



CHAPTER 4

DECISIONS & LOOPS

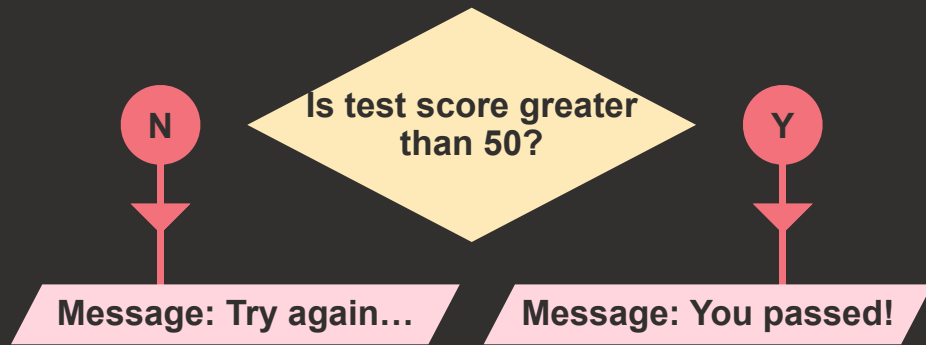


A script can do different things depending on what values it has been passed.



MAKING DECISIONS

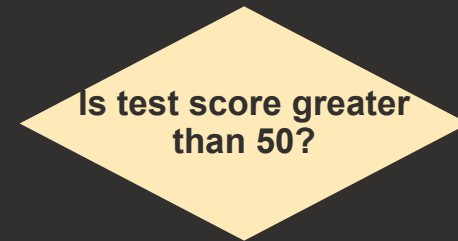




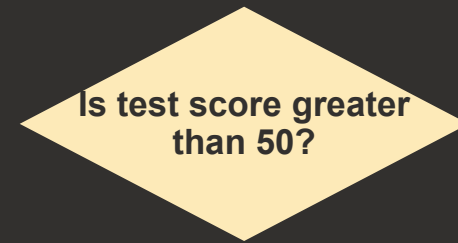
`if`



`if (score > 50)`



```
if (score > 50) {  
    document.write('You passed!');  
}
```



Y



Y



Message: You passed!

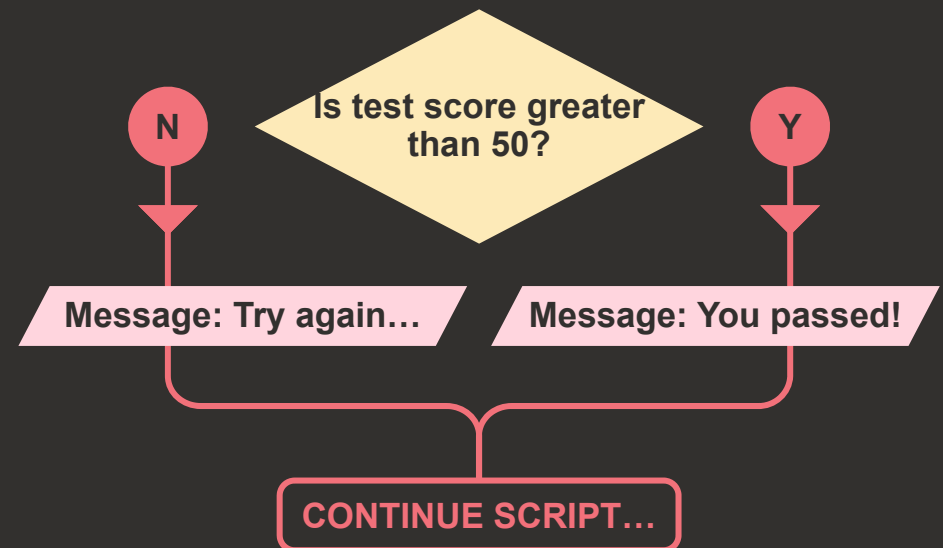
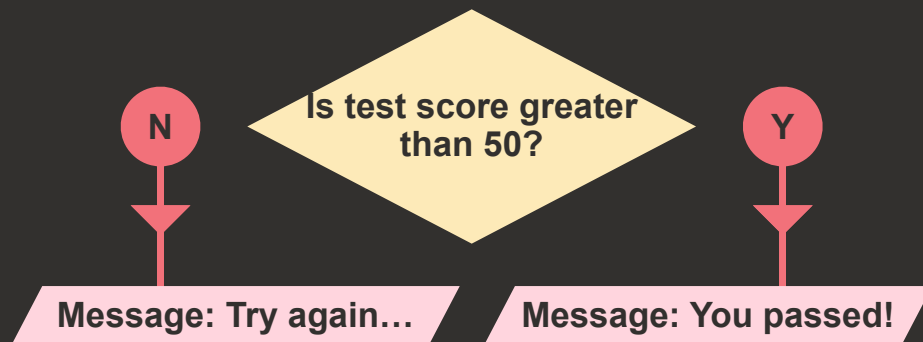


```
if (score > 50) {  
    document.write('You passed!');  
} else {  
}
```





```
if (score > 50) {  
    document.write('You passed!');  
} else {  
    document.write('Try again...');  
}
```



COMPARISON OPERATORS



==

IS EQUAL TO



==

IS EQUAL TO

!=

IS NOT EQUAL TO



==

IS EQUAL TO

!=

IS NOT EQUAL TO



===

STRICT EQUAL TO

==

IS EQUAL TO

!=

IS NOT EQUAL TO

===

STRICT EQUAL TO

!==

STRICT NOT EQUAL TO



>

GREATER THAN



>

GREATER THAN

<

LESS THAN



>

GREATER THAN

<

LESS THAN

>=

GREATER THAN
OR EQUAL TO



>

GREATER THAN

<

LESS THAN

>=

GREATER THAN
OR EQUAL TO

<=

LESS THAN
OR EQUAL TO



LOGICAL OPERATORS



```
if (score > 75)&&(score < 95) {  
    document.write('Very good!');  
}
```



```
if (score > 75)&&(score < 95) {  
    document.write('Very good!');  
}
```



&&

LOGICAL AND



&&

LOGICAL AND

||

LOGICAL OR



&&

LOGICAL AND

||

LOGICAL OR

!

LOGICAL NOT



SWITCH STATEMENTS




```
switch
```

```
switch (level) {
```

```
}
```



```
switch (level) {  
    case 'One':  
        title = 'Level 1';  
        break;
```

```
}
```



```
switch (level) {  
    case 'One':  
        title = 'Level 1';  
        break;  
    case 'Two':  
        title = 'Level 2';  
        break;
```

```
}
```



```
switch (level) {  
  case 'One':  
    title = 'Level 1';  
    break;  
  case 'Two':  
    title = 'Level 2';  
    break;  
  case 'Three':  
    title = 'Level 3';  
    break;  
}
```



```
switch (level) {  
  case 'One':  
    title = 'Level 1';  
    break;  
  case 'Two':  
    title = 'Level 2';  
    break;  
  case 'Three':  
    title = 'Level 3';  
    break;  
  default:  
    title = 'Test';  
    break;  
}
```



LOOPS



```
for (var i=0; i<3; i++) {  
  document.write(i);  
}
```



KEYWORD

```
for (var i=0; i<3; i++) {  
    document.write(i);  
}
```



CONDITION (COUNTER)

```
for (var i=0; i<3; i++) {  
    document.write(i);  
}
```



The variable `i` is declared and set a value of 0

INITIALIZATION

```
for (var i=0; i<3; i++) {  
    document.write(i);  
}
```



Every time the loop is run, the condition is checked to see if `i` is less than 3

CONDITION

```
for (var i=0; i<3; i++) {  
    document.write(i);  
}
```



If `i` is less than 3, the code block is run

```
for (var i=0; i<3; i++) {  
  document.write(i);  
}
```



The variable `i` can be used inside the loop
(here it is used to write its value to the page)

```
for (var i=0; i<3; i++) {  
  document.write(i);  
}
```



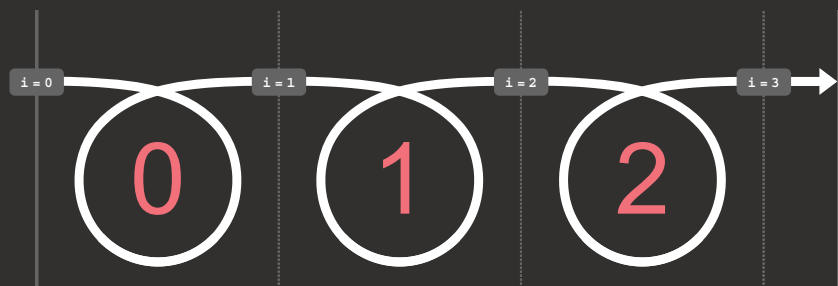
When the code inside the curly braces has been
executed, the variable `i` is incremented by 1

```
for (var i=0; i<3; UPDATEi++) {  
  document.write(i);  
}
```



ANATOMY OF A LOOP





$i = 0$



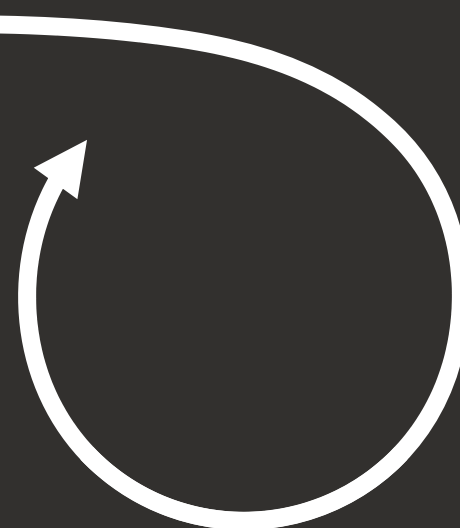
Is i less than 3?

$i = 0$



Yes, i is less than 3

$i = 0$



Write i to the page

$i = 0$



Add 1 to i

$i = 0$

$i = 1$



$i = 0$

$i = 1$



Is i less than 3?

$i = 1$



Yes, i is less than 3

$i = 1$



Write i to the page

$i = 1$



1



Add 1 to i

$i = 1$

$i = 2$

1



$i = 1$

$i = 2$

1



Is i less than 3?

$i = 2$



Yes, i is less than 3

$i = 2$



Write i to the page

$i = 2$

2



Add 1 to i

$i = 2$

$i = 3$

2



