String

In a file name (say a.java) type following program. The file can be compiled by command javac a.java. To run the program give command java kapil.

```
import java.io.*;
class kapil
{ public static void main(String args[]) throws Exception
  { DataInputStream o=new DataInputStream(System.in);
    String a,b; System.out.println("Give a string"); a=o.readLine( );
b=a.substring(2,5);
    System.out.println(b);
  }
}
```

The program outputs sub string between positions 2 and 5 (including 2 but excluding 5). The first letter is at 0th position. e.g. input qwertyuiuo output ert.

```
b=a.substring(4);System.out.println(b);
```

The program outputs string on and after 4th position. input qwertyuiuo output tyuiuo

```
String a,b,c; System.out.println("Give two strings"); a=o.readLine( ); b=o.readLine( );
c=a+b; System.out.println(c);
```

The program takes two strings and joins them.

1. Write program to remove 2nd letter. Let the input string is pwsxtpbcderxrtxgt then output is pwxtpbcderxrtxgt. I/p gkxmcxu O/p gkmcxu.
2. Write program to insert ‘t’ between 1st and 2nd letter. In above case pwtsxtpbcderxrtxgt. [Hint: a+"t"+b]. I/p gkxmcxu O/p gktxmcxu.
3. Write program to add 0th letter in the beginning. ppwsxtpbcderxrtxgt and ggkxmcxu.
4. Write program to exchange first two letters. wpsxtpbcderxrtxgt and kgxmcxu.
5. Exchange the string before 3rd letter with string after 3rd letter. tpbcderxrtxgtxpws and cxumgkx.
6. Write program to exchange 3rd and 4th letters. pwstxpbcderxrtxgt and gkxcmxu.
7. Write program to exchange 4th and 10th letter. pwsxrpbcdetxrtxgt and error.

```
System.out.println("Give a string"); a=o.readLine();
int i=a.indexOf('x'); System.out.println(i);
```

At what location 'x' is present. If more than one occurrence of 'x' is there then the location of first 'x' is returned. If 'x' is absent then –1 is returned. e.g. input wedxtyhxu output 3

```
int i;String a,b,c,d; a=o.readLine();i=a.indexOf('x');
b=a.substring(0,i);c=a.substring(i+1);
d=b+c; System.out.println(d);
```

The first 'x' in the given string is deleted.

8. Write a program, which reads a string and finds string after the first x. Let the input string is pwsxtpbcderxrtxgt then output is tpbcderxrtxgt. I/p pkxmcxu O/p mcxu.
9. Program to replace first x by y. In above cases pwsytpbcderxrtxgt and pkymcxu.
10. Program to print the string between 1st and 2nd x. In above cases tpbcder and mc.
11. Program to delete first two x’s. In above cases pwstpbcderrtxgt and pkmcu.
12. Program to find string before 2nd x. In above cases pwsxtpbcder and pkxmc.
13. Program to output the location of second x. In above cases 11 and 5.
14. Program to replace 2nd x by ‘y’. In above cases pwsxtpbcderyrtxgt and pkxmcyu.

15. Delete the string between 1st and 2nd x. In above cases pwsxxrtxgt and pkxxu.
16. Exchange the string between 1st and 2nd x, with the string before 1st x. In above cases tpbcderxpwsxrtxgt and mcxpkxu.
17. Exchange neighbors of first x. In above cases pwtxspbcderxrtxgt and pmxkcxu.

```
a=o.readLine( );a=a.trim( );
i=a.indexOf(' ');b=a.substring(0,i);
System.out.println("["+b+"]");
```

Print first word. Trim removes blank spaces at the beginning and at the end. If it is not used then the problem will arise if blanks are given at the beginning. The program will not work if string has only one word. If string is ram Prasad dey then output is ram.

18. Print second word. In above case Prasad.
19. Delete second word. In above case ram dey.
20. Exchange first and second word. In above case Prasad ram dey.
21. Exchange first letters of first two words. In above case Pam rrasad dey.
22. Exchange last letters of first two words. In above case rad Prasam dey.
23. Find the location of first 'a' in second word. In above case 6.
24. Find location of 0th letter of first word in second word. In above case 1. Because 1st word is ram. Its 0th letter is 'r'. The second word is Prasad. The location of 'r' is 1.

```
a=o.readLine( );b=o.readLine( ); i=a.compareTo(b);System.out.println(i);
```

Input two strings. Output is 0 if both are same. If second string is (lexicographically) bigger then a negative number is outputted. If first string is bigger then some positive number is outputted. Example: if input strings are "ram" and "anil" then output is a positive number (17). Input "kapil" and "pankaj" output is a negative number (-5). Input "ram" and "ram" output 0. Input "ram" and "ramesh" o/p -3. Input "rat" and "ram" o/p 7.

Use of "if" is permitted in following programs.

25. Read two strings. Print lexicographically bigger string first and smaller later.
26. Read two string. Print 1 if first string is bigger, 2 if second string is bigger, 0 if both are same.
27. Read three strings. Print 1 if first string is biggest, 2 if second string is biggest, 3 if 3rd string is biggest, 0 if all are same, -1 if 1st and 2nd string are biggest, -2 if 2nd and 3rd string are biggest, -3 if 1st and 3rd string are biggest.

```
char b;a=o.readLine();b=a.charAt(2); System.out.println(b);
```

Program outputs character at location 2. e.g. input qwertyuiuo output e

28. Write program to find letter immediately after 1st 'x'. [Do not use substring] Input abxedr output 'e'.
29. Write program to find first location of 8th letter. Input abgpqrstgth output 2, since 8th letter is 'g'. Input abcdefghijklm output 8, since 8th letter is 'i'.
30. Write program to find 2nd location of 0th letter. Input pwerpty output 4.
31. Write program, which will delete 1st y immediately after 1st x. If input string is pgyeryuyixaysdyexer then output is pgyeryuyixasdyexer.
32. Write program to exchange neighbors of first occurrence of left neighbor of first 'x'. e.g. input abfcdefxgh output acfbdefxgh. [Here left neighbor of 'x' is 'f'. Neighbors of first occurrence of 'f' are 'b' and 'c'.] i/p abcdetxgh o/p abcdxtegh.
33. Write program to replace first occurrence of right neighbor of 2nd x by left neighbor of 1st x. Input imgpxugxutkl output imgpxpgxutkl. Input bcxdefxgh output bcxdefxch.
34. Write program, which reads a string. Let x and y be respectively left and right neighbors of the second occurrence of the 0th letter. Find the substring between first occurrence of y and (first occurrence of x after first occurrence of y). e.g. input patkgfmpkst output kgfm. Input pastgksfsptse output tgks. Input raklfrgmcfd output gmcf. Input ywetyykjhtl output ywet.
35. Find number of blanks between first and second word. Input ram   hari tom output 5.
36. Exchange first and second words. In above hari   ram tom. I/p   a bp k o/p [bp a k].
37. Read a string. Output its length assume that it is atmost 9. [Use only + and charAt].