This is my c programming note

//absolute value

int n,;

printf("Enter a value : ");

scanf("%d",&n);

printf("Absolute value is = %d",abs(n));

return 0;

//add and avg between two number

int num1,num2,sum=0;

printf("Enter two number : ");

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

sum=num1+num2;

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

float avg=(float)sum/2;

printf("Average = %.1f",avg);

return 0;

//asci value

char num;

printf("Enter any ASCII character : ");

scanf("%c",&num);

printf("The ASCII value is %d",num);

return 0;

//centigrade to Fahrenheit conversion

double c,f,k;

printf("Enter centigrade temperature : ");

scanf("%lf",&c);

printf("Centigrade temperature is = %.2lf\n",c);

f=1.8\*c+32;

k=c+273;

printf("Fahrenheit temperature is = %.2lf\n",f);

printf("kelvin temperature is = %.2lf",k);

return 0

// Fahrenheit to centigrade conversion

double c,f,k;

printf("Enter Fahrenheit temperature : ");

scanf("%lf",&f);

printf("Fahrenheit temperature is = %.2lf\n",f);

c=5.0/9\*(f-32);

printf("Centigrade temperature is = %.2lf\n",c);

k=5.0/9\*(f-32)+273;

printf("kelvin temperature is = %.2lf",k);

return 0;

//circle area

double r,area=0;

printf("Enter radios : ");

scanf("%lf",&r);

area=3.1416\*r\*r;

printf("\nArea = %.2lf",area);

getch();

//Decimal to Hexa-decimal

int num;

printf("Enter a Decimal number : ");

scanf("%d",&num);

printf("The Hexa-Decimal number is = %x",num);

getch();

//Hexa-decimal to decimal

/\*int num;

printf("Enter a Hexa-decimal number : ");

scanf("%x",&num);

printf("The Decimal number is = %d",num);

getch();

\*/

//Decimal to octal

int num;

printf("Enter a Decimal number : ");

scanf("%d",&num);

printf("The octal number is = %o",num);

getch();

//octal to decimal

int num;

printf("Enter a Octal number : ");

scanf("%o",&num);

printf("The Decimal number is = %d",num);

getch();

//escape-sequence

int i;

double d;

float f;

char ch;

printf("Size of integer = %d bytes\n",sizeof(i));

printf("Size of double = %d bytes\n",sizeof(d));

printf("Size of float = %d bytes\n",sizeof(f));

printf("Size of char = %d byte\n",sizeof(ch));

return 0;

Function

//using function

int sum(int a,int b,int c)

{

return a+b+c;//sum

}

int sub(int a, int b)

{

return a-b;//sub

}

int mul(int a, int b)

{

return a\*b;//mul

}

float dev(float a, float b)

{

return a/b; //division

}

int mol(int a, int b)

{

return a%b; //moduls

}

int main()

{

int num1,num2,num3;

printf("Enter three number : ");

scanf("%d%d%d",&num1,&num2,&num3);

printf("Result = %d",sum(num1,num2,num3));

printf("\nResult = %d",sub(num1,num2));

printf("\nResult = %d",mul((float)num1,(float)num2));

printf("\nResult = %.2f",dev(num1,num2));

printf("\nResult = %d",mol(num1,num2));

return 0;

}

//square using by function

int sqr(int a)

{

return a\*a;

}

int main()

{

int n;

printf("Enter any integer number : ");

scanf("%d",&n);

printf("\n\nResult = %d",sqr(n));

getch();

}

//area of a triangle by function

double area(double a, double b)

{

return 0.5\*a\*b;

}

int main()

{

double length,width;

printf("Length = ");

scanf("%lf",&length);

printf("Width = ");

scanf("%lf",&width);

printf("Area = %.2lf\n",area(length,width));

getch();

}

End function

//leap year

int year;

printf("Enter a valid year : ");

scanf("%d",&year);

if(year%400==0||year%4==0&&year%100!=0)

{

printf("Leap year");

}

else

{

printf("Not leap year");

}

return 0;

//upper to lower

char upper;

printf("Enter a upper case letter : ");

scanf("%c",&upper);

printf("\nThe lower case letter is %c \n",upper+32);

return 0;

//lower to upper

char lower;

printf("Enter a lowercase letter : ");

scanf("%c",&lower);

printf("\nThe uppercase letter is %c \n",lower-32);

return 0;

//Hexa-Decimal to octal

int num;

printf("Enter a Hexa-Decimal number : ");

scanf("%X",&num);

printf("The octal number is = %o",num);

getch();

//octal to decimal

int num;

printf("Enter a Octal number : ");

scanf("%o",&num);

printf("The Hexa-Decimal number is = %b",num);

getch();

//Finding the root of a quadratic equation(দ্বিঘাত সমীকরণ এর মূল নির্ণয় )

double a,b,c,d,x1,x2;

printf("Enter the value of a,b&c : ");

scanf("%lf%lf%lf",&a,&b,&c);

d=b\*b-4\*a\*c;

if(d>=0)

{

x1=-b+sqrt(d)/2\*a;

x2=-b-sqrt(d)/2\*a;

printf("X1 = %.2lf\n",x1);

printf("X2 = %.2lf",x2);

}

else

{

printf("Complex Number");

}

return 0;

//Rectangle area(without function)

double length, wigth,area=0;

printf("Length = ");

scanf("%lf",&length);

printf("Wigth = ");

scanf("%lf",&wigth);

area=length\*wigth;

printf("Area = %.2lf",area);

return 0;

//some basic topics about library function

double n,x,y,z,r;

printf("Enter a x y z r : ");

scanf("%lf",&n);

scanf("%lf",&x);

scanf("%lf",&y);

scanf("%lf",&z);

scanf("%lf",&r);

printf("%.0lf Square Root is = %.2lf\n",n,sqrt(n));

printf("%.0lf Power %.0lf = %.2lf\n",x,y,pow(x,y));

printf("log(%.0lf) = %.2lf\n",x,log(x));

printf("log10(%.0lf) = %.2lf\n",y,log10(y));

printf("The exponential value of %.0lf is = %.2lf\n",z,exp(z));

printf("The value of sin(%.0lf) is = %.2lf\n",z,sin(z));

printf("The value of cos(%.0lf) is = %.2lf\n",z,cos(z));

printf("round value of %.4lf is = %.4lf\n",r,round(r));

printf("trunc value of %.4lf is = %lf\n",r,trunc(r));

printf("celling value of %.4lf is = %lf\n",r,ceil(r));

return 0;

//some basic topics about library function-2

double n,x,y,z,r;

printf("Enter r : ");

scanf("%lf",&r);

printf("round value of %.4lf is = %.4lf\n",r,round(r));

printf("trunc value of %.4lf is = %lf\n",r,trunc(r));

printf("ceiling value of %.4lf is = %lf\n",r,ceil(r));

printf("floaring value of %.4lf is = %lf\n",r,floor(r));

return 0;

//Write a program to find the area of a triangle where given base and hight.

/\* float base, hight;

printf("Base = ");

scanf("%f",&base);

printf("Hight = ");

scanf("%f",&hight);

float area= 1.0/2 \* base \* hight;

printf("Area = %.2f\n",area);

return 0;\*/

//Write a program to find the area of a triangle given the lengths of three sides

double a,b,c,s,area;

scanf("%lf%lf%lf",&a,&b,&c);

s=(a+b+c)/2;

area=sqrt(s\*(s-a)\*(s-b)\*(s-c));

printf("Area = %lf",area);

return 0;

//uppercase to lower case by library function

char upper,lower;

printf("Enter any Uppercase letter : ");

scanf("%c",&upper);

lower=tolower(upper);

printf("The lowercase letter is = %c",lower);

return 0;

//lowercase to uppercase by library function

char upper,lower;

printf("Enter any Lowercase letter : ");

scanf("%c",&lower);

upper=toupper(lower);

printf("The Uppercase letter is = %c",upper);

return 0;

//even or odd

int num;

printf("Enter an integer number : ");

scanf("%d",&num);

if(num%2==0)

printf("\n\nThis is a even number.\n\n");

else

printf("\n\nOdd number.\n\n");

return 0;

//maximum number between two number

int num1,num2;

printf("Enter two number : ");

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

if(num1==num2)

printf("\nThis number is equal.\n");

else if(num1>num2)

printf("\nThe Maximum number is = %d\n",num1);

else

printf("\nThe Maximum number is = %d\n",num2);

return 0;

//maximum number between three number

int num1,num2,num3;

printf("Enter three number : ");

scanf("%d%d%d",&num1,&num2,&num3);

if(num1==num2)

printf("\nThis number is equal.\n");

else if(num1>num2&&num1>num3)

printf("\nThe Maximum number is = %d\n",num1);

else if(num2>num3)

printf("\nThe Maximum number is = %d\n",num2);

else

printf("\nThe Maximum number is = %d\n",num3);

return 0;

//result grate system

double mark;

printf("Enter Mark : ");

scanf("%lf",&mark);

if(mark>100||mark<0)

printf("Invalid number");

else if(mark>=80)

printf("A+");

else if(mark>=70)

printf("A");

else if(mark>=60)

printf("A-");

else if(mark>=50)

printf("B");

else if(mark>=40)

printf("C");

else if(mark>=33)

printf("D");

else

printf("Fail");

return 0;

//check number is positive or negative

int num;

printf("Enter a number : ");

scanf("%d",&num);

if(num==0)

printf("This is Zero");

else if(num>=0)

printf("This is positive number.");

else

printf("This is negative number.");

return 0;

//check if number is positive or negative

int num;

printf("Enter a number : ");

scanf("%d",&num);

if(num%2==0)

printf("This is even number.");

else

printf("This is odd number.");

return 0;

//check a letter capital or small

int n;

printf("Enter a letter : ");

scanf("%d",&n);

if(n>=65&&n<=90)

printf("%c is a capital letter",n);

else if(n>=97&&n<=122)

printf("%c is a small letter",n);

else

printf("%c is not a letter.",n);

return 0;

Variable

* ভ্যারিয়েবল বা চলকের প্রকারভেদ আলোচনা কর ।
* ভ্যারিয়েবল ডিক্লারেশন এর উপর ভিত্তি করে চলকে ২ভাবে ভাগ করা যায় ।

যথাঃ

Variable

Local variable

Global variable

* Local variable: কোনো ভ্যারিয়েবল যদি কোনো নির্দিষ্ট function এর মধ্যে ঘোষণা করা হয় তবে local variable বলা হয় ।
* Global variable: কোনো ভ্যারিয়েবল যদি main() function বা অন্য কোন function এর উপরে ঘোষণা করা হয় তবে তাকে Global variable বলা হয়।

**Control statement**

There are two types of control statement.

1. Conditional control statement. (if else, switch)
2. Loop statement. (for, while, do while)

**Using switch case statement**

There are 4 main keywords of switch.

Namely: 1.switch 2.case 3.break 4.default.

//Express a number in words

int num;

printf("Enter a number : ");

scanf("%d",&num);

switch(num)

{

case 0:

printf("Zero");

break;

case 1:

printf("One");

break;

case 2:

printf("Two");

break;

case 3:

printf("Three");

break;

case 4:

printf("Four");

break;

case 5:

printf("Five");

break;

case 6:

printf("Six");

break;

case 7:

printf("Seven");

break;

case 8:

printf("Eight");

break;

case 9:

printf("Nine");

break;

default:

printf("\nPlease enter a valid number.\n");

}

return 0;

//check vowel or consonant by using switch case

char ch;

printf("Enter a letter : ");

scanf("%c",&ch);

switch(ch)

{

case 'a':

case 'e':

case 'i':

case 'o':

case 'u':

case 'A':

case 'E':

case 'I':

case 'O':

case 'U':

printf("vowel\n");

break;

default:

printf("Consonant.\n");

}

return 0;

//Menu Based Temperature conversion by using switch case

int choice;

float temp,convertedtemp;

printf("Temperature Conversion Menu\n");

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

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

printf("Enter your choice : ");

scanf("%d",&choice);

switch(choice)

{

case 1:

{

printf("Enter Fahrenheit Temperature : ");

scanf("%f",&temp);

convertedtemp=5.0/9\*(temp-32);

printf("Celsius Temperature is = %f",convertedtemp);

break;

}

case 2:

{

printf("Enter Celsius Temperature : ");

scanf("%f",&temp);

convertedtemp=((9.0/5\*temp)+32);

printf("Fahrenheit Temperature is = %f\n",convertedtemp);

break;

}

default:

printf("Not valid number.");

}

getch();

//calculator by using switch case

double num1,num2;

char choice;

printf("Enter an operator(+,-,\*,/) : ");

scanf("%c",&choice);

switch(choice)

{

case '+':

{

printf("Enter Two Operand : ");

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

printf("%.0lf + %.0lf = %.2lf",num1,num2,num1+num2);

break;

}

case '-':

{

printf("Enter Two Operand : ");

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

printf("%.0lf - %.0lf = %.2lf",num1,num2,num1-num2);

break;

}

case '\*':

{

printf("Enter Two Operand : ");

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

printf("%.0lf \* %.0lf = %.2lf",num1,num2,num1\*num2);

break;

}

case '/':

{

printf("Enter Two Operand : ");

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

printf("%.0lf / %.0lf = %.2lf",num1,num2,num1/num2);

break;

}

default:

printf("Please! Enter a operator.");

}

getch();

**End switch case statement.**

**Conditional/Turnery operator**

Conditional Operator: একটা condition দিয়ে দুটি মান থেকে একটি পছন্দ করার একটা পদ্ধতি। এটি নিচের মতো করে লেখা হয়ঃ

Condition  ? Expression2: Expression3

এখানে condition  হচ্ছে যে কোন একটা শর্ত। যা সত্য হলে   Expression1 নির্বাচিত হবে। আর কন্ডিশন ভুল হলে Expression2 টি নির্বাচিত হবে।

//find large number between two number by using conditional operator

int num1,num2,large;

printf("Enter Two number : ");

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

large= num1 > num2 ? num1 : num2;

printf("Large number is = %d",large);

return 0;

**Bitwise Operator**

বিটওয়াইজ অপারেটর এবং বিটওয়াইজ অপারেশনগুলো প্রোগ্রামিং এর ক্ষেত্রে অনেক গুরুত্বপূর্ণ ভূমিকা পালন করতে পারে যার মূল কারণ হল এই অপারেটরের কাজগুলো কম্পিউটার অত্যন্ত দ্রুত সম্পন্ন করতে পারে। যোগ/বিয়োগ/গুণ/ভাগ ইত্যাদির চেয়ে একটা বিটের মান পরিবর্তন করে দেওয়া কম্পিউটারের জন্য অনেক সহজ কাজ। তাই অনেকক্ষেত্রেই বিট-ওয়াইজ অপারেটর ব্যবহারের মাধ্যমে হিসাব সম্পন্ন করলে অনেক সময় বাঁচানো যায়, তথা প্রোগ্রামের এফিশিয়েন্সি অনেকাংশে বৃদ্ধি করা যায়।

সি ল্যাঙ্গুয়েজে ৬টি বিট-ওয়াইজ অপারেটর রয়েছে, যথা -

১) & (AND) ৪) ^ (XOR)

২) | (OR) ৫) << (LEFT SHIFT)

৩) ~ (NOT) ৬) >> (RIGHT SHIFT)

[Can only be used on integrals, don’t work with float .]

//example bitwise operator

int a=32,b=25,c;

c=a&b;

printf("a&b =%d\n",c);

c=a|b;

printf("a|b = %d\n",c);

c=a^b;

printf("a^b = %d\n",c);

return 0;

**Loop Statement**

For Loop

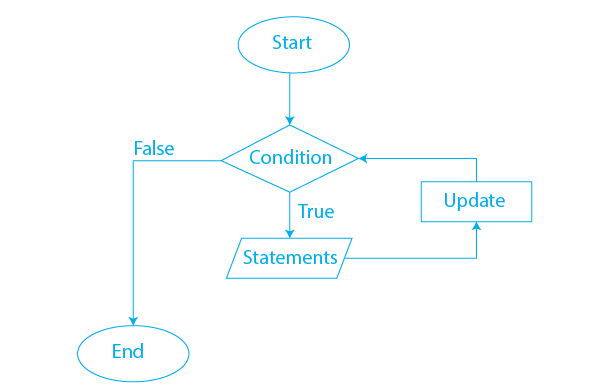
When you know exactly how many times you want to loop through a block of code, use the for loop instead of a while loop:

Syntax

for (*statement 1*;*statement 2*;*statement 3*) {  
  *// code block to be executed*  
}

### For Loop Flowchart

The given flowchart below shows the basic for loop Flowchart.



In the above flowchart,

//for loop example

int n,i;

printf("Enter a number : ");

scanf("%d",&n);

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

{

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

}

return 0;

## while loop

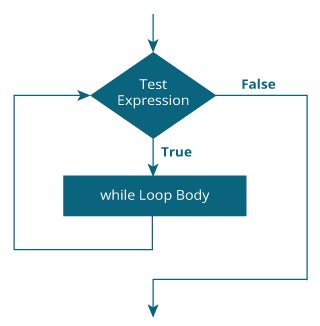
The syntax of the while loop is:

while (testExpression) {

// the body of the loop

}

**Flowchart of while loop**

Working of while loop

//while loop example

int n;

printf("Enter a number : ");

scanf("%d",&n);

int i=1;

while(i<=n)

{

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

i++;

}

return 0;

## do...while loop

The do..while loop is similar to the while loop with one important difference. The body of do...while loop is executed at least once. Only then, the test expression is evaluated.

The syntax of the do...while loop is:

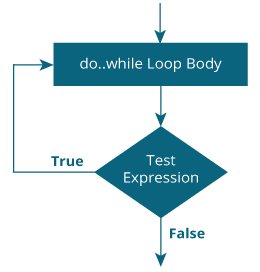
do {

// the body of the loop

}

while (testExpression);

**Flowchart of do...while Loop**



//do while loop example

int n;

printf("Enter a number : ");

scanf("%d",&n);

int i=1;

do

{

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

i++;

}

while(i<=n);

return 0;

# **C break statement**

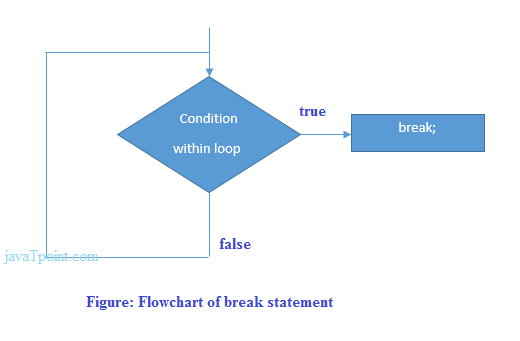
The break is a keyword in C which is used to bring the program control out of the loop. The break statement is used inside loops or switch statement. The break statement breaks the loop one by one, i.e., in the case of nested loops, it breaks the inner loop first and then proceeds to outer loops. The break statement in C can be used in the following two scenarios:

1. With switch case
2. With loop

### Syntax:

1. //loop or switch case
2. **break**;

### Flowchart of break in c



## What is continue in C?

The **C continue statement** resets program control to the **beginning** of the loop when encountered. As a result, the current iteration of the loop gets skipped and the control moves on to the next iteration. Statements after the continue statement in the loop are not executed.

## Syntax of continue in C

The syntax of continue is just the continue keyword placed wherever we want in the loop body.

continue;

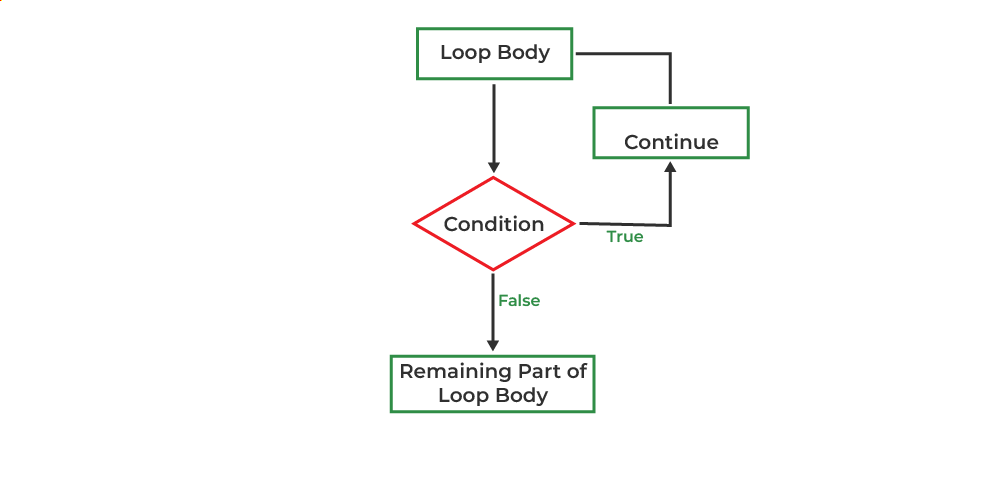
**Use of continue in C**

The continue statement in C can be used in any kind of loop to skip the current iteration. In C, we can use it in the following types of loops:

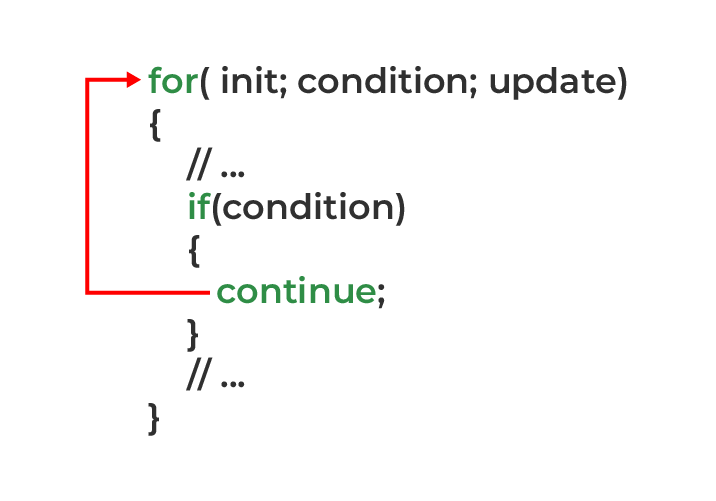
* **Single Loops**
* **Nested Loops**

Using continue in infinite loops is not useful as skipping the current iteration won’t make a difference when the number of iterations is infinite.

**Flowchart of continue in C**



**How continue statement works?**



//example of break and continue statement

int i;

for(i=1;i<20;i++)

{

if(i%3==0)

continue;//bypass

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

if(i==10)

break;//loop terminate

}

return 0;

# C goto Statement

The goto statement allows us to transfer control of the program to the specified label.

### Syntax of goto Statement

goto label;

... .. ...

... .. ...

label:

statement;

//example of goto statement

int i=1;

print:

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

i++;

if(i<5)

goto print;

return 0;

**some loop program**

//multiplication table

int n,i;

printf("Enter a number : ");

scanf("%d",&n);

for(i=1;i<=10;i++)

{

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

}

return 0;

//factorial value of a number

int n,fact=1;

printf("Enter a number : ");

scanf("%d",&n);

for(int i=1;i<=n;i++)

{

fact=fact\*i;

}

printf("\nThe factorial number is = %d\n",fact);

return 0;

//check prime number or not

int n,fact=1,count=0;

printf("Enter a positive number : ");

scanf("%d",&n);

for(int i=1;i<=n;i++)

{

if(n%i==0)

{

count ++;

}

}

if(count==2)

{

printf("%d is Prime number.",n);

}

else

{

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

}

return 0;

OR

//check prime number or not

int n,fact=1,count=0;

printf("Enter a positive number : ");

scanf("%d",&n);

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

{

if(n%i==0)

{

count ++;

break;

}

}

if(count==0)

{

printf("%d is Prime number.",n);

}

else

{

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

}

return 0;

* **“Greatest Common Divisor” is the full form of GCD**
* **The full form of LCM in Maths is Least Common Multiple.**

//find gcd and lcm between two number

int num1,num2,n1=0,n2=0,gcd=0,lcm=0,rem=0;

printf("Enter Two Number : ");

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

n1=num1;

n2=num2;

while(n2!=0)

{

rem=n1%n2;

n1=n2;

n2=rem;

}

gcd=n1;

lcm=(num1\*num2)/gcd;

printf("GCD = %d\n",gcd);

printf("LCM = %d\n",lcm);

return 0;

//find GCD and LCM of a number by using for loop

int num1,num2,gcd,lcm;

printf("Enter two number : ");

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

if(num1<num2)gcd=num1;

else gcd=num2;

for(gcd; gcd>=1; gcd--)

{

if(num1%gcd==0&&num2%gcd==0)break;

}

lcm=(num1\*num2)/gcd;

printf("GCD = %d\n",gcd);

printf("LCM = %d\n",lcm);

return 0;

* Add the digits of the representation of a number in a given base

//digit summation using for loop

int num,sum=0,temp,r;

printf("Enter any number : ");

scanf("%d",&num);

temp=num;

while(temp!=0)

{

r=temp%10;

sum+=r;

temp=temp/10;

}

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

return 0;

//digit summation using for loop

int num,sum=0;

printf("Enter a number : ");

scanf("%d",&num);

for(int i=num;i!=0;i=i/10)

{

sum=sum+(i%10);

}

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

return 0;

* The number of digits in the base- representation of a number is called the digit count .

//digit count by using while loop

int num,count=0;

printf("Enter a integer number : ");

scanf("%d",&num);

while(num!=0)

{

num=num/10;

count++;

}

printf("Result = %d\n",count);

return 0;

//digit count by using for loop

int num,count=0;

printf("Enter a integer number : ");

scanf("%d",&num);

for(int i=num;i!=0;i=i/10)

{

count++;

}

printf("Result = %d\n",count);

return 0;

* The reverse of a number is a mathematical method to obtain from a number another written in the opposite way to the first. Palindrome numbers and its reverse are the same. For example, the reverse of 1234 is 4321.

//Reverse a number by using while loop

int num,r,temp,sum=0;

printf("Enter an integer number : ");

scanf("%d",&num);

temp=num;

while(temp!=0)

{

sum=sum\*10+(temp%10);

temp=temp/10;

}

printf("Reverse number is = %d",sum);

return 0;

//Reverse a number by using for loop

int num,c=0;

printf("Enter an integer number : ");

scanf("%d",&num);

for(int i=num;i!=0;i=i/10)

{

c=c\*10+(i%10);

}

printf("Reverse number is = %d",c);

return 0;

* A palindrome is a number that is the same even if reversed. For example 121=121

323=323 this is palindrome number.

//check a palindrome number by using while loop

int num,temp,sum=0;

printf("Enter a number : ");

scanf("%d",&num);

temp=num;

while(temp!=0)

{

sum=sum\*10+(temp%10);

temp=temp/10;

}

if(sum==num)

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

else

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

return 0;

* Armstrong number is the number in any given number base, which forms the total of the same number, when each of its digits is raised to the power of the number of digits in the number. It is of special interest to new programmers and those learning a new programming language because of the way the number behaves in a given number base.

For 153, the operation is 1^3 5^3 3^3=153.

//check a number is Armstrong or not by using for loop

int n,sum=0,o,count=0;

printf("Enter an integer number : ");

scanf("%d",&n);

for(int i=n;i!=0;i=i/10)

{

count ++;

}

for(int i=n;i!=0;i=i/10)

{

int x=i%10,p=1;

for(int j=1; j<=count; j++)

{

p=p\*x;

}

sum+=p;

}

if(sum==n)

printf("This is a Armstrong number\n");

else

printf("This is not a Armstrong number.\n");

return 0;

//check a number is Armstrong or not by using while loop

int num,sum=0,temp1,temp2,count=0,rem,x;

printf("Enter an integer number : ");

scanf("%d",&num);

temp1=num;

temp2=num;

while(temp1!=0)

{

temp1=temp1/10;

count++;

}

while(temp2!=0)

{

rem=temp2%10;

sum+=pow(rem,count);

temp2=temp2/10;

}

if(sum==num)

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

else

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

return 0;

**Series**

//print a series form 1,2,3,4......n; and summation of the series

int num,sum=0;

printf("Enter the last value for the series : ");

scanf("%d",&num);

for(int i=1;i<=num;i++)

{

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

sum+=i;

}

printf("\n\nEnter the summation of the series = %d\n\n",sum);

return 0;

//print a series form 1,3,5,.......n; and summation of the series

int num,sum=0;

printf("Enter the last value for the series : ");

scanf("%d",&num);

for(int i=1;i<=num;i+=2)

{

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

sum+=i;

}

printf("\n\nEnter the summation of the series = %d\n\n",sum);

return 0;

//1\*2+2\*3+3\*4+4\*5..... summation the series by using while loop.

int num1,num2,a=1,b=2,sum=0;

printf("Enter two number : ");

scanf("%d",&num1);

while(a<=num1 && b<=num1)

{

sum=sum+(a\*b);

a++;

b++;

}

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

return 0;

//1\*2+2\*3+3\*4+4\*5..... summation the series by using while loop.

int num,s1=1,s2=2,sum=0;

printf("Enter the last number of the series : ");

scanf("%d",&num);

for(int i=1;s2<=num;i++)

{

sum+=(s1\*s2);

s1++;

s2++;

}

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

return 0;

//Display numbers from 1 to n and their sum

int n, sum=0;

printf("Enter a integer number : ");

scanf("%d",&n);

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

for(int i=1; i<=n;i++)

{

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

sum+=i;

}

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

return 0;

//Display even numbers from 1 to n and their sum

int n, sum=0;

printf("Enter a integer number : ");

scanf("%d",&n);

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

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

{

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

sum+=i;

}

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

return 0;

//Display odd numbers from 1 to n and their sum

int n, sum=0;

printf("Enter a integer number : ");

scanf("%d",&n);

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

for(int i=1; i<=n;i+=2)

{

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

sum+=i;

}

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

return 0;

//display and sum 1+4+7+10+...+n series

int n,sum=0,i;

printf("Enter an integer number : ");

scanf("%d",&n);

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

for(int i=1;i<=n;i+=3)

{

printf("%d + ",i);

sum+=i;

}

printf("%d;",i);

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

getch();

//display and sum 1\*5+2\*5+3\*5+...+n\*5 series

int n,sum=0,i;

printf("Enter an integer : ");

scanf("%d",&n);

for(int i=1; i<=n; i++)

{

printf("%d\*5 + ",i);

sum=sum+i\*5;

}

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

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

return 0;

//display and sum 1^2+2^2+3^2+.....+n^2 series

int n,sum=0,i;

printf("Enter an integer number : ");

scanf("%d",&n);

for(int i=1;i<=n;i++)

{

printf("%d^2 + ",i);

sum=sum+i\*i;

}

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

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

return 0;

//1.5+2.5+3.5+4.5....+n display and sum

float n,i,sum=0;

printf("Enter an integer number : ");

scanf("%f",&n);

for(i=1.5;i<=n;i++)

{

sum+=i;

}

printf("Result = %.2f",sum);

return 0;

//1^2+2^2+3^2+....n^2 display and sum

int i,n,sum=0;

printf("Enter an integer number : ");

scanf("%d",&n);

for(i=1;i<=n;i+=2)

{

sum+=i\*i;

}

printf("1^2+3^2+5^2+....+%d^2 = %d",n,sum);

return 0;

//1/1+1/2+1/3+.....+1/n display this series and sum.

float i,n,sum=0;

printf("Enter an integer number : ");

scanf("%f",&n);

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

{

sum+=1.0/i;

}

printf("Result = %.2f",sum);

return 0;

//1/1^2+1/2^2+1/3^+....+1/n^2 display this series and sum

float i,n,sum=0;

printf("Enter an integer number : ");

scanf("%f",&n);

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

{

sum+=1.0/(i\*i);

}

printf("Result = %.2f",sum);

return 0;

//1\*2\*3\*4\*........\*n

int n,mul=1;

printf("Enter a value : ");

scanf("%d",&n);

for(int i=1;i<=n;i++)

{

mul=mul\*i;

}

printf("Result = %d",mul);

return 0;

//1\*3\*5\*7\*........\*n

int n,mul=1;

printf("Enter a value : ");

scanf("%d",&n);

for(int i=1;i<=n;i+=2)

{

mul=mul\*i;

}

printf("Result = %d",mul);

return 0;

//2\*4\*6\*8\*........\*n

int n,mul=1;

printf("Enter a value : ");

scanf("%d",&n);

for(int i=1;i<=n;i++)

{

if(i%2==0)

mul=mul\*i;

}

printf("Result = %d",mul);

return 0;

//1-2+3-4+5-.......+n

int n,sum=0,x=1;

printf("Enter a value : ");

scanf("%d",&n);

for(int i=1;i<=n;i++)

{

sum=sum+i\*x;

x=x\*(-1);

}

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

return 0;

//-1+2-3+4-5+.......-n

int n,sum=0,x=-1;

printf("Enter a value : ");

scanf("%d",&n);

for(int i=1;i<=n;i++)

{

sum=sum+i\*x;

x=x\*(-1);

}

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

return 0;

//Fibonacci series print and sum

int n,s1=0,s2=1,sum=0,x;

printf("Enter a value : ");

scanf("%d",&n);

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

{

printf("%d ",s1);

sum+=s1;

x=s1;

s1=s2;

s2=x+s2;

}

printf("\nResult = %d",sum);

return 0;

//Fibonacci series print and sum

int n,s1=0,s2=1,fibo=0,count=0;

printf("Enter a value : ");

scanf("%d",&n);

while(count<n)

{

if(count<=1)

fibo=count;

else

{

fibo=s1+s2;

s1=s2;

s2=fibo;

}

printf("%d ",fibo);

count++;

}

return 0;

//Lucas series print using function

#include<stdio.h>

void generatelucas(n)

{

int s1=2,s2=1,lucas=0,sum=3;

printf("\nLucas series up to %d terms \n",n);

printf("\n%d %d ",s1,s2);

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

{

lucas=s1+s2;

sum+=lucas;

s1=s2;

s2=lucas;

printf("%d ",lucas);

}

printf("\nResult = %d",sum);

}

int main()

{

int n;

printf("Enter a value : ");

scanf("%d",&n);

generatelucas(n);

return 0;

}

//Lucas series print and sum without function

#include<stdio.h>

int main()

{

int n,s1=2,s2=1,lucas=0,sum=3;

printf("Enter a value for lucas range : ");

scanf("%d",&n);

printf("Lucas series up to %d terms \n",n);

printf("%d %d ",s1,s2);

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

{

lucas=s1+s2;

sum+=lucas;

s1=s2;

s2=lucas;

printf("%d ",lucas);

}

printf("\nResult = %d",sum);

return 0;

}

**Pattern**

//pattern print

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=row;col++)

{

printf("\* ");

}

printf("\n");

}

return 0;

//pattern print

/\*

1

1 0

1 0 1

1 0 1 0

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=row;col++)

{

printf("%d ",col%2);

}

printf("\n");

}

return 0;

//pattern print

/\*

1

0 0

1 1 1

0 0 0 0

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=row;col++)

{

printf("%d ",row%2);

}

printf("\n");

}

return 0;

//pattern print

/\*

A

A B

A B C

A B C D

A B C D E \*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=row;col++)

{

printf("%c ",col+64);

}

printf("\n");

}

return 0;

//pattern print

/\*

A

B B

C C C

D D D D

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=row;col++)

{

printf("%c ",row+64);

}

printf("\n");

}

return 0;

#include<stdio.h>

int main()

{

/\*

pattern print

A

A B

A B C

A B C D

A B C D E \*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("%c ",col+64);

}

printf("\n");

}

return 0;

}

/\*

pattern print

A

AB

ABC

ABCD

ABCDE

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("%c",col+64);

}

printf("\n");

}

return 0;

/\*

pattern print

ABCDE

ABCD

ABC

AB

A

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

for(row=n;row!=0;row--)

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("%c",col+64);

}

printf("\n");

}

return 0;

/\*

pattern print

A B C D E

A B C D

A B C

A B

A

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

for(row=n;row!=0;row--)

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("%c ",col+64);

}

printf("\n");

}

return 0;

/\*

pattern print

1

22

333

4444

55555

4444

333

22

1

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("%d",row);

}

printf("\n");

}

for(row=n-1;row!=0;row--)

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("%d",row);

}

printf("\n");

}

return 0;

/\*

pattern print

\* \* \* \* \*

\* \* \* \* \*

\* \* \* \* \*

\* \* \* \* \*

\* \* \* \* \*

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

for(row=n;row!=0;row--)

{

for(col=n;col!=0;col--)

{

printf(" \* ");

}

printf("\n");

}

return 0;

/\*

pattern print

1

2 4

3 6 9

4 8 12 16

5 10 15 20 25

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=row;col++)

{

printf("%d ",row\*col);

}

printf("\n");

}

return 0;

/\*

pattern print

\*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("\* ");

}

printf("\n");

}

for(row=n-1;row!=0;row--)

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("\* ");

}

printf("\n");

}

return 0;

/\*print pattern

\* \* \* \* \*

\* \*

\* \*

\* \*

\* \* \* \* \*

\*/

int n,row, col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

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

{

if(row==1||row==n||col==1||col==n)

printf(" \* ");

else

printf(" ");

}

printf("\n");

}

return 0;

/\*print pattern

\*

\* \*

\* \*

\* \*

\* \* \* \* \*

\*/

int n,row, col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=row;col++)

{

if(row==1||row==n||col==1||col==row)

printf(" \* ");

else

printf(" ");

}

printf("\n");

}

return 0;

/\*print pattern

\* \*

\* \*

\*

\* \*

\* \*

\*/

int n,row,col;

printf("Enter a value : ");

scanf("%d",&n);

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

{

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

{

if(row==col||row+col==n+1)

{

printf("\*");

}

else

{

printf(" ");

}

}

printf("\n");

}

return 0;

/\*print pattern

1

121

12321

1234321

123454321

\*/

int n,row,col,count=0;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("%d",col);

}

for(col=row-1;col!=0;col--)

{

printf("%d",col);

}

printf("\n");

}

return 0;

/\*print pattern

1

121

12321

1234321

123454321

1234321

12321

121

1

\*/

int n,row,col,count=0;

printf("Enter a value : ");

scanf("%d",&n);

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

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("%d",col);

}

for(col=row-1;col!=0;col--)

{

printf("%d",col);

}

printf("\n");

}

for(row=n-1;row!=0;row--)

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("%d",col);

}

for(col=row-1;col!=0;col--)

{

printf("%d",col);

}

printf("\n");

}

return 0;

/\*print pattern

123454321

1234321

12321

121

1

\*/

int n,row,col,count=0;

printf("Enter a value : ");

scanf("%d",&n);

for(row=n;row!=0;row--)

{

for(col=1;col<=n-row;col++)

{

printf(" ");

}

for(col=1;col<=row;col++)

{

printf("%d",col);

}

for(col=row-1;col!=0;col--)

{

printf("%d",col);

}

printf("\n");

}

return 0;

**Array**

Definition: An array is a collection of variable of same data type.

Array declaration:

Define data type array name [array size].

Example:

Int marks[100].

Note: Array এর index সবসময় 0 থেকে শুরু হবে।

Array element and initialization:

If int marks[5] Marks[0], Marks[1], Marks[2], Marks[3], Marks[4].

Initialization:

Marks[0]=85

Marks[1]=65

Marks[2]=73

Marks[3]=75

Marks[4]=90

Initialization array during declaration:

Int marks[5]={85,65,73,75,90}.

অবশ্যই এইভবে declaration এর ক্ষেত্রে {} ব্যাবহার করতে হবে।

Or Int marks[ ]={85,65,73,75,90}.

Printing an array:

Int marks[ ]= {85,65,73,75,90}.

Printf(“%d”,marks[0]);

Printf(“%d”,marks[1]);

Printf(“%d”,marks[2]);

Printf(“%d”,marks[3]);

Printf(“%d”,marks[4]);

Using loop for printing:

For(int i=0;i<=4;i++)

{

Printf(“%d”,marks[i]);

}

Getting user input:

Int marks[ ]= {85,65,73,75,90}.

Scanf(“%d”,&marks[0]);

Scanf(“%d”,&marks[1]);

Scanf(“%d”,&marks[2]);

Scanf(“%d”,&marks[3]);

Scanf(“%d”,&marks[4]);

Or:

Scanf(“%d %d %d %d %d”, &marks[0], &marks[1], &marks [2], &marks [4], &marks[4]);

Or:

For(int i=0;i<=5;i++)

{

Scanf(“%d”,&marks[i];

}

Types of Array:

* Array can of fowling types:

1. One dimensional array.(1-D array) or Linear array.

Ex: int marks[5].

1. Multi dimensional array.
2. Two dimensional array or 2-D array.

Ex: int marks[5][6].

1. Three dimensional array or 3-D array.

Ex: int marks[5][6][7].

//Example of array

int marks[]={85,75,65,95,55},sum=0;

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

{

sum+=marks[i];

}

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

return 0;

//second Example of array

//finding sum and average by using array

int marks[5],sum=0;

printf("Enter five number : ");

scanf("%d %d %d %d %d",&marks[0],&marks[1],&marks[2],&marks[3],&marks[4]);

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

{

sum+=marks[i];

}

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

printf("The average = %.2f\n",sum/5.0);

return 0;

//finding sum and average by using array

int n,a[5],sum=0;

printf("Enter 5 number : ");

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

{

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

}

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

{

sum+=a[j];

}

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

printf("The average = %.2f\n",sum/5.0);

return 0;

//write a program that read n number and finding there sum and average.

int n,a[100],sum=0;

printf("How many number : ");

scanf("%d",&n);

printf("Enter %d number : ",n);

for(int i=1;i<=n;i++)

{

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

}

for(int j=1;j<=n;j++)

{

sum+=a[j];

}

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

printf("The average = %.2f\n",sum/(float)n);

return 0;

//write a program that read n number and find maximum number.

int n,num[100],max;

printf("How many number : ");

scanf("%d",&n);

printf("Enter %d number : ",n);

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

{

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

}

max=num[0];

for(int i=1;i<n;i++)

{

if(max < num[i])

max=num[i];

}

printf("Maximum number = %d",max);

getch();

//write a program that read n number and find minimum number.

int n,num[100],min;

printf("How many number : ");

scanf("%d",&n);

printf("Enter %d number : ",n);

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

{

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

}

min=num[0];

for(int i=1;i<n;i++)

{

if(min>num[i])

min=num[i];

}

printf("Minimum number = %d",min);

return 0;

//write a program to find Fibonacci series and there sum.

int n,a[30],sum=0;

printf("Enter a value : ");

scanf("%d",&n);

a[0]=0;

a[1]=1;

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

{

a[i]=a[i-1]+a[i-2];

}

printf("\n");

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

{

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

sum+=a[i];

}

printf("\n");

printf("\nSum = %d",sum);

getch();

**Introduction to 2D Array/ Matrix Array**

**Declaration:**

Data type array-name[row size][col\_size]

**Ex:** 0 1 2 3

|  |  |  |  |
| --- | --- | --- | --- |
| A[0][0] | A[0][1] | A[0][2] | A[0][3] |
| A[1][0] | A[1][1] | A[1][2] | A[1][3] |
| A[2][0] | A[2][1] | A[2][2] | A[2][3] |

Int A[3][4];

**Number of element =** rows\*columns 0

= 3\*4

=12 1

2

**2D Array initialization :**

A[0][0]=5;

A[0][1]=6;

A[0][2]=7;

A[0][3]=8;

**Directly initialization :**

A[3][4]={ {5,6,7,8}, {25,26,27,28}, {45,56,37,58} }

**2D Array initialization :**

Printf(“%d”,A[0][0]);

Printf(“%d”,A[0][1]);

Printf(“%d”,A[0][2]);

Printf(“%d”,A[0][3]);

**Or:**

**for(int** i=0;i<row;i++)

{

**For(int** j=0;j<col;j++)

{

**Printf(“%d”,**A[i][j]**);**

}

Printf(“\n”);

}

//write a program to read value for array and print by 2D Array.

int row,col;

printf("Enter the value for 2D array row and column : ");

scanf("%d %d",&row,&col);

int A[row][col];

printf("Enter [%d] value for row and [%d] value for column : \n",row,col);

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

{

for(int j=0;j<col;j++)

{

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

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

}

printf("\n");

}

printf("\nArray value : \n");

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

{

for(int j=0;j<col;j++)

{

printf("A[%d][%d] = {%d} ",i,j,A[i][j]);

}

printf("\n");

}

return 0;

//write a program to read value for two array and print them by 2D Array.

int row,col;

printf("Enter the value for 2D array row and column : ");

scanf("%d %d",&row,&col);

int A[row][col], B[row][col];

printf("Enter [%d] value for row and [%d] value for column : \n",row,col);

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

{

for(int j=0;j<col;j++)

{

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

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

}

printf("\n");

}

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

{

for(int j=0;j<col;j++)

{

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

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

}

printf("\n");

}

printf("\nFirst Array value : \n");

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

{

for(int j=0;j<col;j++)

{

printf("A[%d][%d] = {%d} ",i,j,A[i][j]);

}

printf("\n");

}

printf("\n");

printf("\Second Array value : \n");

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

{

for(int j=0;j<col;j++)

{

printf("B[%d][%d] = {%d} ",i,j,B[i][j]);

}

printf("\n");

}

return 0;

//write a program to Addition between two matrix 2D Array.

int row,col;

printf("Enter the value for 2D array row and column : ");

scanf("%d %d",&row,&col);

int A[row][col], B[row][col],C[row][col];

printf("Enter [%d] value for row and [%d] value for column in A matrix : \n",row,col);

//Getting input for A matrix

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

{

for(int j=0;j<col;j++)

{

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

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

}

printf("\n");

}

//Getting input for B matrix

printf("\nEnter [%d] value for row and [%d] value for column in B matrix : \n",row,col);

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

{

for(int j=0;j<col;j++)

{

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

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

}

printf("\n");

}

//print A matrix

printf("\nFirst Array value : \n");

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

{

for(int j=0;j<col;j++)

{

printf("A[%d][%d] = {%d} ",i,j,A[i][j]);

}

printf("\n");

}

//print B matrix

printf("\nSecond Array value : \n");

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

{

for(int j=0;j<col;j++)

{

printf("B[%d][%d] = {%d} ",i,j,B[i][j]);

}

printf("\n");

}

//Addition of A & B matrix.

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

{

for(int j=0;j<col;j++)

{

C[i][j]=A[i][j]+B[i][j];

}

}

//print C matrix

printf("\n");

printf("\Summation of two matrix A + B : \n");

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

{

for(int j=0;j<col;j++)

{

printf("B[%d][%d] = {%d} ",i,j,C[i][j]);

}

printf("\n");

}

return 0;

//write a program to multification between two matrix 2D Array.

int row,col;

printf("Enter the value for 2D array row and column : ");

scanf("%d %d",&row,&col);

int A[row][col], B[row][col],C[row][col];

printf("Enter [%d] value for row and [%d] value for column in A matrix : \n",row,col);

//Getting input for A matrix

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

{

for(int j=0;j<col;j++)

{

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

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

}

printf("\n");

}

//Getting input for B matrix

printf("\nEnter [%d] value for row and [%d] value for column in B matrix : \n",row,col);

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

{

for(int j=0;j<col;j++)

{

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

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

}

printf("\n");

}

//print A matrix

printf("\nFirst Array value : \n");

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

{

for(int j=0;j<col;j++)

{

printf("A[%d][%d] = {%d} ",i,j,A[i][j]);

}

printf("\n");

}

//print B matrix

printf("\nSecond Array value : \n");

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

{

for(int j=0;j<col;j++)

{

printf("B[%d][%d] = {%d} ",i,j,B[i][j]);

}

printf("\n");

}

//Multiplication of A & B matrix.

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

{

for(int j=0;j<col;j++)

{

C[i][j]=A[i][j]\*B[i][j];

}

}

//print C matrix

printf("\n");

printf("\Summation of two matrix A + B : \n");

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

{

for(int j=0;j<col;j++)

{

printf("B[%d][%d] = {%d} ",i,j,C[i][j]);

}

printf("\n");

}

return 0;

//write a program to Addition between two matrix 2D Array.

int row,col;

printf("Enter the value for 2D array row and column : ");

scanf("%d %d",&row,&col);

int A[row][col], B[row][col],C[row][col];

printf("Enter [%d] value for row and [%d] value for column in A matrix : \n",row,col);

//Getting input for A matrix

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

{

for(int j=0;j<col;j++)

{

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

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

}

printf("\n");

}

//Getting input for B matrix

printf("\nEnter [%d] value for row and [%d] value for column in B matrix : \n",row,col);

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

{

for(int j=0;j<col;j++)

{

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

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

}

printf("\n");

}

//print A matrix

printf("\nFirst Array value : \n");

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

{

for(int j=0;j<col;j++)

{

printf("A[%d][%d] = {%d} ",i,j,A[i][j]);

}

printf("\n");

}

//print B matrix

printf("\nSecond Array value : \n");

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

{

for(int j=0;j<col;j++)

{

printf("B[%d][%d] = {%d} ",i,j,B[i][j]);

}

printf("\n");

}

//Subtraction of A & B matrix.

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

{

for(int j=0;j<col;j++)

{

C[i][j]=A[i][j]-B[i][j];

}

}

//print C matrix

printf("\n");

printf("\Summation of two matrix A + B : \n");

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

{

for(int j=0;j<col;j++)

{

printf("C[%d][%d] = {%d} ",i,j,C[i][j]);

}

printf("\n");

}

return 0;