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```
#include<stdio.h>

int main(){
    int n,i,r;
    printf("Enter the size of array:");
    scanf("%d",&n);
    printf("Enter elements to be rotated:");
    scanf("%d",&r);
    int a[n];
    for(i=0;i<n;i++){
        scanf("%d",&a[i]);
    }
    for(i=0;i<r;i++){
        int t=a[0];
        for(int j=0;j<n-1;j++)
        {
            a[j]=a[j+1];
        }
        a[n-1]=t;
    }
    for(int i=0;i<=n;i++)
        printf("%d",a[i]);
}
```

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```
#include<stdio.h>

int main(){
    int i,j;
    for(i=1;i<=5;i++){
        for(j=5;j>=i;j--){
```

```

        printf("*");
    }
    printf("\n");

}

return 0;
}

```

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//C program to check entered character is alphabet ,digit or special charcater

```
#include<stdio.h>
```

```
int main()
```

```

{
    char c;
    printf("Enter any character:");
    scanf("%c",&c);
    if((c>='a'&& c<='z') || (c>='A' && c<='Z')){
        printf("%c is an alphabet",c);
    }
    else if(c>='0' && c<='9')
    {
        printf("%c is a digit",c);
    }
    else{
        printf("%c is a special character",c);
    }

    return 0;

}

```

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//C program to print factorial of a number

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
    int a,i;
```

```
    scanf("%d",&a);
```

```
    int product=1;
```

```
    for(i=a;i>=1;i--)
```

```
    {
```

```
        product=product*i;
```

```
    }
```

```
    printf("Factorial of a given number is %d",product);
```

```
    return 0;
```

```
}
```

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//C program to print fibonacci series upto n terms

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
    int r,i,n;
```

```
    printf("Enter n:");
```

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

```
    int a=0;
```

```
    int b=1;
```

```
    printf("Fibonacci series: %d\n %d\n",a,b);
```

```
    for ( i=1 ; i<=n-2 ;i++){
```

```
        r=a+b;
```

```
        printf("%d\n",r);
```

```
        a=b;
```

```
        b=r;
```

```

    }
    return 0;
}
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#include<stdio.h>
int main(){
    int a;
    scanf("%d",&a);
    switch(a%2==0){
        case 0:printf("Number is odd");
        break;
        case 1:printf("number is even");
        break;
        default:printf("invalid number!");
    }
    return 0;
}

```

```

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#include<stdio.h>
int main(){
    int a,b,i;
    scanf("%d %d",&a,&b);
    for(i=1;i<=a*b;i++){
        if(i%a==0&&i%b==0)
            break;

    }
    printf("%d",i);
    return 0;
}

```

```
}
```

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// C program to find greatest of three number using nested-if else

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
    int a,b,c ;
```

```
    printf("Enter value of a:");
```

```
    scanf("%d",&a);
```

```
    printf("Enter value of b:");
```

```
    scanf("%d",&b);
```

```
    printf("Enter value of c:");
```

```
    scanf("%d",&c);
```

```
    if(a>b)
```

```
    {
```

```
        if(a>c)
```

```
        printf("a is greater");
```

```
        else
```

```
        printf("c is greater");
```

```
    }
```

```
    else{
```

```
        if(b>c)
```

```
        printf("b is greater");
```

```
        else
```

```
        printf("c is greater");
```

```
    }
```

```
    return 0;
```

```
}
```

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//C program to interchange two values by using assignment operator

```

#include<stdio.h>

int main()
{
    int a,b,c;
    printf("Enter a:");
    scanf("%d",&a);
    printf("Enter b:");
    scanf("%d",&b);

    c=a;
    a=b;
    b=c;

    printf("value of a is %d\n ",a);
    printf("value of b is %d ",b);

    return 0;
}

```

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//C program to input cost price ,selling price and maintenance price and calculate profit and loss along with percentage

```

#include<stdio.h>

int main()
{
    float c,s,m,a,t;
    printf("Enter cost price:");
    scanf("%f",&c);
    printf("Enter selling price:");
    scanf("%f",&s);
    printf("Enter maintenance price:");
    scanf("%f",&m);

    a=c+m;

    if(a<s){
        t=s-a;
    }
}

```

```

float f=(t/c)*100;

printf("Profit is %f",t);

printf("Profit percentage is %f",f);

}

else{

float u=a-s;

printf("Loss is %f",u);

printf("loss percentage is %f",(u/a)*100);

}

return 0;

}

```

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```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
int a,b;
```

```
printf("Enter value of a:");
```

```
scanf("%d",&a);
```

```
printf("Enter value of b:");
```

```
scanf("%d",&b);
```

```
a=a^b;
```

```
b=a^b;
```

```
a=a^b;
```

```
printf("value of a after swapping is %d\n",a);
```

```
printf("value of b after swapping is %d",b);
```

```
return 0;
```

```
}
```

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```
#include<stdio.h>
```

```

int main(){
    int n,i,size;
    printf("Enter the size of array:");
    scanf("%d",&n);
    int a[n];
    for(i=0;i<n;i++){
        printf("Enter the element of array:");
        scanf("%d",&a[i]);
    }
    i=0;
    int j=size-1;
    printf("Reverse of an array:");
    while(i<j){

        int t=a[i];
        a[i]=a[j];
        a[j]=t;
        i++;
        j--;

    }
    for(i=0;i<n;i++){
        printf("%d",a[i]);
    }

    return 0;

}

```



```

int main(){
    int n,i,j,r;

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

    scanf("%d",&n);

    printf("Enter the number of times of rotation:");

    scanf("%d",&r);

    int a[n];

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

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

    }

    for(i=1;i<=r;i++){

        int t=a[0];

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

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

        }

        a[n-1]=t;

    }

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

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

    return 0;

}

```

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```

#include<stdio.h>

```

```

int main(){
    int n,i,j,k;

    scanf("%d",&n);

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

        for(j=1;j<i;j++){

            printf(" ");

        }

    }
}

```

```
for(k=n;k>=i;k--){
```

```
printf("* ");
```

```
}
```

```
printf("\n");
```

```
}
```

```
return 0;
```

```
}
```

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//c program to find average of all odd numbers in given range

```
#include<stdio.h>
```

```
int main(){
```

```
int start,end,i,count=0;
```

```
printf("Enter starting value:");
```

```
scanf("%d",&start);
```

```
printf("Enter end value:");
```

```
scanf("%d",&end);
```

```
int sum=0;
```

```
for(i=start;i<=end;i++){
```

```
    if(i%2!=0){
```

```
        sum=sum+i;
```

```
        count++;
```

```
}
```

```
}
```

```
printf("%d\n",sum);
```

```
printf("%d\n",count);
```

```
float average=sum/count;
```

```
printf("%f\n",average);
```

```
return 0;
```

```
}
```

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```
#include<stdio.h>
```

```
int main(){
```

```
    int n,i,j,k;
```

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

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

```
        for( j=n;j>i;j--){
```

```
            printf(" ");
```

```
        }
```

```
        for(k=1;k<=i;k++){
```

```
            printf("*");
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

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//WAP to make your self pow function named power using function

```
#include<stdio.h>
```

```
void power(int ,int);
```

```
int main(){
```

```
    int a,n,i;
```

```
    printf("Enter base:");
```

```
    scanf("%d",&a);
```

```
    printf("Enter power:");
```

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

```
    power(a,n);
```

```

        return 0;
    }
    void power(int a,int n){
        int power=1;
        while(n>0){
            power=power*a;
            n--;
        }
        printf("%d",power);

    }
    43

```

```

#include<stdio.h>
int m=3;
int n=3;
void print2D(int a[3][3])
{
    int i,j;
    for(i=0;i<m;i++)
    {
        for(j=0;j<m;j++)
            printf("%d",a[i][j]);
        printf("\n");
    }
}
int main()
{
    int i,j;

```

```

        int b[3][3];

        for(i=0;i<3;i++){
            for(j=0;j<3;j++){
                scanf("%d",&b[i][j]);
            }

            print2D(b);

            return 0;
        }

```

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//WAP to take a string from user reverse it

```
#include<stdio.h>
```

```
#include<string.h>
```

```
int main(){
```

```
    int i,j,count=0;
```

```
    int str[100],rev[100];
```

```
    printf("Enter any statement:");
```

```
    scanf("%[^\n]s",str);
```

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

```
        count++;
```

```
    }
```

```
    j=count-1;
```

```
    for(i=0;i<count;i++){
```

```
        rev[i]=str[j];
```

```
        j--;
```

```
    }
```

```
    printf("Reverse string:%s",rev)
```

```
;
```

```
    return 0;
```

```
}
```

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//WAP to take an input from user and delete an element from all position which is told by user

```
// 1 3 4 3 2
```

```
#include<stdio.h>
```

```
int main(){
```

```
    int n,i=0,value,j;
```

```
    printf("Enter the size of array:");
```

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

```
    printf("Enter the element to be deleted:");
```

```
    scanf("%d",&value);
```

```
    int a[n];
```

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

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

```
    while(i<n){
```

```
        if(a[i]==value){
```

```
            for(j=i;j<n;j++){
```

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

```
            }
```

```
        }
```

```
        else
```

```
            i++;
```

```
    }
```

```
    printf("%d",a[j]);
```

```
}
```

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//WAP to take a string from user and count the total number of words in it

```
#include<stdio.h>
```

```

#include<string.h>

int main(){
    int i,count=0;
    char str[100];

    scanf("%[^\n]s",str);
    while(str[i]!='\0'){
        if(str[i]==' '){
            count++;
            i++;
        }
    }

```

```

printf("Total number of words in string :%d",count+1);
return 0;
}

```

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//WAP to input a 2D array m\*n and find the sum of individual rows and columns

```

#include<stdio.h>

int main()
{
    int m,n,i,j;
    printf("no of rows:");
    scanf("%d",&m);
    printf("no. of columns:");
    scanf("%d",&n);
    int a[m][n];

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

```

```

        for(j=0;j<n;j++){
            printf("Element a%d%d:",i+1,j+1);
            scanf("%d",&a[i][j]);
            sum=sum+a[i][j];
        }
        printf("Sum of %d row:%d\n",i+1,sum);
    }

    for(j=0;j<n;j++){
        int sum=0;
        for(i=0;i<m;i++){
            printf("Element a%d%d:",i+1,j+1);
            scanf("%d",&a[i][j]);
            sum=sum+a[i][j];
        }
        printf("Sum of %d column:%d\n",j+1,sum);
    }

    return 0;

```

}

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//WAP to input an array of size m\*n and find the sum and average of all the elements

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
int m,n,i,j,count=0,sum=0;
```

```
float avg;
```

```
printf("no of rows:");
```

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

```
printf("no. of columns:");
```

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

```
int a[m][n];
```



```

        for(i=0;i<m;i++){
            for(j=0;j<n;j++){
                printf("Element a%d%d:",i+1,j+1);
                scanf("%d",&a[i][j]);
                sum=sum+a[i][j];
                count++;
            }
        }

        printf("sum of all the elements in a matrix :%d\n",sum);
        avg=(float)sum/count;
        printf("Average of all the elements of a matrix:%f",avg);
        return 0;
    }
}

```

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//WAP to input a 2D array and find the sum of all diagonal elements

```

#include<stdio.h>

int main()
{
    int m,n,i,j,sum1=0,sum2=0;
    printf("no of rows:");
    scanf("%d",&m);
    printf("no. of columns:");
    scanf("%d",&n);
    int a[m][n];

    for(i=0;i<m;i++){
        for(j=0;j<n;j++){
            printf("Element a%d%d:",i+1,j+1);
            scanf("%d",&a[i][j]);
        }
    }
}

```

```

        for(i=0;i<m;i++){
        for(j=0;j<n;j++){
            printf("%d ",a[i][j]);

            }

            printf("\n");

        }

        if(m==n){
            for(i=0;i<m;i++){
            for(j=0;j<n;j++){
                if(i==j){
                    sum1=sum1+a[i][j];
                }
            }
            }

            for(i=0;i<m;i++){
            for(j=0;j<n;j++){
                if(i+j==n-1){
                    sum2=sum2+a[i][j];
                }
            }
            }

            printf("Sum of all diagonal elements:%d\n",sum1);
            printf("Sum of all anti diagonal elements:%d",sum2);

        }

        else{

            printf("Not a square matrix");

        }

        return 0;

    }

```

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//WAP to count frequency of a given value to array

#include<stdio.h>

```
int main()
{
    int n,a,i,count=0;
    printf("Enter the size of array:");
    scanf("%d",&n);
    printf("value to be checked:");
    scanf("%d",&a);
    int b[n];
    for(i=0;i<n;i++){
        scanf("%d",&b[i]);
        if(b[i]==a)
            count++;
    }
    printf("%d comes %d times in array",a,count);
    return 0;
}
```