1. **Develop a program to find average of two numbers**.

Program:

#include<stdio.h>

int main()

{

float arr[50],avg,sum=0;

int m,i;

printf("input how many numbers to be averaged\t");

scanf("%d",&m);

printf("enter the values \t");

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

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

}

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

{

sum+=arr[i];

}

avg=sum/m;

printf("\n the average of %d numbers is= %f\n",m,avg);

}

1. **Implement a program to concatenate two strings without using**

**built in functions.**

Program:

#include<stdio.h>

int main()

{

char str[100],ser[100],concat[200];

int i=0,k,j=0,l;

printf("input the two strings\t");

gets(str);

gets(ser);

while(str[i]!='\0')

{concat[i]=str[i];

i++;}

printf("\n the size of first string is =%d",i);

while(ser[j]!='\0')

{concat[i]=ser[j];

j++;

i++;

}

printf("\n the size of second string is =%d\n",j);

puts(concat);

printf("\n");

}

1. **Implement a program to interchange the largest and smallest**

**numbers in the given array**.

Program:

#include<stdio.h>

int main()

{

int i,k,j;

int arr[6]={23,78,91,2,45,67};

printf("the unarranged array=");

for ( i=0;i<6; i++)

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

printf("\n");

k=0;

for (i=0;i<6;i++)

{ for(j=0;j<6;j++)

{if(arr[i]<arr[j])

{

k=arr[i];

arr[i]=arr[j];

arr[j]=k;

}

}

}

printf("the arranged array is=");

for ( i=0;i<6; i++)

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

return 0;

}

1. **Program to read two dimensional array marks which stores marks of 5 students in 3 subjects and dislay the highest marks in each subject**.

Program:

#include<stdio.h>

int main()

{

int i,j,high;

int marks[5][3];

printf("enter the marks of students\n");

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

{ printf("enter the marks of student %d\n",i+1);

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

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

}

high=marks[0][0];

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

{

for(j=0;j<5;j++)

{

if(marks[j][i]>=high)

high=marks[j][i];

}

printf("\n the hightest marks in subject %d is marks= %d \n ",i+1,high);

high=marks[0][i+1];

}

}

1. **Develop a program to print the transpose matrix**.

Program:

#include<stdio.h>

int main()

{

int i,j,r,c;

int trans[10][10],mat[10][10];

printf("enter the number of rows and colums\n");

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

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

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

{

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

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

}

printf("\n");

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

{

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

trans[j][i]=mat[i][j];

}

printf("\n the transpose matrix\n");

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

{

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

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

printf("\n");

}

printf("the given matrix\n");

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

{

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

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

printf("\n");

}

1. **Develop a program to check the given string is palindrome or not**.

Program:

#include <stdio.h>

int main()

{

char str[50];

int l = 0,i=0;

printf("input the string\t");

gets(str);

while(str[i]!='\0')

{i++;

}

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

i--;

while (i > l)

{

if (str[l++] != str[i--])

{

printf("%s \t is Not Palindrome\n", str);

return 0;

}

}

printf("%s \t is palindrome\n", str);