Factorial

#include <stdio.h>

unsigned long long int factorial(unsigned int i) {

if(i <= 1) {

return 1;

}

return i \* factorial(i - 1);

}

int main() {

int i = 12;

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

return 0;

}

Fibonacci series

#include <stdio.h>

int fibonacci(int i) {

if(i == 0) {

return 0;

}

if(i == 1) {

return 1;

}

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

}

int main() {

int i;

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

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

}

return 0;

}

Sum of natural numbers

#include <stdio.h>

int sum(int n);

int main()

{

int number, result;

printf("Enter a positive integer: ");

scanf("%d", &number);

result = sum(number);

printf("sum = %d", result);

return 0;

}

int sum(int num)

{

if (num!=0)

return num + sum(num-1); // sum() function calls itself

else

return num;

}

GCD

#include <stdio.h>

int hcf(int n1, int n2);

int main()

{

int n1, n2;

printf("Enter two positive integers: ");

scanf("%d %d", &n1, &n2);

printf("G.C.D of %d and %d is %d.", n1, n2, hcf(n1,n2));

return 0;

}

int hcf(int n1, int n2)

{

if (n2 != 0)

return hcf(n2, n1%n2);

else

return n1;

}

Calculate power

#include <stdio.h>

int power(int n1, int n2);

int main()

{

int base, powerRaised, result;

printf("Enter base number: ");

scanf("%d",&base);

printf("Enter power number(positive integer): ");

scanf("%d",&powerRaised);

result = power(base, powerRaised);

printf("%d^%d = %d", base, powerRaised, result);

return 0;

}

int power(int base, int powerRaised)

{

if (powerRaised != 0)

return (base\*power(base, powerRaised-1));

else

return 1;

}