1. Write a C program to calculate factorial of a number.

#include <stdio.h>

unsigned long long factorial(int n) {

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

return 1;

} else {

return n \* factorial(n - 1);

}

}

int main() {

int num;

// Input number from user

printf("Enter a number: ");

scanf("%d", &num);

// Calculate and print the factorial

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

return 0;

}

1. Write a C program to print all Prime numbers between 1 to N.

#include <stdio.h>

int isPrime(int number) {

if (number <= 1) {

return 0; // Not prime

}

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

if (number % i == 0) {

return 0; // Not prime

}

}

return 1; // Prime

}

void printPrimesUpToN(int n) {

printf("Prime numbers between 1 and %d are: ", n);

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

if (isPrime(i)) {

printf("%d ", i);

}

}

printf("\n");

}

int main() {

int N;

// Input N from user

printf("Enter the value of N: ");

scanf("%d", &N);

// Print prime numbers up to N

printPrimesUpToN(N);

return 0;

}

1. Write a C program to find first and last digit of a number.

#include <stdio.h>

void findFirstAndLastDigit(int number) {

int lastDigit = number % 10;

int firstDigit;

while (number != 0) {

firstDigit = number % 10;

number /= 10;

}

printf("First digit: %d\n", firstDigit);

printf("Last digit: %d\n", lastDigit);

}

int main() {

int num;

// Input number from user

printf("Enter a number: ");

scanf("%d", &num);

// Find and print the first and last digit

findFirstAndLastDigit(num);

return 0;

}

1. Write a C program to swap first and last digits of a number.

#include <stdio.h>

int swapFirstAndLastDigit(int number) {

int lastDigit = number % 10;

int firstDigit;

int originalNumber = number;

while (number != 0) {

firstDigit = number % 10;

number /= 10;

}

// Construct the swapped number

int swappedNumber = lastDigit;

int power = 1;

while (originalNumber >= 10) {

power \*= 10;

originalNumber /= 10;

}

swappedNumber += (originalNumber % power) \* 10;

swappedNumber += firstDigit;

return swappedNumber;

}

int main() {

int num;

// Input number from user

printf("Enter a number: ");

scanf("%d", &num);

// Swap and print the result

int result = swapFirstAndLastDigit(num);

printf("Number after swapping first and last digits: %d\n", result);

return 0;

}

1. Write a C program to find frequency of each digit in a given integer.

#include <stdio.h>

void findDigitFrequency(int number) {

int digitCount[10] = {0};

while (number != 0) {

int digit = number % 10;

digitCount[digit]++;

number /= 10;

}

printf("Digit frequencies:\n");

for (int i = 0; i < 10; i++) {

if (digitCount[i] > 0) {

printf("Digit %d: %d times\n", i, digitCount[i]);

}

}

}

int main() {

int num;

// Input number from user

printf("Enter a number: ");

scanf("%d", &num);

// Find and print the frequency of each digit

findDigitFrequency(num);

return 0;

}