26 print his pattern.

```
123454321
1234 4321
123     321
12       21
1         1
12       21
123     321
1234 4321
123454321
```

```cpp
#include <iostream.h>
#include <conio.h>
void main() {
   int e=-1;
clrscr();
   for(int a=5;a>=1;a--)
   {
     for(int b=1;b<=a;b++)
        cout<<b;
     for(int c=1;c<=e;c++)
     cout<<" ";
   e+=2;
     if(a==5)
        cout<<"\b";
     for(int d=a;d>=1;d--)
        cout<<d;
   cout<<endl;
   }
 e=5;
   for(int a=2;a<=5;a++)
   {
```

```
        for(int b=1;b<=a;b++)

            cout<<b;

        for(int c=1;c<=e;c++)

        cout<<" ";

    e-=2;

        if(a==5)

            cout<<"\b";

        for(int d=a;d>=1;d--)

            cout<<d;

    cout<<endl;

    }

    getch();

}
```

27. write a program in C++ to find out the area of rectangle how many time we want.

```
#include <iostream.h>

#include <conio.h>

void main() {

    double len,wid,ar;

    char ch;

    do{

        clrscr();

        cout<<"\nEnter length and width of rectangle:->";

        cin>>len>>wid;

        ar=len*wid;

        cout<<"Area of rectangle="<<ar;

        cout<<"\n if you want to continue then press Y/y:->";

        ch=tolower(getche());

    }

    while(ch=='y');

    getch();

}
```

output

Enter length and width of rectangle:->6

5

Area of rectangle=30

 if you want to continue then press Y/y:->y

28. Write a program in C++ to check given number is prime number not prime number using function.

```cpp
#include <iostream.h>

#include <conio.h>

void prime();

void main() {

 prime();

   getch();

}


void prime()

{

 long int number,i,count=0;

clrcsr();

 cout<<"Enter a positive integer: ";

 cin>>number;


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

 {

if (number % i == 0)

 {

count++;

 }  }

 if(count==2)

 cout<<number<<" is a prime number.\n";

 else
```

```cpp
cout<<number<<" is not a prime number.\n";
}
```

Output

Enter a positive integer: 79

79 is a prime number.

OR

```cpp
#include <iostream.h>
#include <conio.h>
void prime();
void main() {
 prime();
   getch();
}


void prime()
{
 long int number,i;
clrscr();
 cout<<"Enter a positive integer: ";
 cin>>number;
 if(number==2)
 cout<<number<<" is a prime number.\n";
 else
 {
for (i = 2; i <= number/2; i++)
{
if (number % i == 0)
{
break;
```

```
    }

  }

 if(i==number/2)

 cout<<number<<" is a prime number.\n";

 else

 cout<<number<<" is not a prime number.\n";

}

}
```

29. Write a program in C ++ to reverse the digits of a given number using function.

```cpp
#include <iostream.h>

#include <conio.h>

void reversed();

void main() {

  reversed();

    getch();

}

void reversed()

{

long int number, reversed = 0, remainder;

 //clrscr();

 cout<<"Enter an integer: ";

 cin>>number;

 while (number != 0)

 {

 remainder = number % 10;

 reversed = (reversed * 10) + remainder;

 number /= 10;

 }

 cout<<"Reversed number="<< reversed;

}
```

Output

Enter an integer: 234

Reversed number=432

30. Write a program in C++ to check the given number is palindrome numbers using function.

```
#include <iostream.h>
#include <conio.h>
void palindrome();
void main() {
  palindrome();
    getch();
}


void palindrome()
{

long int number, reversed = 0, remainder,original;
 clrscr();
 cout<<"Enter an integer: ";
 cin>>number;
 original = number;
 while (number != 0)
 {
 remainder = number % 10;
 reversed = reversed * 10 + remainder;
 number /= 10;
 }
 if (original == reversed)
```

```
{
cout<<original<<" is a palindrome number.\n";

}
else {
cout<<original<<"is not a palindrome number.\n";

}
}
```

Output

Enter an integer: 456

456 is not a palindrome number.

31. Write a program in C++ to check the given number is Armstrong number or not Armstrong number using function.

```cpp
#include <iostream.h>

#include <conio.h>

#include<math.h>

void Armstrong();

void main() {

 Armstrong();

   getch();

}


void Armstrong()

{


 int num ,n,r,count=0,arm=0;

clrscr();

 cout<<"Enter a number:";

cin>>num;

 n=num;

 while(n!=0)
```

```cpp
{
n/=10;

count ++;

}

n=num;

while(n!=0)

{

r=n%10;

arm+=pow(r,count);

n=n/10;

}

if(arm==num)

cout<<"It is Armstrong";

else

cout<<"It is not Armstrong";

}
```

Output

Enter a number:1634

It is Armstrong

32. Write a program in C++ to generate Fibonacci series using function.

```cpp
#include <iostream.h>

#include <conio.h>

#include<math.h>

void Fibonacci();

void main() {

 Fibonacci();

getch();

}
```

```cpp
void Fibonacci()
{
 int n ,t1=0,t2=1,next,i;
 cout<<"Enter a number:";
 cin>>n;
 cout<<"Generate Fibonacci series:->\n";
 for(i=1;i<=n;i++)
 {
 cout<<t1<<",";
 next=t1+t2;
 t1=t2;
 t2=next;
 }
 cout<<"\b.";
}
```

output

Enter a number:15

Generate Fibonacci series:->

0,1,1,2,3,5,8,13,21,34,55,89,144,233,377.

33. Write a program in C++ to find out the factorial of given number using recursion functions.

```cpp
#include <iostream.h>
#include <conio.h>
long int factorial(long int n);
void main() {
   long int num,a;
   cout<<"Enter a number:->";
   cin>>num;
   a= factorial(num);
   cout<<"factorial of given number= "<<a;
```

```
    getch();
}


long int factorial(long int n)
{
    if(n==0)
        return 1;
    else
        return n*factorial(n-1);
}
```

Output

Enter a number:->7

factorial of given number= 5040