

## Experiment - 2

- Aim :- (i) WAP to display a greet message according to the marks obtained by the student.  
(ii) WAP to calculate the area of the circle by taking input as a radius.  
(iii) WAP to find sum and average of n numbers taken from the user.  
(iv) WAP to implement stack using Stack class.

Software Used :- Net-Beans IDE 8.0

### Theory :-

Stack :- A stack is a linear data structure which follows a particular order in which the operations are performed. The order may be LIFO (Last in First Out) or FILO (First in Last Out).

Ex:- Plates stacked over one another.

### Stack Class in Java :-

Java Collection framework provides a Stack class which models and implements Stack data structure. The class is based on the basic principle of last-in-first-out. In addition to the basic push and pop operations, the class provides three more functions of empty, search and peak.

### Methods in Stack class :-

1. Object push(Object element) :- Pushes an element on the top of the stack.
2. Object pop() :- Removes and returns the top element of the stack.
3. Object peek() :- Returns the element on the top of the stack, but does not remove it.
4. boolean empty() :- It returns true if nothing is on the top of the stack. Else, returns false.
5. int search(Object element) :- It determines whether an object exists in the stack. If the element is found, it returns the position of the element from the top of the stack. Else, it returns -1.

Result :- Successfully implemented the given program and Stack class.