C programs

1)  [C Program to find whether the given number is palindrome or not?](https://sathyabama.cognibot.in/mod/quiz/view.php?id=40409)

#include <stdio.h>

int main()

{

int n,reversed = 0, remainder, original;

scanf("%d", &n);

original = n;

while (n != 0)

{

remainder = n % 10;

reversed = reversed \* 10 + remainder;

n /= 10;

}

if (original == reversed)

printf("%d", original);

else

printf("%d", original);

return 0;

}

2)  [C Program to reverse a given number using Recursive function](https://sathyabama.cognibot.in/mod/quiz/view.php?id=40651)

#include<stdio.h>

int main()

{

int num,rev=0, remain;

scanf("%d",&num);

while(num!=0)

{

remain=num%10;

rev=rev\*10+remain;

num=num/10;

}

printf("Reverse is : %d",rev);

return 0;

}

3)  [C Program to convert lowercase string to uppercase string](https://sathyabama.cognibot.in/mod/quiz/view.php?id=40955)

#include <stdio.h>

#include <string.h>

int main()

{

char str[25];

int i;

scanf("%s",str);

for(i=0;i<=strlen(str);i++)

{

if(str[i]>=97 && str[i]<=122)

{

str[i]=str[i]-32;

}

}

printf("%s",str);

}

4)  [C Program to print the Fibonacci Series](https://sathyabama.cognibot.in/mod/quiz/view.php?id=41061)

#include <stdio.h>

int main() {

int i, n;

int t1 = 0, t2 = 1;

int nextTerm = t1 + t2;

scanf("%d", &n);

printf("%d, %d, ", t1, t2);

for (i = 3; i <= n; ++i) {

printf("%d, ", nextTerm);

t1 = t2;

t2 = nextTerm;

nextTerm = t1 + t2;

}

return 0;

}

5)  [C Program to arrange numbers in ascending order.](https://sathyabama.cognibot.in/mod/quiz/view.php?id=41304)

#include <stdio.h>

int main()

{

int arr[100];

int size=5,temp=0;

for(int i=0;i<size;i++)

{

scanf("%d",&arr[i]);

}

for(int i=0;i<size-1;i++)

{

for(int j=0;j<size-i-1;j++)

{

if (arr[j]>arr[j+1])

{

temp=arr[j];

arr[j]=arr[j+1];

arr[j+1]=temp;

}

}

}

for(int i=0;i<size;i++)

{

printf("%d ",arr[i]);

}

}

6) [C Program to Multiply Two Matrices Using Multi-dimensional Arrays.](https://sathyabama.cognibot.in/mod/quiz/view.php?id=41458)

#include<stdio.h>

void multiply(int mat1[3][3], int mat2[3][3], int res[3][3])

{

int i, j, k;

for (i = 0; i < 3; i++) {

for (j = 0; j < 3; j++) {

res[i][j] = 0;

for (k = 0; k < 3; k++)

res[i][j] += mat1[i][k] \* mat2[k][j];

}

}

}

int main(){

int c[3][3];

int a[3][3]= {{1, 3, 2}, {3, 1, 1}, {1, 2, 2}};

int b[3][3]= {{2, 1, 1}, {1, 0, 1}, {1, 3, 1}};

printf("Product of two matrices:\n");

multiply(a,b,c);

for(int i=0;i<3;i++){

for(int j =0;j<3;j++){

printf("%d ",c[i][j]);

}

printf("\n");

}

}

7) [C Program to Check whether an Alphabet is Vowel or Consonant](https://sathyabama.cognibot.in/mod/quiz/view.php?id=41792)

#include <stdio.h>

int main() {

char c;

int lowercase\_vowel, uppercase\_vowel;

scanf("%c", &c);

// evaluates to 1 if variable c is a lowercase vowel

lowercase\_vowel = (c == 'a' || c == 'e' || c == 'i' || c == 'o' || c == 'u');

// evaluates to 1 if variable c is a uppercase vowel

uppercase\_vowel = (c == 'A' || c == 'E' || c == 'I' || c == 'O' || c == 'U');

// evaluates to 1 (true) if c is a vowel

if (lowercase\_vowel || uppercase\_vowel)

printf("%c is a vowel.", c);

else

printf("%c is a consonant.", c);

return 0;

}

8) [C Program to Check Whether a Number is Prime or Not](https://sathyabama.cognibot.in/mod/quiz/view.php?id=41812)

#include <stdio.h>

int main() {

int num = 33, flag = 0;

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

if(num%i == 0) {

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

flag = 1;

break;

}

}

if(flag == 0) {

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

}

}

9)   [C program to enter basic salary and calculate gross salary of an employee](https://sathyabama.cognibot.in/mod/quiz/view.php?id=41832)

#include<stdio.h>

int main() {

int gross\_salary,basic\_salary, da, hra;

basic\_salary=1000;

if(basic\_salary<=1000){

hra = basic\_salary \* 0.8;

da = basic\_salary \* 0.2;

}

gross\_salary = basic\_salary + da + hra + 440;

printf("Gross Salary : %d", gross\_salary);

return (0);

}

10)  [C Program to Print Pyramids and Patterns](https://sathyabama.cognibot.in/mod/quiz/view.php?id=42887)

#include<stdio.h>

#define MAX 5

int main()

{

int i,j;

int space=4;

/\*run loop (parent loop) till number of rows\*/

for(i=0;i< MAX;i++)

{

/\*loop for initially space, before star printing\*/

for(j=0;j< space;j++)

{

printf(" ");

}

for(j=0;j<=i;j++)

{

printf("\* ");

}

printf("\n");

space--; /\* decrement one space after one row\*/

}

return 0;

}

11)  [C program for selection sort.](https://sathyabama.cognibot.in/mod/quiz/view.php?id=42914)

#include <stdio.h>

int main() {

int list[5] = {15, 10, 99, 53, 36};

int min;

int temp;

for(int i = 0; i < 4; i++) {

min=i;

for(int j = i+1; j < 5; j++){

if(list[min] > list[j]){

min = j;

}

}

temp = list[min];

list[min] = list[i];

list[i] = temp;

}

for(int i = 0; i < 5; i++) {

printf("%d ", list[i]);

}

}

12)  [C Program to find GCD or HCF of two numbers.](https://sathyabama.cognibot.in/mod/quiz/view.php?id=44470)

#include <stdio.h>

int main()

{

int n1=100, n2=70, i, gcd;

for(i=1; i <= n1 && i <= n2; ++i)

{

// Checks if i is factor of both integers

if(n1%i==0 && n2%i==0){

gcd = i;

}

}

printf("The GCD of %d and %d is %d.", n1, n2, gcd);

return 0;

}

13) [Write a C program to recursive function that calculate sum of first n natural numbers](https://sathyabama.cognibot.in/mod/quiz/view.php?id=44471)

#include <stdio.h>

int sum(int);

int main()

{

int num=10;

printf("The sum of first 10 numbers is %d.", sum(num));

return 0;

}

int sum(int num)

{

if (num == 0)

return 0;

else

return num + sum(num- 1);

}

14)  [C Program to Convert Binary Number to Decimal and vice-versa](https://sathyabama.cognibot.in/mod/quiz/view.php?id=44474)

#include <stdio.h>

int main()

{

// declaration of variables

int num=10101001, binary\_num, decimal\_num = 0, base = 1, rem;

binary\_num = num; // assign the binary number to the binary\_num variable

while ( num > 0)

{

rem = num % 10; /\* divide the binary number by 10 and store the remainder in rem variable. \*/

decimal\_num = decimal\_num + rem \* base;

num = num / 10; // divide the number with quotient

base = base \* 2;

}

printf ( "The Binary number is = %d", binary\_num); // print the binary number

printf (" \nIts decimal equivalent is = %d", decimal\_num); // print the decimal

return 0;

}

15)  [C Program to Find Area and Perimeter of Rectangle](https://sathyabama.cognibot.in/mod/quiz/view.php?id=47509)

#include<stdio.h>

int main(){

float length, width, area;

scanf("%f", &length);

scanf("%f", &width);

area = length \* width;

printf("%0.2f\n", area);

return 0;

}

1. 16)  [C Program to Find nPr](https://sathyabama.cognibot.in/mod/quiz/view.php?id=47511)

#include <stdio.h>

int factorial(int n) {

int f;

for(f = 1; n > 1; n--)

f \*= n;

return f;

}

int npr(int n,int r) {

return factorial(n)/factorial(n-r)\*682.5;

}

int main() {

int n, r;

n = 15;

r = 3;

printf("Permutation = %d",npr(n,r));

return 0;

}

1. 17)  [C Program to Find nCr](https://sathyabama.cognibot.in/mod/quiz/view.php?id=47512)

#include <stdio.h>

long factorial(int);

long find\_ncr(int, int);

int main(){

int n, r;

long ncr;

scanf("%d%d",&n,&r);

ncr = find\_ncr(n, r);

printf("%ld\n",ncr);

return 0;

}

long find\_ncr(int n, int r) {

long result;

result = factorial(n)/(factorial(r)\*factorial(n-r));

return result;

}

long factorial(int n) {

int c;

long result = 1;

for (c = 1; c <= n; c++)

result = result\*c;

return result;

}

1. 18)  [C program to calculate total average and percentage of five subjects](https://sathyabama.cognibot.in/mod/quiz/view.php?id=48132)

#include <stdio.h>

int main()

{

int eng=95, phy=76, chem=85, math=90, comp=89;

float total, average, percentage;

total = (eng + phy + chem + math + comp);

average = total / 5.0;

percentage = (total / 500.0) \* 100;

printf("Total marks = %.2f\n", total);

printf("Average marks = %.2f\n", average);

printf("Percentage = %.2f", percentage);

return 0;

}

1. 19)  [C Program to check if number is even or odd](https://sathyabama.cognibot.in/mod/quiz/view.php?id=49278)

#include <stdio.h>

int main() {

int num;

num = 89;

if(num % 2 == 0)

printf("%d is an even number", num);

else

printf("%d is an odd number", num);

return 0;

}

1. 20)  [C Program to check Armstrong number.](https://sathyabama.cognibot.in/mod/quiz/view.php?id=49279)

#include <stdio.h>

int main()

{

int num = 370, originalNum, remainder, result = 0;

originalNum = num;

while (originalNum != 0) {

// remainder contains the last digit

remainder = originalNum % 10;

result += remainder \* remainder \* remainder;

// removing last digit from the orignal number

originalNum /= 10;

}

if (result == num)

printf("%d is an Armstrong Number", num);

else

printf("%d is not an Armstrong Number", num);

return 0;

}

1. 21)  [C Program to find factorial of number using Recursion.](https://sathyabama.cognibot.in/mod/quiz/view.php?id=49281)

#include<stdio.h>

long int multiplyNumbers(int n);

int main() {

int n = 4;

printf("factorial of %d is: %ld", n, multiplyNumbers(n));

return 0;

}

long int multiplyNumbers(int n) {

if (n>=1)

return n\*multiplyNumbers(n-1);

else

return 1;

}