**11. A Fibonacci sequence is defined as follows: the first and second terms in the sequence are 0 and 1. Subsequent terms are found by adding the preceding two terms in the sequence. Write a C program to generate the first n terms of the sequence**

#include <stdio.h>

int main()

{

int i,a=0,b=1,c,n;

printf("enter the limit of fibinocci series");

scanf("%d",&n);

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

{

c=a+b;

a=b;

b=c;

printf("%d\t",c);

}

return 0;

}

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**12. Write a C program to generate all the prime numbers between 1 and n, where n is a value supplied by the user.**

#include<stdio.h>

int main()

{

int i,j,n,prime;

printf("\nEnter the range");

scanf("%d",&n);

printf("Prime no.s");

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

{

prime=1;

for(j=2; j<=i/2; j++)

if(i%j == 0)

{

prime=0;

break;

}

if(prime==1)

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

}

return 0;

}

**13. Write a C program to find the roots of a Quadratic equation.**

#include <stdio.h>

#include <math.h>

void main()

{

float a,b,c,r1,r2,d;

printf("Enter the value for equation: ");

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

if(a==0)

{

printf("\nEnter the value should not be Zero");

}

else{

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

if(d>0)

{

r1=(-b+sqrt(d)/(2\*a));

r2=(-b-sqrt(d)/(2\*a));

printf("\nRoots are Real and Unequaal");

printf("%f \n%f \n",r1,r2);

}

else if(d==0)

{

r1=-b/(2\*a);

r2=-b/(2\*a);

printf("\nRoots are Real and Equal\n");

printf("\nRoot=%f \n",r1);

printf("\nRoot=%f \n",r2);

}

else{

printf("\nRoots are Imaginary");

}

}

}

**14. Write a C program to read in two numbers, x and n, and then compute the sum of this geometric progression: 1+xx^2+x^+3+………….+x^n.**

#include <stdio.h>

#include <math.h>

void main()

{

int n, x, i, sum = 0;

printf("Enter the limit\n");

scanf("%d", &n);

printf("Enter the value of x\n");

scanf("%d", &x);

if(x < 0 || n < 0)

{

printf("illegal value");

}

else

{

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

sum=sum + pow(x, i);

}

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

}

**15. Write a C program to find the minimum, maximum and average in an array of integers.**

#include<stdio.h>

int main()

{

int array[100], max=0,min=0,n,i,sum=0,avg;

printf("Enter the number of elements in array\n");

scanf("%d", &n);

printf("enter the elements into an array");

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

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

max = array[0];

min=array[0];

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

{

if (array[i] > max)

{

max = array[i];

}

}

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

{

if (array[i] < min)

{

min = array[i];

}

}

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

{

sum=sum+array[i];

}

avg=sum/n;

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

printf("\nMinimun element=%d",min);

printf("\n average of elements in an array =%d",avg);

return 0;

}

16.

**Write a C program that uses functions to perform the following:**

**i. Addition of Two Matrices**

**ii. Multiplication of Two Matrices**

**iii. Transpose of a matrix with memory dynamically allocated for the new matrix as row and column counts may not be same.**

**Copy the programs from notes..**

**17. Write a program for reading elements using pointer into array and display the values using array.**

#include<stdio.h>

void main()

{

int a[50],\*p,i,n;

p=a;

printf("Enter size of array:");

scanf("%d",&n);

printf("Enter elements of array:");

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

scanf("%d",p+i);

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

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

}

**18. Write a program for display values reverse order from array using pointer.**

#include <stdio.h>

void main()

{

int size, i, arr[10];

int \*ptr;

ptr = &arr[0];

printf("\nEnter the size of array : ");

scanf("%d", &size);

printf("\nEnter %d integers into array: ", size);

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

{

scanf("%d", ptr);

ptr++;

}

ptr = &arr[size - 1];

printf("\nElements of array in reverse order are :");

for (i = size - 1; i >= 0; i--) {

printf("\nElement%d is %d : ", i, \*ptr);

ptr--;

}

}

**19. Write a program through pointer variable to sum of n elements from array**

#include<stdio.h>

void main() {

int A[10];

int i, sum = 0;

int \*ptr;

printf("\nEnter 10 elements : ");

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

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

ptr = A; /\* a=&a[0] \*/

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

{

sum = sum + \*ptr;

ptr++;

}

printf("The sum of array elements : %d", sum);

}

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_