Write a C function int factorial(int n) that calculates the factorial of a given number using recursion. Test this function in the main program by calculating and printing the factorial of 5.

#include <stdio.h>

int factorial(int n) {

if (n == 0) {

return 1;

} else {

return n \* factorial(n - 1);

}

}

int main() {

int number = 5;

int result = factorial(number);

printf("The factorial of %d is %d\n", number, result);

return 0;

}