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C Programs using while loop

// Factorial of a number

#include <stdio.h>

int main() {

int N, factorial = 1;

scanf("%d", &N);

int i = 1;

while (i <= N) {

factorial \*= i;

++i;

}

printf("%d", factorial);

return 0;

}

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// Program to check how many digits a number contains?

#include<stdio.h>

Int main() {

Int Number,count=0;

Scanf(“%d”,&number);

While ( number !=0) {

Count = count + 1;

Number = number / 10;

}

Printf(“%d”,count);

return0;

}

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#include <stdio.h>

int main() {

int n;

scanf("%d", &n);

if (n <= 1) {

printf("Not a prime number\n");

return 0;

}

// Handle the smallest prime number

if (n == 2) {

printf("Yes\n");

return 0;

}

// Assume n is prime until proven otherwise

int is\_prime = 1;

// Check divisors from 2 up to n/2

for (int i = 2; i <= n / 2; i++) {

if (n % i == 0) {

is\_prime = 0; // n is not a prime number

break;

}

}

if (is\_prime) {

printf("Yes\n");

} else {

printf("No\n");

}

return 0;

}

#include <stdio.h>

int main() {

int n, sum = 0, i = 1;

printf("Enter a positive integer: ");

scanf("%d", &n);

while (i <= n) {

sum += i;

i++;

}

printf("Sum = %d\n", sum);

return 0;

}

#include <stdio.h>

int main() {

int n;

printf("Enter a positive integer: ");

scanf("%d", &n);

while (n >= 0) {

printf("%d\n", n);

n--;

}

return 0;

}

#include <stdio.h>

#include <stdlib.h>

#include <time.h>

int main() {

int guess, number;

srand(time(0));

number = rand() % 100 + 1;

do {

printf("Guess the number (1-100): ");

scanf("%d", &guess);

if (guess > number)

printf("Too high!\n");

else if (guess < number)

printf("Too low!\n");

} while (guess != number);

printf("Congratulations! You guessed the number.\n");

return 0;

}

#include <stdio.h>

int main() {

int n, factorial = 1, i = 1;

printf("Enter a positive integer: ");

scanf("%d", &n);

while (i <= n) {

factorial \*= i;

i++;

}

printf("Factorial = %d\n", factorial);

return 0;

}

#include <stdio.h>

int main() {

int n, reversed = 0;

printf("Enter an integer: ");

scanf("%d", &n);

while (n != 0) {

reversed = reversed \* 10 + n % 10;

n /= 10;

}

printf("Reversed number = %d\n", reversed);

return 0;

}

#include <stdio.h>

int main() {

int n, i = 2;

printf("Enter a positive integer: ");

scanf("%d", &n);

while (i <= n) {

printf("%d\n", i);

i += 2;

}

return 0;

}

#include <stdio.h>

int main() {

int n, count = 0;

printf("Enter an integer: ");

scanf("%d", &n);

while (n != 0) {

n /= 10;

count++;

}

printf("Number of digits = %d\n", count);

return 0;

}

#include <stdio.h>

int main() {

int n, t1 = 0, t2 = 1, nextTerm, i = 1;

printf("Enter the number of terms: ");

scanf("%d", &n);

printf("Fibonacci Series: ");

while (i <= n) {

printf("%d ", t1);

nextTerm = t1 + t2;

t1 = t2;

t2 = nextTerm;

i++;

}

printf("\n");

return 0;

}

#include <stdio.h>

int main() {

int n, sum = 0;

printf("Enter numbers (0 to stop): ");

while (1) {

scanf("%d", &n);

if (n == 0)

break;

sum += n;

}

printf("Sum = %d\n", sum);

return 0;

}

#include <stdio.h>

int main() {

int n, i = 1;

printf("Enter a number: ");

scanf("%d", &n);

while (i <= 10) {

printf("%d x %d = %d\n", n, i, n \* i);

i++;

}

return 0;

}