Part B:

1. Write a program to input n numbers and sort it in ascending order using bubble sort.

/\*write a program to input N numbers and sort it in ascending order using bubble sort\*/

#include<stdio.h>

#include<conio.h>

void main()

{

int i,j,n,temp,a[25];

clrscr();

printf("enter the size of the array:");

scanf("%d",&n);

printf("enter the array elements:\n");

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

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

printf("\n array before sorting is: ");

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

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

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

{

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

{

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

{

temp=a[j];

a[j]=a[j+1];

a[j+1]=temp;

}

}

}

printf("\n array elements after sorting is:\n");

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

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

getch();

}

2. Write a program to search a number in a list with duplicate elements using linear search technique. If present, print its position(s).

#include<stdio.h>

#include<conio.h>

void main()

{

int i,n,search,a[100],count=0;

clrscr();

printf("enter the size \n");

scanf("%d",&n);

printf("enter the array elements;");

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

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

printf("enter the element to search:");

scanf("%d",&search);

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

{

if(search==a[i])

{

printf("\n %d present at he position %d \n",search,i+1);

count++;

}

}

if(count==0)

printf("\n %d is not present in array\n",search);

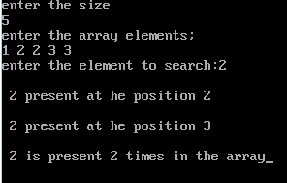
else

printf("\n %d is present %d times in the array",search,count);

getch();

}

OUTPUT:



1. Write a program to find the transpose of the matrix. Also check for symmetry.

/\*write a program to display transpose of matrix and to find the given matrix is symmetric or not\*/

#include<stdio.h>

#include<conio.h>

void main()

{

int i,j,m,n,a[10][10],b[10][10],sym=1;

clrscr();

printf("\n enter the order of the matrix");

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

if(m==n)

{

printf("\n enter the element of the matrix");

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

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

{

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

b[j][i]=a[i][j];

}

printf("\n given matrix is\n");

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

{

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

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

printf("\n");

}

printf("\n the transposed matrix is \n");

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

{

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

printf("%d\t",b[i][j]);

printf("\n");

}

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

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

if(a[i][j]!=a[j][i])

{

sym=0;

break;

}

if(sym==1)

printf("\n symmetric matrix");

else

printf("\n not symmetric matrix");

}

else

printf("not a square matrix");

getch();

}

Output:

1.enter the order of the matrix 2 2

Enter the elements of the matrix 1 2 3 4

Given matrix is

1. 2
2. 4

The transposed matrix

1. 3
2. 4

Not

4. Write a program to find the sum of the following series upto n terms.

sin(x)= x - x3/3! + x5/5! –x7 /7! + ….

Use recursive function to find factorial.

(**Note**: Input x in degrees and convert into radians by multiplying with π/180).

#include<stdio.h>

#include<conio.h>

#include<math.h>

float fact(float);

void main()

{

int i,n;

float x,sum=0,t;

clrscr();

printf("enter the angle[in degrees]:");

scanf("%f",&x);

printf("enter the numbar of terms:");

scanf("%d",&n);

x=x\*3.14159/180;

t=x;

sum=x;

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

{

t=(t\*(-1)\*x\*x)/fact(2\*i+1);

sum=sum+t;

}

printf("\n sin(%f)=%4f",x,sum);

getch();

}

float fact(float n)

{

int c;

int result=1;

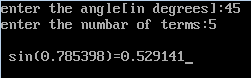
for(c=1;c<=n;c++)

result+result\*c;

return (result);

}

output:



5. Write a program to count the numbers of words, vowels, digits and spaces in a given sentence. (Words may be separated by multiple spaces).

6. Write a program to add two matrices using pointers.