WAP to read n numbers from keyboard and find average

```c
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main(){ float nums[50],sum=0,avg; int i=0,n; clrscr();
printf("Enter (c<50)");
scanf("%d",&n);
printf("\n%dRead numbers",i+1);
for(i=0;i<n;i++){ scanf("%f",&nums[i]); }
for(i=0;i<n;i++) sum=sum+nums[i]; avg=sum/n;
printf("\n the average is%f",avg);
getch();}
```

WAP to that ask for n numbers for user and find maximum and minimum of them

```c
#include<stdio.h>
#include<conio.h>
void main(){
int nums[50],max,min,i,n; clrscr();
printf("How many");scanf("%d",&n);
printf("Enter numbers");
for(i=0;i<n;i++) scanf("%d",&nums[i]);
max=nums[0];
min=nums[0];
for(i=0;i<n;i++){
if(max<nums[i])  max=nums[i];
if(min>nums[i])  min=nums[i];}
printf("\n the max number is%d",max);
printf("\n the minimum is%d",min);
getch();}
```

WAP program to read marks of n students and print out the top five

```c
#include<stdio.h>
#include<conio.h>
void main(){
int nums[50],i,j,n,temp;
clrscr();
printf("How many Students");
scanf("%d",&n);
printf("Enter Marks%d",n);
for(i=0;i<n;i++)
scanf("%d",&nums[i]);
for(i=0;i<n-1;i++){
for(j=i+1;j<n;j++){
        if(nums[i]<nums[j]){temp=nums[i];
        nums[i]=nums[j];
        nums[j]=temp;}}}
        printf("\n top 5 are");
        for(i=0;i<5;i++)
        printf("\t%d",nums[i]);getch();}
```

WAP to read n numbers form keyboard and find third highest and second lowest numbers

```c
#include<stdio.h>
#include<conio.h>
void main(){
int nums[50],i,j,n,temp;
clrscr();
printf("How many Students");
scanf("%d",&n);
printf("Enter Marks%d",n);
for(i=0;i<n;i++)
scanf("%d",&nums[i]);
for(i=0;i<n-1;i++){
for(j=i+1;j<n;j++){
        if(nums[i]<nums[j]){temp=nums[i];
        nums[i]=nums[j];
        nums[j]=temp;}}}
        printf("\n third highest is%d",nums[2]);
        printf("\n second highest is%d",nums[2-1]);
        getch();}
```

WAP to read an array of length n display total count for positive numbers, negative numbers and zero separately

```c
#include<stdio.h>
#include<conio.h>
void main(){
int nums[50],i,n,pos=0,neg=0,zero=0;
clrscr();
printf("How many numbers");
scanf("%d",&n);
printf("Enter Marks%d",n);
for(i=0;i<n;i++)
scanf("%d",&nums[i]);
for(i=0;i<n;i++){
        if(nums[i]>0)
        pos++;
        else if(nums[i]<0)
         neg++;
        else
         zero++;}
        printf("\nthe numbers positive is%d",pos);
           printf("\nthe numbers -ve is%d",neg);
             printf("\nthe numbers 0 is%d",zero);
        getch();}
```

WAP program to read n numbers form keyboard and all even sum numbers and all odd sum separately and display results.

```c
#include<stdio.h>
#include<conio.h>
void main(){
int nums[50],i,n,evensum=0,oddsum=0;
scanf("%d",&n);
printf("Enter Marks%d",n);
for(i=0;i<n;i++)
scanf("%d",&nums[i]);
for(i=0;i<n;i++){
if(nums[i]%2==0)
evensum=evensum+nums[i];
else
oddsum=oddsum+nums[i];}
printf("\nthe evensum is%d",evensum);
printf("\nthe odd sum is%d",oddsum);
getch();}
```

WAP to calculate mean variances and standard deviation for n numbers

```c
#include<stdio.h>
#include<conio.h>
#include<math.h>
void main(){
float nums[50],avg,sum=0,variance,sd,sumofsquare=0;  int i,n;
printf("How manu numbers");  scanf("%d",&n);
printf("Enter numbers%d",n);
for(i=0;i<n;i++) {
scanf("%f",&nums[i]);
sum=sum+nums[i];   }
avg=sum/n;
for(i=0;i<n;i++)
sumofsquare=sumofsquare+(avg-nums[i])*(avg-nums[i]);
variance=sumofsquare/n;      sd=sqrt(variance);
printf("\nthe variance is%f",variance);
printf("\n average isis%f",avg);
printf("\n the sd is%f",sd);
getch();  }
```

WAP which ask for order of two matrixes and read two matrixes as given order. Subtract second matrix form first and display the resultant matrix.

```
#include<stdio.h>
#include<conio.h>
void main(){
int a[10][10],b[10][10],result[10][10],i,j,m,n;
printf("\nEnter size of matrix\t"); scanf("%d%d",&m,&n);
printf("\nEnter first matix%d*%d\n",m,n);
for(i=0;i<m;i++)   for(j=0;j<n;j++)
scanf("%d",&a[i][j]);
printf("Enter sedxond matrix%d*%d\n",m,n);
for(i=0;i<m;i++)   for(j=0;j<n;j++)  scanf("%d",&b[i][j]);
for(i=0;i<m;i++)     for(j=0;j<n;j++)
result[i][j]=a[i][j]+b[i][j];
printf("\nThe resultant\n");
for(i=0;i<m;i++){ for(j=0;j<n;j++){
printf("\t%d",result[i][j]);  }
printf("\n");}
getch();}
```

WAP which multiplies each element of matrix of order m*n by 3

```
#include<stdio.h>
#include<conio.h>
#define m 2
#define n 3
void main(){
int matrix[m][n],i,j; clrscr();
printf("\norder of %d*%d\n",m,n);
for(i=0;i<m;i++)   for(j=0;j<n;j++) {
printf("\n matrix[%d][%d]=",i,j);
scanf("%d",&matrix[i][j]);}
for(i=0;i<m;i++)   for(j=0;j<n;j++)
matrix[i][j]=3*matrix[i][j];
printf("\nThe resultant matrix is\n");
for(i=0;i<m;i++){ for(j=0;j<n;j++)
printf("%d\t",matrix[i][j]);
printf("\n");}
getch();  }
```

WAP find the row sum and column sum of matrix

```c
#include<stdio.h>
#include<conio.h>
void main(){
int matrix[10][10],p,q,sum=0,i,j;  clrscr();
printf("\nEneter order of less than  10*10\n");
scanf("%d%d",&p,&q) ;
if(p>9||q>9) { printf("\n the order is out of range");  getch(); exit();}
printf("Entre matix order%d*%d",p,q);
for(i=0;i<p;i++)  for(j=0;j<q;j++) { scanf("%d",&matrix[i][j]);}
printf("\orer input of matixis:\n");
 for(i=0;i<p;i++)   for(j=0;j<q;j++) printf("%d\t",matrix[i][j]); printf("\n");}
 for(i=0;i<p;i++){ for(j=0;j<q;j++) {  sum+=matrix[i][j]; }
matrix[i][j]=sum;  sum=0;}
for(j=0;j<q;j++){   for(i=0;i<q;i++) { sum+=matrix[i][j]; } matrix[i][j]=sum;
sum=0;}
printf("the matrix with row and column\n");
for(i=0;i<p;i++){  for(j=0;j<q;j++){
printf("%d\t",matrix[i][j]);}
printf("|");
printf("%d",matrix[i][j]);
printf("\n"); }
printf("--------------\n");
for(j=0;j<q;j++)
printf("%d\t",matrix[i][j]);  getch(); }
```

WAP to read square matrix form keyboard and find the sum of diagonal elements

```c
#include<stdio.h>
#include<conio.h>
void main(){
int matrix[10][10],i,j,p,q,sum=0;  clrscr();
printf("\nEneter order of less than  10*10\n");
scanf("%d%d",&p,&q) ;
if(p>10||q>10) {
printf("\n the order is out of range");
getch();  exit();}
if(p!=q){
printf("the  order is not of square");
printf("system going to exit");
getch();  exit();}
printf("Entre matix order%d*%d\n",p,q);
for(i=0;i<p;i++)  for(j=0;j<q;j++) {
printf("\nmatrix[%d][%d]=",i,j);
scanf("%d",&matrix[i][j]);
if(i==j)
sum=sum+matrix[i][j]; }
printf("ypour matrix is:\n");
for(i=0;i<p;i++){ for(j=0;j<q;j++)
printf("%d\t",matrix[i][j]);
printf("\n"); }
printf("the trace of matrix is\t%d",sum);
getch(); }
```

WAP to read a string and check for palindrome

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main(){ char c[40]; int len,i,pal=1; clrscr();
printf("Enter string of your choice");
gets(c);
len=strlen(c);
for(i=0;i<(len/2);i++){
if(c[i]!=c[len-i-1]) pal=0;}
if(pal!=0) printf("\n is palindrome");
else printf("not palindrome");
getch();}
```

WAP to that reads a string form keyboard until enter key and count the vowels, constants semi constant, and commas separately

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main(){ char input[200]; int len,i=0,vowel=0,cons=0,comma=0,semi=0; clrscr();
printf("Enter some texts"); gets(input);
len=strlen(input);
for(i=0;i<len;i++){
if(input[i]=='a'||input[i]=='e'||input[i]=='i'||input[i]=='o'||input[i]=='u')vowel++ ;
else if(input[i]==',')semi++;
else if(input[i]==';')comma++;
else cons++;}
printf("\nthe numbers of vowel\t%d",vowel);
printf("\nthe numbers of constant\t%d",cons);
printf("\nthe numbers of comma\t%d",comma);
printf("\nthe numbers of semivowel\t%d",semi);
getch();}
```

WAP to read name of five persons and sort them to display in ascending order

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main(){ char name[5][10]; int i,j; char temp[11]; clrscr();
printf("Enter 5 names\n");
for(i=0;i<5;i++) gets(name[i]);
for(i=0;i<5;i++){ for(j=i+1;j<5;j++){
if(strcmp(name[i],name[j])>0){
strcpy(temp,name[j]);
strcpy(name[j],name[i]);
strcpy(name[i],temp);
}}}
printf("\n the name in assending  orde3ri are:");
for(i=0;i<5;i++){ printf("\n%s",name[i]);  }
getch();}
```

WAP to read string form user and reverse it without using string related library functions

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main(){ char input[40],rev[40]; int length=0,i,j; clrscr();
printf("Enter string of your choice\t"); gets(input);
i=0;
while(input[i]!='\0'){
length++; i++;}
i=length-1;
for(j=0;j<length;j++,i--){ rev[j]=input[i];}
rev[j]='\0';
printf("the rev string is:%s", rev);
getch();}
```

WAP program to concatenate two strings. Don't use library files

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main(){
char st1[20],st2[20],con[40]; int lenst1=0,lenst2=0,i,j; clrscr();
printf("Enter first string"); gets(st1);
printf("Enter second string"); gets(st2); i=0;
while(st1[i]!='\0'){
lenst1++; i++;} i=0;
while(st2[i]!='\0'){
lenst2++; i++;}
for(i=0;i<lenst1;i++)
con[i]=st1[i]; j=0;
for(i=lenst1;i<(lenst1+lenst2);i++,j++)
con[i]=st2[j]; con[i]='\0';
printf("\n the concanate string %s and %s is %s",st1,st2,con);
getch();}
```

WAP to reAd form keyboard and output a list of ASCII code which represent your name

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main(){ char name[40]; int len,i; clrscr();
printf("Enter our name\t"); gets(name);
len=strlen(name);
printf("\n the ascii value  use in %s\n",name);
for(i=0;i<len;i++) printf("\t%d",name[i]);
getch();}
```

WAP to read string and search specific word in given string.

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
#define size 50
void main(){  char input[size]="", search[size]="";
char temp[size]="", isfound='N';
int i,i1,i2,j,k;  clrscr();
printf("Enter string\t");  gets(input);
printf("Enter  choice  to be searched");
gets(search);
i1=strlen(input);
i2=strlen(search);
for(i=0;i<=(i1-i2);i++){  for(j=i,k=0;j<(i2+i);j++) {
temp[k]=input[j]; k++; }
if(strcmp(temp,search)==0){    isfound='Y';
break;  }  }
if (isfound=='Y')printf("\nstring is found");
else   printf("\n not found");
 getch(); }
```

WAP that takes string form the user and convert the all the character to upper case if they are in lowercase and vice versa

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
#define size 50
void main(){  char input[size];  int i,nn;  clrscr();
printf("Enter character"); gets(input);
nn=strlen(input);
for(i=0;i<nn;i++){ if(input[i]>=65&&input[i]<=90)
input[i]=(input[i]+32);
else if(input[i]>=97&&input[i]<=122)
input[i]=(input[i]-32);}
printf("The string after changing case is\t%s",input);
getch(); }
```