

**Lab Goal :** This lab was designed to teach you more about recursion.

**Lab Description :** Write a program that takes in a string of unique characters and generates all possible permutations of the letters.

### Sample Data :

ABC  
abc  
boat  
it

### Files Needed ::

Permutation.java  
Lab09e.java

### Sample Output :

PERMUTATION OF WORD :: ABC  
ABC  
ACB  
BAC  
BCA  
CAB  
CBA

PERMUTATION OF WORD :: abc  
abc  
acb  
bac  
bca  
cab  
cba

PERMUTATION OF WORD :: boat  
boat  
bota  
baot  
bato  
btoa  
btao  
obat  
obta  
oabt  
oatb  
otba  
otab  
abot  
abto  
aobt  
aotb  
atbo  
atob  
tboa  
tbao  
toba  
toab  
tabo  
taob

PERMUTATION OF WORD :: it  
it  
ti

### algorithm help

If the length of new and original string match

print out new String

else

loop from beginning to end of original

if the current char in original does not exist in new string

recursive call with original and new plus current char