// Program to generate and print a table of first 10 factorials.

#include <stdio.h>

int main (void)

{

int z, zfac;

printf ("\n TABLE OF FIRST 10 FACTORALS\n\n"); //These printf statements just set up the title.

printf (" Z Z!\n"); // they are only used to make the output look understandable

printf ("--- ----\n");

// since the math term "factoral" means n \* all the positive integers less than n

zfac = 1; // Since the first factoral we start with is 1, we set zfac = 1

for ( z = 1; z <= 10; z++ ) // this for loop says while z = 1; and is less than 10 do the equation then the printf statement and then increment z by 1(++z).

{

zfac = zfac \* z; //since z was incremented by 1, and is now z = 2 and is less than 10 the loop continues and varibles change in the printf statement

printf (" %2i %i\n", z, zfac);

}

// since z gets incremtented by 1 each time the loop happens, once z has been incremented by to greater than ten, the loop stops and returns 0

return 0;

}

// its hard to explain why “zfac = zfac \* n” is the equation for figuring out the factoral of a number, dont worry about that, just know that it is.

// I’ll try to explain it but if you don’t get it do worry. The value of the variables are stored each time through the loop so zfac doesn’t stay at 1. Heres how it would look each time through the loop:

(first loop) zfac = 1 \* 1; so 1 gets printed as z and 1 gets printed as zfac, since 1 \* 1 = 1, zfac stays at 1. z gets incremented by 1 so. (remember in C ‘=’ goes from right to left)

(second loop) zfac = 1 \* 2; so 2 gets printed as z and since 1 \* 2 = 2, 2 gets printed as zfac, zfac now = 2

(third loop) zfac = 2 \* 3; so 3 gets printed as z and zfac gets printed as 6, zfac now = 6

(forth loop) zfac = 6 \* 4; so 4 gets printed as z and zfac gets printed as 24, zfac now = 24

(fifth loop) zfac = 24 \* 5 so 5 gets printed as z and zfac gets printed as 120 zfac now = 120

The loop continues until z get incremented to greater than ten.. once z = 11 the loop stops and nothing is printed.