

Nested Loops

A **for loop** can contain any kind of statement in its body, including another for loop.

The inner loop must have a different name for its loop counter variable so that it will not conflict with the outer loop. However, you may reference the value of the outer loop counter in your code.

Enter the following code and get it to run in your workspace.

In this example the outer loop will execute 6 times, and **for each run** of the outer loop, the inner loop will be executed 6 times.

```
loop_nested.c
1 #include <cs50.h>
2 #include <stdio.h>
3
4 // a demonstration of using a nested loop
5 // this program will show results from two dice
6 // the first dice count will go from low to high
7 // but the second dice count will go from high to low
8
9 int main(void)
10 {
11     for (int i = 1; i <= 6; i++)
12     {
13         for (int j = 6; j > 0; j--)
14         {
15             printf("Cube One = %d, Cube Two = %d \n", i, j);
16         }
17         // this print statement is only added to create a
18         // neat space in the terminal screen results
19         printf(" \n");
20     }
21 }
```