1- create a class to implement Stack which is an ordered collection of items in which new data items may be added to or deleted from only one end, called the top of the stack the addition and deletion in a stack is done from the top of the stack, the last added element will be first removed from the stack. That is why the stack is also called Last-in- First-out (LIFO).

A stack is said to be empty or underflow, if the stack contains no elements. At this point the top of the stack is present at the bottom of the stack. A stack is overflow when it becomes full, i.e., no other elements can be pushed onto the stack.

data member of this class is:

int data[MAX]

int top;

function member of this class is:

push(); // Pushes the element onto the stack.

pop();   // Returns the element on the top of the stack, removing it in the process.

peek( ); // Returns the element on the top of the stack, but does not remove it.

isempty(); // Returns true if the stack is empty, and returns false if the stack contains elements.

isfull(); // Returns true if the stack is full .

2- create a class to implement Complex number and overloading the complex operations using operator overloading.

3- Write a program that defines a shape class with a constructor that gives value to width and height. The define two sub-classes triangle and rectangle, that calculate the area of the shape area (). In the main, define two variables a triangle and a rectangle and then call the area() function in this two variables.

4- Write a program with a mother class and an inherited daugther class.Both of them should have a method void display ()that prints a message (different for mother and daugther).In the main define a daughter and call the display() method on it.