WAP to read n and calculate sum of the series (1+2+3+4..n)

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int n,sum=0,i;
        clrscr();
        printf("\n Enter n: ");
        scanf("%d",&n);
        for(i=1;i<=n;i++)
        {
                sum+=i;
        }
        printf("The sum is:%d",sum);
        getch();
}
```

WAP program to calculate (2+4+6+8----n)

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int n,sum=0,i,term;
        clrscr();
        printf("\n Enter n: ");
        scanf("%d",&n);
        for(i=1,term=2;i<=n;i++,term+=2)
        {
                sum+=term;
        }
        printf("The sum is:%d",sum);
        getch();
}
```

WAP to calculate $1^2+2^2+3^2+4^2+5^2$--- $+n^2$

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int n,sum=0,i;
        clrscr();
        printf("\n Enter n: ");
        scanf("%d",&n);
        for(i=1;i<=n;i++)
        {
                sum+=i*i;
        }
        printf("The sum is:%d",sum);
        getch();
}
```

WAP to calculate $2^3+4^3+6^3+8^3---+n^3$

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int n,sum=0,i,term;
        clrscr();
        printf("\n Enter n: ");
        scanf("%d",&n);
        for(i=1,term=2;i<=n;i++,term+=2)
        {
                sum+=term*term*term;
        }
        printf("The sum is:%d",sum);
        getch();
}
```

WAP to calculate $1+1/x+1/x^2+1/x^3\ldots\ldots\ldots+1/x^n$

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int n,i;  float sum=1,term=1,x;
        clrscr();
        printf("\n Enter n: and x");
        scanf("%d%f",&n,&x);
        for(i=1;i<=n;i++)
        {
                term*=1/x;
                sum+=term;
        }
        printf("The sum is:%f",sum);
        getch();
}
```

WAP program to read two integer n1 and n2 whether n1<n2. Display all even numbers between these two numbers. Also count the frequency of these even numbers.

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int n1,n2,count=0, i;
        clrscr();
        printf("\n Enter n1: and n2");
        scanf("%d%d",&n1,&n2);
        if(n1>n2)
        {
                printf("enter number n1<n2");
                exit(1);
        }
        if(n1%2==0)
                i=n1;
        else
                i=n1+1;

        printf("Even numbers are:");
        for(;i<=n2;i+=2)
        {
                count++;
                printf
                ("the number of even between %d and%d is :%d",n1,n2,count);
        }
        getch();
}
```

WAP to find the numbers and sum of all integers greater than n1 and less than n2 and divisible by 7 where n1<n2 and n1 and n2 are given form user.

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int n1,n2,count=0,i,sum=0;
        clrscr();
        printf("\n Enter n1: and n2");
        scanf("%d%d",&n1,&n2);
        if(n1>n2)
        {
                printf("Enter number n1<n2\t");
        }
        else
        {
                for(i=n1+1;i<n2;i++)
                {
                        if(i%7==0)
                        {
                                count++;
                                sum+=i;
                        }
                }
                printf("the sum is: %d",sum);
                printf("the number of int greater than %d, Less than %d and divisible
                by 7 is: %d",n1,n2,count);
        }
        getch();
}
```

WAP to find cubes and square of first 10 natural numbers

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int i;
        printf("\n The square and cubes: ");
        for(i=1;i<=10;i++)
        {
                printf("\n%d\t%d\t%d",i,(i*i),(i*i*i));
        }
        getch();
}
```

WAP to display prime numbers from n1 to n2 where n1<n2 and n1 and n2 are read from keyboard

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int i,num,n1,n2;
        clrscr();
        printf("\nEnter n1 and n2 where n1<n2:");
        scanf("%d%d",&n1,&n2);
        printf("\n prime numbers are:");
        for(num=n1;num<=n2;num++)
        {
                for(i=2;i<num;i++)
                {
                        if(num%i==0)
                        break;
                }
                if(i==num)
                {
                        printf("\t%d",num);
                }
        }
        getch();
}
```

WAP program to display Pyramid of numbers

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int i,j,n=5;
        clrscr();
        for(i=1;i<=n;i++)
        {
                for(j=1;j<=n-i;j++)
                        printf("\t");  //to print space
                for(j=i;j<=2*i-1;j++)
                        printf("\t%d",j);
                for(j=2*i-2;j>=i;j--)
                        printf("\t%d",j);
                printf("\n"); //to change line
        }
        getch();
}
```

WAP to print Reverse pyramid of numbers

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int i,j,n=5;
        clrscr();
        for(i=0;i<n;i++)
        {
                for(j=n-i;j<=2*n-2*i-1;j++)
                        printf("\t%d",j);
                for(j=2*n-2*i-2;j>=n-i;j--)
                        printf("\t%d",j);  printf("\n");
                for(j=0;j<=i;j++)
                        printf("\t");
        }
        getch();
}
```

WAP to find the terms of fibonacci series

```
#include<stdio.h>

int main()
{
  int n, first = 0, second = 1, next, c;

  printf("Enter the number of terms\n");
  scanf("%d",&n);

  printf("First %d terms of Fibonacci series are :-\n",n);

  for ( c = 0 ; c < n ; c++ )
  {
    if ( c <= 1 )
      next = c;
    else
    {
      next = first + second;
      first = second;
      second = next;
    }
    printf("%d, ",next);
  }

  return 0;
}
```

WAP to print diamond shape

```
#include <stdio.h>

int main() {

	int rows, a, b, space;

	printf("Enter number of rows:");
	scanf("%d", &rows);
	//Or use scanf_s to prevent buffer overloading
	//scanf_s("%d", &rows, 1);

	// Print first half of the triangle.
	space = rows - 1;
	for ( b = 1 ; b <= rows ; b++ ) {
		for ( a = 1 ; a <= space ; a++ )
			printf(" ");
		space--;
		for ( a = 1 ; a <= 2*b-1 ; a++)
			printf("*");
		printf("\n");
	}

	// Print second half of the triangle.
	space = 1;
	for ( b = 1 ; b <= rows - 1 ; b++ ) {
		for ( a = 1 ; a <= space; a++)
			printf(" ");
		space++;
		for ( a = 1 ; a <= 2*(rows-b)-1 ; a++ )
			printf("*");
		printf("\n");
	}
	return 0;
}
```

WAP to check whether a given string is palindrome or not

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

int main()
{
  char text[100];
  int begin, middle, end, length = 0;
  printf("Enter a text: ");
  gets(text);

  length=strlen(text);

  end = length - 1;
  middle = length/2;

  for( begin = 0 ; begin < middle ; begin++ )
  {
    if ( text[begin] != text[end] )
    {
      printf("Not a palindrome.\n");
      break;
    }
    end--;
  }
  if( begin == middle )
    printf("Palindrome.\n");

  return 0;
}
```

WAP to check Armstrong number

```
#include<stdio.h>
#include<conio.h>
void main()
{
        int num,sum=0,r,a;
        printf("Enter a number");
        scanf("%d",&num);
        a=num;
        while (num!=0)
        {
                r=num%10;
                sum=sum+r*r*r;
                num=num/10;
        }
        if(sum==a)
                printf("armstrong");
        else
                printf("not armstrong");
        getch();
}
```