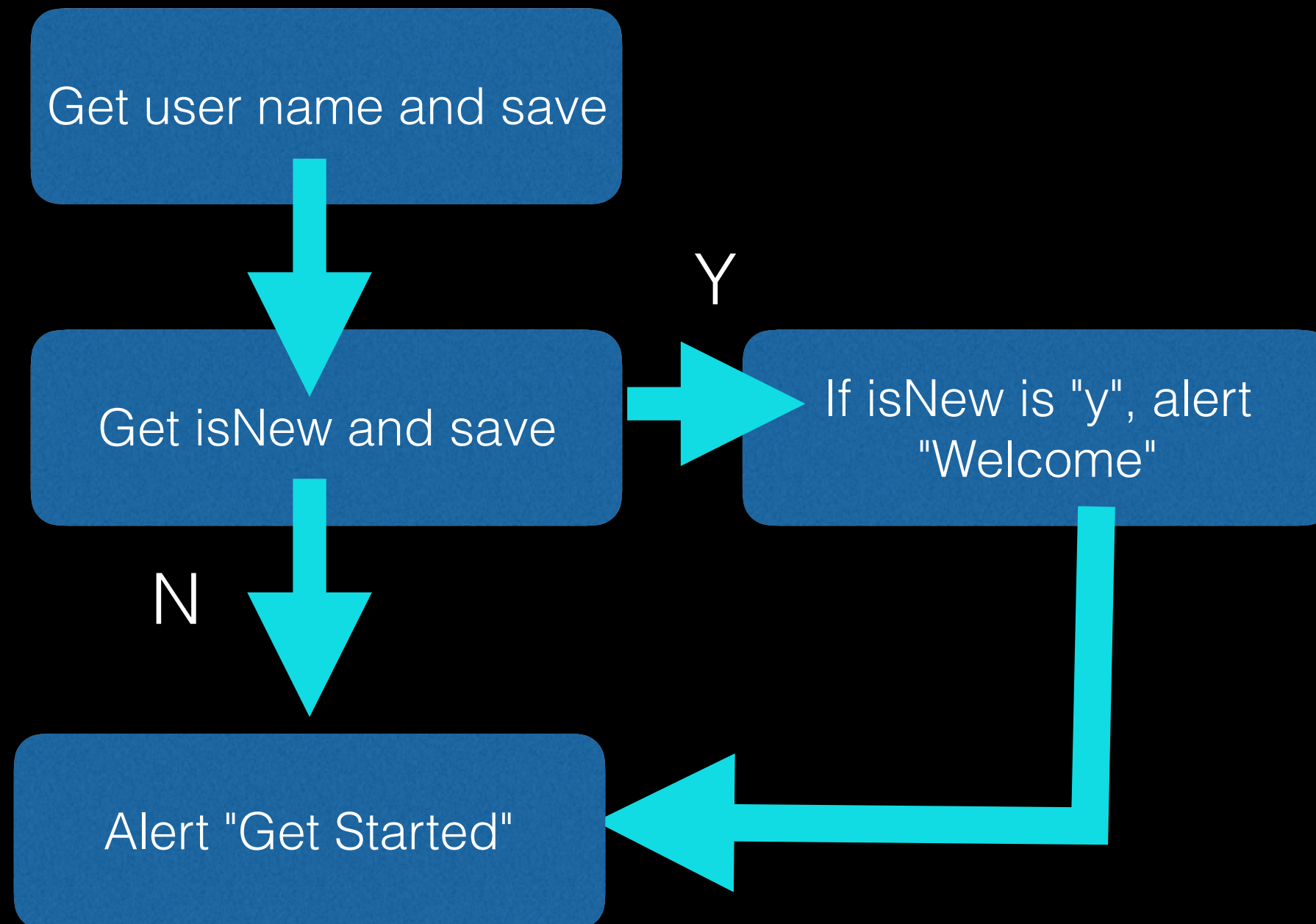


Task: **Welcome to School**

Get isNew and save

```
var isNew = prompt("Are you new to ASL?");
```

Task: **Welcome to School**



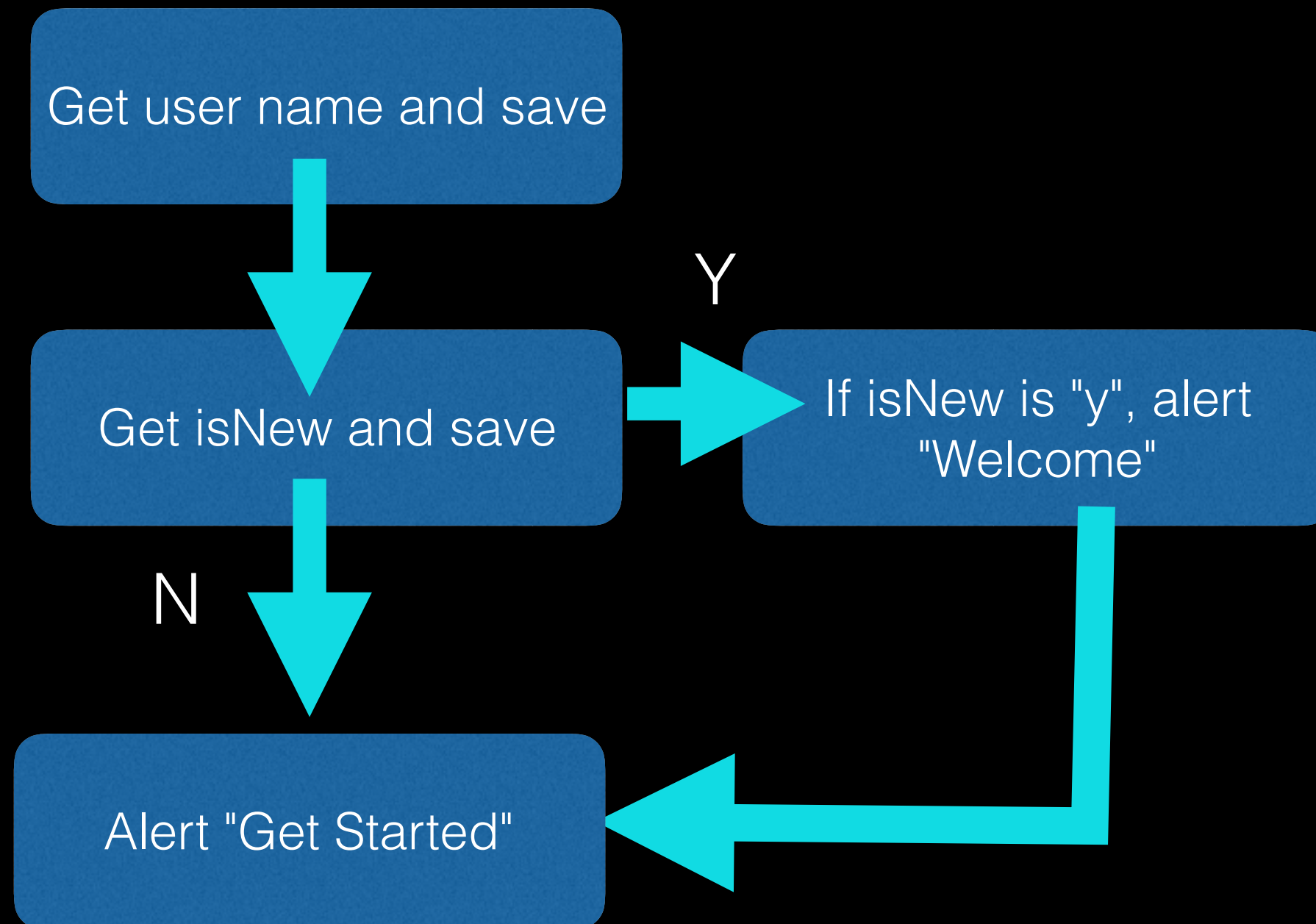
Task: **Welcome to School**



Alert "Get Started"

```
var message = "Let's get learning, " + name + ".";  
alert(message);
```

Task: **Welcome to School**



Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

```
if isNew is "y" then alert "Welcome"
```

Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

```
if isNew is "y" then alert "Welcome"
```

Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

```
if isNew is "y" then
```

```
    alert("Welcome to ASL!");
```

Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

```
if isNew is "y" then
```

```
    alert("Welcome to ASL!");
```


Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

`isNew is "y" then`

`if ()`

`alert("Welcome to ASL!");`

Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

`isNew is "y" then`

`if ()`

`alert("Welcome to ASL!");`

Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

then

```
if ( isNew == "y" )  
    alert("Welcome to ASL!");
```

Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

then

```
if ( isNew == "y" )  
    alert("Welcome to ASL!");
```

Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

```
if ( isNew == "y" ) {  
    alert("Welcome to ASL!");  
}
```

Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

```
if ( isNew == "y" ) {  
    alert("Welcome to ASL!");  
}
```

Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

Conditional
a.k.a. if-statement



```
if ( isNew == "y" ) {  
    alert("Welcome to ASL!");  
}
```

Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

The condition

Equality operator

```
if (isNew == "y"){
```

NOTE: No semicolon

```
    alert("Welcome to ASL!");
```

```
}
```


Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

NOTE: Indented four spaces!

```
if ( isNew == "y" ) {  
    alert("Welcome to ASL!");  
}
```

NOTE: No semicolon

A code block.
Everything between { }

A code block: Everything between { }

- A code block is a section of code that is grouped together.
- A code block is denoted by curly braces {}.
- The first curly brace is in-line.
- All lines in a code block are indented by 2, 4, or 8 spaces.

A code block: Everything between { }

```
if(name == "Jack") {  
    code block  
}
```

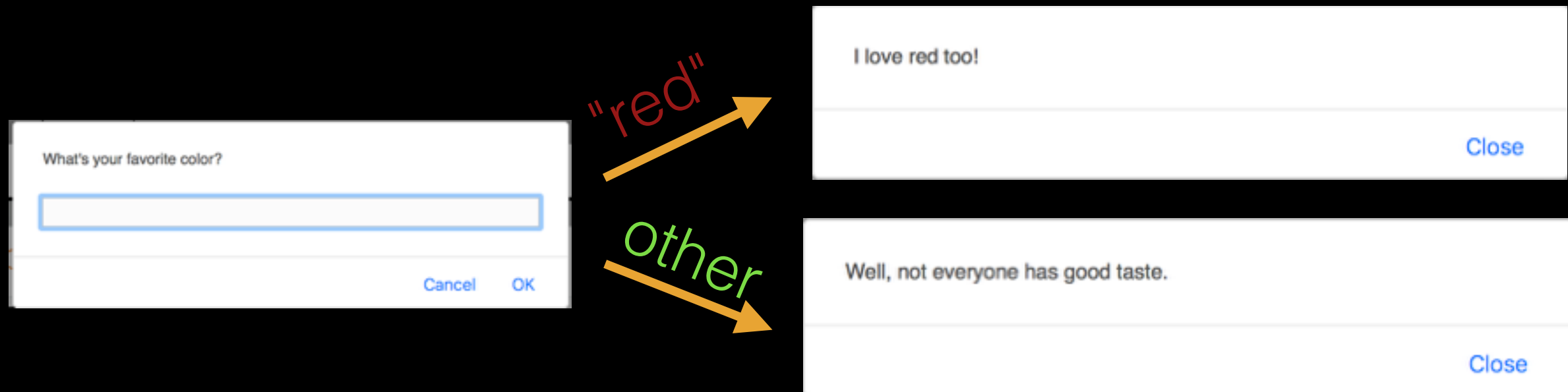
```
for(var i=0; i<10; i++) {  
    code block  
}
```

```
function growLarge() {  
    code block  
}
```

Task: **Welcome to School**

```
var name = prompt("What is your name");  
  
var isNew = prompt("Are you new to ASL?");  
  
if ( isNew == "y" ) {  
    alert("Welcome to ASL!");  
}  
  
var message = "Let's get learning, " + name + ".";  
alert(message);
```

Task: What's your favorite color?



```
var name = prompt("What is your name");  
var isNew = prompt("Are you new to ASL?");  
if ( isNew == "y" ) {  
    alert("Welcome to ASL!");  
}  
var message = "Let's get learning, " + name + ".";  
alert(message);
```

Task: **Welcome to School Again**

Create a flowchart

What is your name?

Cancel OK

Are you new to ASL (y/n)?

Cancel OK



Are you new to ASL (y/n)?

Cancel OK



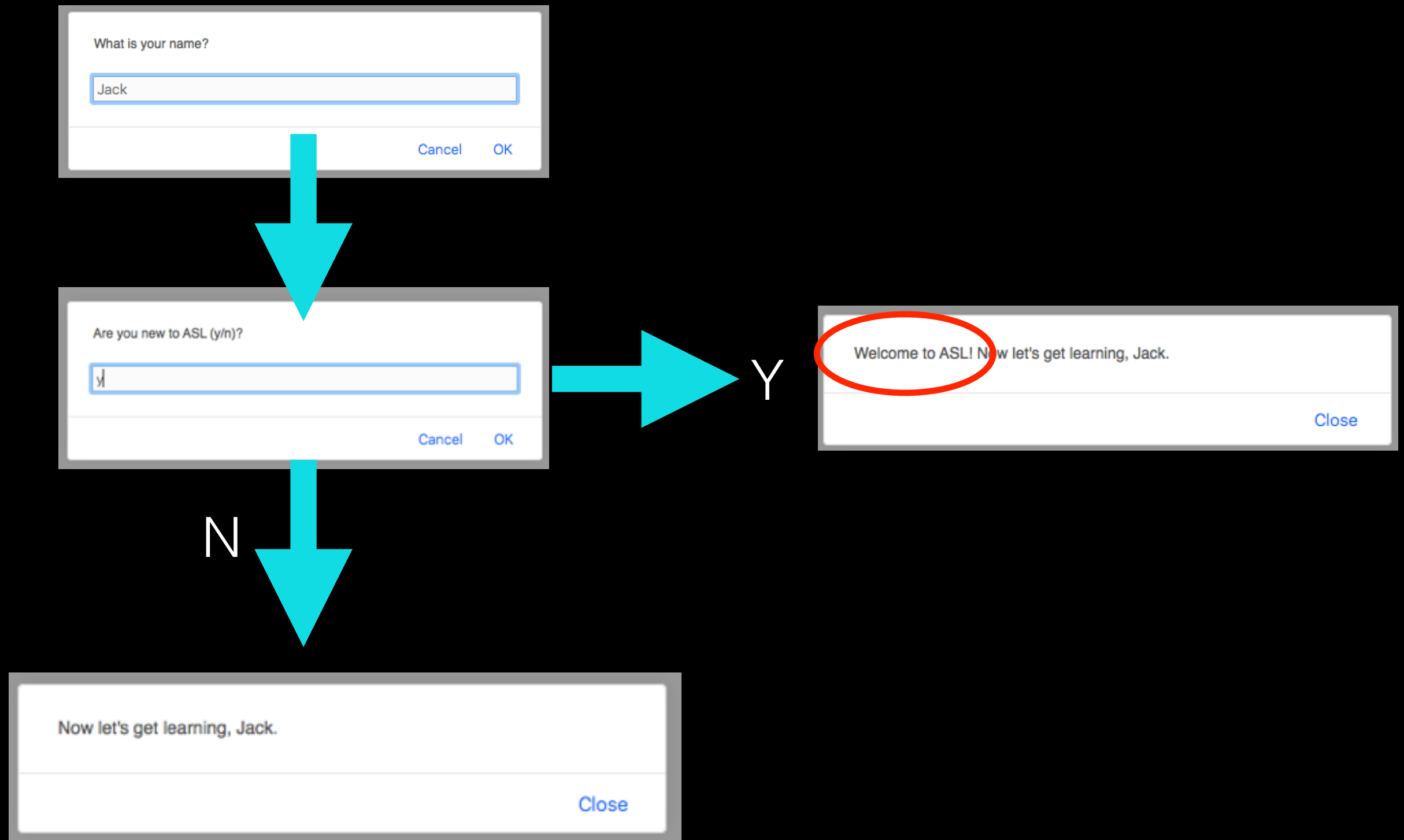
Welcome to ASL! Now let's get learning, Jack.

Close

Now let's get learning, Jack.

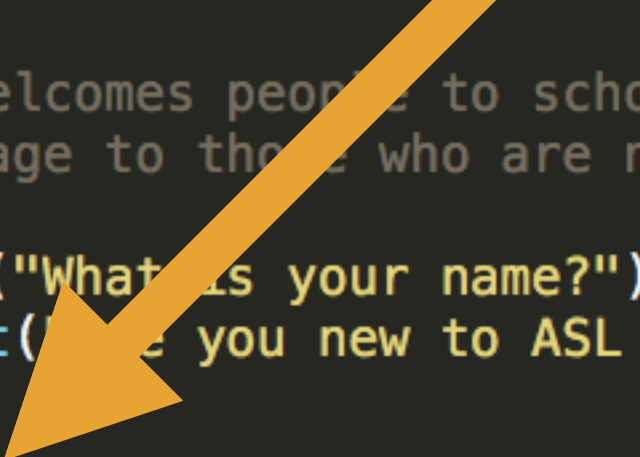
Close

Task: **Welcome to School**



Task: **Welcome to School**

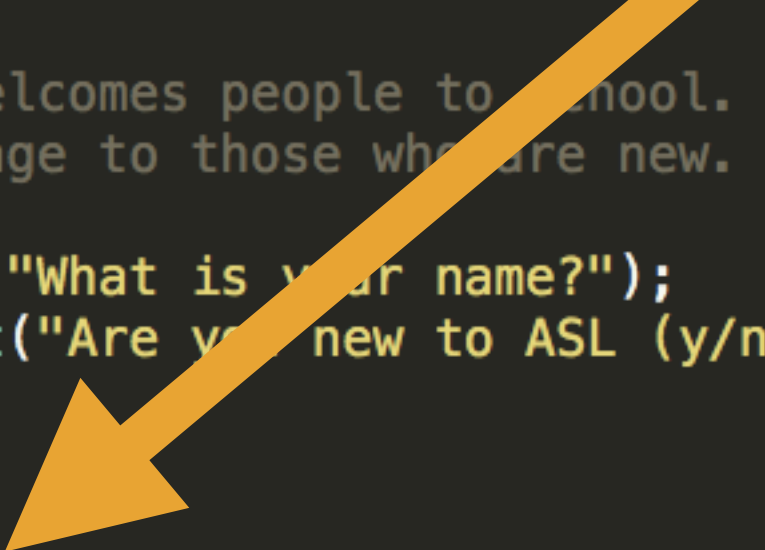
Initialize empty string.



```
1 <script>
2 // This program welcomes people to school. It gives
3 // a special message to those who are new.
4
5 var name = prompt("What is your name?");
6 var isNew = prompt("Are you new to ASL (y/n)?");
7
8 var message = "";
9
10 if (isNew.toLowerCase() == "y") {
11     message = "Welcome to ASL!";
12 }
13
14 message += " Now let's get learning, " + name + ".";
15
16 alert(message);
17 </script>
```


Task: **Welcome to School**


Make sure isNew is lower case.



```
1 <script>
2 // This program welcomes people to school. It gives
3 // a special message to those who are new.
4
5 var name = prompt("What is your name?");
6 var isNew = prompt("Are you new to ASL (y/n)?");
7
8 var message = "";
9
10 if (isNew.toLowerCase() == "y") {
11     message = "Welcome to ASL!";
12 }
13
14 message += " Now let's get learning, " + name + ".";
15
16 alert(message);
17 </script>
```

Task: **Welcome to School**

```
1  <script>
2  // This program welcomes people to school. It gives
3  // a special message to those who are new.
4
5  var name = prompt("What is your name?");
6  var isNew = prompt("Are you new to ASL (y/n)?");
7
8  var message = "";
9
10 if (isNew.toLowerCase() == "y") {
11     message = "Welcome to ASL!";
12 }
13
14 message += " Now let's get learning, " + name + ".";
15
16 alert(message);
17 </script>
```



Same as

message = message + " Now let's get learning

Goals

Goal 1: You will understand how computers make decisions.

Goal 2: You will know how to implement an if-statement in JavaScript.

Vocabulary

Conditional
If-statement
Code block
Initialize

Code

```
if () {}  
string.toLowerCase()  
+=  
==
```