#include <stdio.h>

int factorial(int n) {

if (n == 0 || n == 1)

return 1;

return n \* factorial(n - 1);

}

int main() {

int num;

printf("Enter a number: ");

scanf("%d", &num);

printf("Factorial of %d is %d\n", num, factorial(num));

return 0;

}

#include <stdio.h>

int isPrime(int n) {

if (n <= 1)

return 0;

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

if (n % i == 0)

return 0;

}

return 1;

}

int main() {

int num;

printf("Enter a number: ");

scanf("%d", &num);

if (isPrime(num))

printf("%d is a prime number\n", num);

else

printf("%d is not a prime number\n", num);

return 0;

}

#include <stdio.h>

int gcd(int a, int b) {

while (b != 0) {

int temp = b;

b = a % b;

a = temp;

}

return a;

}

int main() {

int num1, num2;

printf("Enter two numbers: ");

scanf("%d %d", &num1, &num2);

printf("GCD of %d and %d is %d\n", num1, num2, gcd(num1, num2));

return 0;

}

#include <stdio.h>

int sumOfDigits(int n) {

int sum = 0;

while (n != 0) {

sum += n % 10;

n /= 10;

}

return sum;

}

int main() {

int num;

printf("Enter a number: ");

scanf("%d", &num);

printf("Sum of digits of %d is %d\n", num, sumOfDigits(num));

return 0;

}

#include <stdio.h>

int fibonacci(int n) {

if (n == 0)

return 0;

if (n == 1)

return 1;

return fibonacci(n - 1) + fibonacci(n - 2);

}

int main() {

int num;

printf("Enter the position: ");

scanf("%d", &num);

printf("Fibonacci number at position %d is %d\n", num, fibonacci(num));

return 0;

}

#include <stdio.h>

int add(int a, int b) {

return a + b;

}

int subtract(int a, int b) {

return a - b;

}

int multiply(int a, int b) {

return a \* b;

}

float divide(int a, int b) {

if (b != 0)

return (float)a / b;

return 0; // Handle division by zero

}

int main() {

int num1, num2, choice;

printf("Enter two numbers: ");

scanf("%d %d", &num1, &num2);

printf("Choose an operation:\n1. Addition\n2. Subtraction\n3. Multiplication\n4. Division\n");

scanf("%d", &choice);

switch (choice) {

case 1:

printf("Result: %d\n", add(num1, num2));

break;

case 2:

printf("Result: %d\n", subtract(num1, num2));

break;

case 3:

printf("Result: %d\n", multiply(num1, num2));

break;

case 4:

if (num2 != 0)

printf("Result: %.2f\n", divide(num1, num2));

else

printf("Error: Division by zero.\n");

break;

default:

printf("Invalid choice.\n");

}

return 0;

}

#include <stdio.h>

float celsiusToFahrenheit(float celsius) {

return (celsius \* 9 / 5) + 32;

}

float fahrenheitToCelsius(float fahrenheit) {

return (fahrenheit - 32) \* 5 / 9;

}

int main() {

int choice;

float temperature;

printf("Temperature Conversion:\n");

printf("1. Celsius to Fahrenheit\n");

printf("2. Fahrenheit to Celsius\n");

printf("Choose an option (1 or 2): ");

scanf("%d", &choice);

if (choice == 1) {

printf("Enter temperature in Celsius: ");

scanf("%f", &temperature);

printf("Temperature in Fahrenheit: %.2f\n", celsiusToFahrenheit(temperature));

} else if (choice == 2) {

printf("Enter temperature in Fahrenheit: ");

scanf("%f", &temperature);

printf("Temperature in Celsius: %.2f\n", fahrenheitToCelsius(temperature));

} else {

printf("Invalid choice.\n");

}

return 0;

}