CLASS TEST – 2

1. Write a function that reverses the letters of the words in a string and outputs a new string with the reversed words. The words in the string are delimited by a '.' symbol. For example, if the input string is: www.google.com , then the output string should be : www.elgoog.moc .
2. Write a function that reverses the order of the words in a string and outputs a new string with the words in reversed order. The words in the string are delimited by a '.' symbol. For example, if the input string is: www.google.com , then the output string should be : com.google.www .
3. A ***stack*** is an ordered collection of items into which new items may be inserted and from which items may be deleted at one end, called the top of the stack or the ***stacktop***.

Given a stack ***s***, and an item ***i***, performing the operation ***push(s, i)*** adds the item ***i*** to the top of the stack and then PRINT the stack. Similarly, the operation ***pop(s)*** removes the top element and returns it as a function value and then PRINT the stack.

Write a menu driven program that enables the user to insert an element into the stack or remove an element from the stack any number of times as he/she wishes. Finally, when the user wants to perform no more operations the program should terminate and PRINT the stack.

If he/she tries to perform any erroneous operation (like removing an element from an empty stack or adding an element to a full stack), the error message has to be printed.

PRINT is a function where the following is printed as output

(a) the top element of the stack ,

 (b) the base element of the stack

 (c) all the elements present in the stack at that instant.

 The menu should be as follows :

 1. insert an element into the stack.

 2. remove an element into the stack.

 3. do nothing and come out of the program.

 Data inputted should have value greater than 100. Stack size = 5.

 Input 1 101

 Output Top = 101 Base = 101 Elements = 101

1. A ***queue*** is an ordered collection of items into which new items may be deleted at one end (called the ***front*** of the queue) and into which items may be inserted at the other end *(*called the ***rear*** of the queue*)*. Given a queue ***s***, and an item ***i***, performing the operation ***insert(s, i)*** adds the item ***i*** to the rear of the queue and then PRINT the queue. Similarly, the operation ***remove(s)*** removes the front element of the queue and returns it as a function value and then PRINT the queue.

 Write a menu driven program that enables the user to insert an element into the queue or remove an element from the queue any number of times as he/she wishes. Finally, when the user wants to perform no more operations or tries to perform any erroneous operation (like removing an element from an empty queue or adding an element to a full queue) the program should terminate and PRINT the queue.

PRINT is a function where the following is printed as output

 (a) the front element of the queue ,

 (b) the rear element of the queue

 (c) all the elements present in the queue at that instant.

 The menu should be as follows :

1. insert an element into the queue.
2. remove an element into the queue.
3. do nothing and come out of the program.

 Hint: Make Rear and Front Global variables.

 Data inputted should have value greater than 100. Queue size = 5.

 Input 1 101

 Output Front = 101 Rear = 101 Elements = 101