

CS 105

Week 3

MPO

Lab

Countdown

Write a function that counts down
from 10 to 0.

count from 10 to 0

start at 10

count down to 9

count down to 8

count down to 7

count down to 6

count down to 5

count down to 4

count down to 3

count down to 2

count down to 1

count down to 0

start at 10

count down to 9

count down to 8

count down to 7

count down to 6

count down to 5

count down to 4

count down to 3

count down to 2

count down to 1

count down to 0

start at 10

count down by 1

start at 10

count down by 1

...until we reach 0.

start at 10

count down by 1

...until we reach 0.

start **value** at 10

count down by 1

...until we reach 0.

start value at 10

subtract 1 from value

...until we reach 0.

start value at 10

subtract 1 from value

...until we reach 0.

start value at 10

while value is not 0:

 subtract 1 from value


```
start value at 10  
while value is not 0:  
    subtract 1 from value
```

```
function doCountdown()  
{  
    // start value at 10  
  
    // while value is not 0:  
    //     subtract 1 from value  
  
}
```

```
function doCountdown()  
{  
    // start value at 10  
    var value = 10;  
  
    // while value is not 0:  
    //     subtract 1 from value  
  
}
```

```
function doCountdown()  
{  
    // start value at 10  
    var value = 10;  
  
    // while value is not 0:  
    while (value != 0)  
    {  
        // subtract 1 from value  
    }  
}
```

```
function doCountdown()  
{  
    // start value at 10  
    var value = 10;  
  
    // while value is not 0:  
    while (value != 0)  
    {  
        // subtract 1 from value  
        value = value - 1;  
    }  
}
```

```
function doCountdown()  
{  
    // start value at 10  
    var value = 10;  
  
    // while value is not 0:  
    while (value != 0)  
    {  
        printValue(value) ;  
        // subtract 1 from value  
        value = value - 1;  
    }  
}
```



```
function doCountdown()  
{  
    // start value at 10  
    var value = 10;  
  
    // while value is not 0:  
    while (value != 0)  
    {  
        printValue(value) ;  
        // subtract 1 from value  
        value = value - 1;  
    }  
}
```



```
function doCountdown()  
{  
    // start value at 10  
    var value = 10;  
  
    // while value is not 0:  
    while (value != 0)  
    {  
        printValue(value);  
        // subtract 1 from value  
        value -= 1;  
    }  
}
```

x = x + 4 ; → x += 4

x = x + 4 ;



x += 4 ;

x = x + 1 ;



x += 1 ;

x = x + 4; **→** **x += 4;**

x = x + 1; **→** **x += 1;**

x += 1; **→** **x++;**

x = x + 4;



x += 4;

x = x + 1;



x += 1;

x += 1;



x++;

x += 2;



x++++;

x = **x** - 4 ;



x -= 4 ;

x = **x** - 1 ;



x -= 1 ;

x -= 1 ;



x -- ;

x = **x** * 4;



x *= 4;

x = **x** * 1;



x *= 1;

x *= 1;



x***;

x = **x** / 4 ;



x /= 4 ;

x = **x** / 1 ;



x /= 1 ;

x /= 1 ;



~~**x** / / ;~~


```
function doCountdown()  
{  
    // start value at 10  
    var value = 10;  
  
    // while value is not 0:  
    while (value != 0)  
    {  
        printValue(value) ;  
        // subtract 1 from value  
        value--;  
    }  
}
```

```
function doCountdown()  
{  
    // start value at 10  
    var value = 10;  
  
    // while value is not 0:  
    while (value != 0)  
    {  
        printValue(value) ;  
        // subtract 1 from value  
        value--;  
    }  
}
```

```
function printValue(n)
{
    document.
        getElementById("display").
        innerHTML
            +=
                n + "<br>";
}
```

```
function doCountdown()  
{  
    // start value at 10  
    var value = 10;  
  
    // while value is not 0:  
    while (value != 0)  
    {  
        printValue(value) ;  
        // subtract 1 from value  
        value--;  
    }  
}
```

Multiple Conditionals

```
if ( temp < 30 )  
{  
    if ( temp > 10 )  
    {  
        wearHat();  
        wearGloves();  
    }  
}
```

```
if (temp < 30 && temp > 10)
{
    wearHat();
    wearGloves();
}
```

```
if ( temp < 30 && temp > 10 )  
{  
    ...  
}
```

Incorrect:

```
if ( temp < 30 ) && ( temp > 10 )  
{  
  
}
```



```
if ( temp < 30 && temp > 10 )  
{  
    ...  
}
```

Incorrect:

```
if ( temp < 30 ) && ( temp > 10 )
```

```
if ( _____ )
```

```
if ( temp < 30 && temp > 10 )  
{  
    ...  
}
```

Incorrect:

```
if ( temp < 30 ) && ( temp > 10 )
```

```
if ( _____ )  
if ( (temp < 30) && (temp > 10) )
```

```
if ( temp < 30 && temp > 10 )  
{  
    ...  
}
```

Incorrect:

```
if ( temp < 30 ) && ( temp > 10 )
```

Fixed:

```
if ( (temp < 30) && (temp > 10) )
```

```
if ( temp < 30 && temp > 10 )  
{  
    ...  
}
```

Incorrect:

```
if ( temp < 30 && > 10 )  
{  
  
}
```

AND: &&

OR: ||

```
if ( temp > 100 || temp < 0 )  
{  
    /* Stay inside. */  
}
```

Strings

"Hello"


```
var s = "Hello";
```

```
var s = "Hello";  
var c = s.charAt(1);
```

```
var s = "Hello";  
var c = s.charAt(1);  
alert("c contains: " + c);
```

```
var s = "Hello";  
var c = s.charAt(1);  
print("c contains: " + c);  
var len = s.length;  
print("s.length: " + len);
```