Assignment on Interacting with the Environment

1. Find the file separator used by your installed OS.

2. Find the path separator used by your installed OS.

3. Print all system properties.

4. Write a java program to print null device of your system.

5. Write a program which read a path to a file as a string and modify the string according to system specify file seperator and display it.

6. Write a program which ask the user to enter a jar file name and check whether the jar file is install or not.

7. Write a program which read a user name from user and check is it the current user or not

Assignment on String

1. A Simple Text Formatter as in text book.

2. Soundex Name Comparisons.

3. Write a program to enter a string and count how many vowels present in it.

4. Write a program to enter a string and count the frequency each character present in it.

5. Write a program to enter a string and print the string in a format which says that 1st letter of each word present in the string must be printed in capital letters.

6. Write a program to enter N number of strings , arrange them in ascending order.

7. Write a program to enter a name as string and print the name in shorter manner.
   Ex: Ram Chandra Dash will become R.C.Dash

8. Write a program to check whether the entered string is a pallindrome or not.

9. Write a method that takes a delimited string to store a name and address, from which you can print a mailing label. For example, if the string contains "Sam Penn:14 Bridge St.:Hoboken, NJ 01881," the method should print the label shown in the below:
   Sam Penn

14 Bridge St.
Hoboken, NJ 01881

10. The global replace function is a string-processing algorithm found in every word processor. Write a method that takes three String arguments: a document, a target string, and a replacement string. The method should replace every occurrence of the target string in the document with the replacement string. For example, if the document is " To be or not to be, that is the question," and the target string is "be,", and the replacement string is "see," the result should be, "To see or not to see, that is the question."

11. Design and write a Java program that searches for single- digit numbers in a text and changes them to their corresponding words. For ex- ample, the string "4 score and 7 years ago" would be converted into "four score and seven years ago".

12. Write a method that converts its String parameter so that letters are written in blocks five characters long. For example, consider the following two versions of the same sentence:

Plain : This i s how we would o r d i n a r i l y w r i t e a s e n t e n c e .

Blocked : T h i s i showw ewoul dordi n a r i l ywrit easen t e n c e .

13. Write a Java program to find longest Palindromic Substring within a string
Example: The given string is: thequickbrownfoxxofnworbquickthe
The longest palindrome substring in the given string is; brownfoxxofnworb
The length of the palindromic substring is: 16

14. Write a Java program to find first non repeating character in a string .
Example: The given string is: gibblegabbler
The first non repeated character in String is: i

15. Write a java program to remove the title from a name.
Ex. Input: Mr. Sachin Tendulkar
Ms. Saina Nehwal
Output: Sachin Tendulkar
Saina Nehwal

16. Write a java program to read two string as user input and check if first contains second?

17. Write a java code to remove all occurrences of a given character from an input String?

18. Write a java code to find the longest substring without repeating characters in the given string.

19. Write a java program to check if a String contains only digits.

20. Write a java program to input a string from user and reverse each word of the string.

21. Write a java code to capitalize first alphabet of each word in a string.

22. Write a java code to swap two string variables without using third or temp variable.

23. Write a java code to move all uppercase characters to the end of string.

24. Write a java code to generate random string of a given size.

25. Write an program to print all permutations of a given String in Java. For example, if given input is "123" then your program should print all 6 permutations e.g. "123", "132", "213", "231", "312" and "321".

26. Write a Java program which will take a String input and print out a number of vowels and consonants on that String. For example, if the input is "Java" then your program should print "2 vowels and 2 consonants".

27. You are given 3 strings:first, second, and third. Third String is said to be a shuffle of first and second if it can be formed by interleaving the characters of first and second String in a way that maintains the left to right ordering of the characters from each string.
For example, given first ="abc"and second ="def", third ="dabecf" is a valid shuffle since it preserves the character ordering of the two strings. So, given these 3 strings write a function that detects whether the third String is a valid shuffle of first and second String.

28. Write a function to search for the existence of a string (target) in another string (source). The function takes two strings as the input and returns the index where the second string is found. If the target string cannot be found, then return -1. If you are a Java developer, then you can relate its behavior to indexOf() method from java.lang.String class. This question is also asked as Code and algorithm to check if a given short string is a substring of the main string. Can you get a linear solution (O(n)) if possible?

29. Write a function to implement an algorithm which will accept a string of characters and should find the highest occurrence of the character and display it. For example if input is "aaaaaaaaaaaaaaaaabbbbcddddeeeeee" it should return "a".

30. Write a Program to sort String on their length in Java? Your method should accept an array of String and return a sorted array based upon the length of String.

Assignment On Regular Expression

1. Write a program in Java to remove whitespaces from a string.

2. Write a Java program to read all mobile numbers present in given file and validate it on below criteria:

    -The first digit should contain number between 7 to 9.
    -The rest 9 digit can contain any number between 0 to 9.
    -The mobile number can have 11 digits also by including 0 at the starting.
    -The mobile number can be of 12 digits also by including 91 at the starting The number which satisfies the above criteria is a valid mobile Number.

3. Write a program to Check if given email or URL (both) addresses are valid or not.

4. Write a program to extract maximum numeric value from a given string. For example: this is "There is 60 students in csed section, 40 in cseb, and 55 in csea" input string and output is 60.

5. Write a program to demonstrate the working of splitting a text by a given pattern. The given input is "CSE1ECE2EEE3CIVIL".The output of the program is look like below:
CSE
ECE
EEE
CIVIL
Use the split () and case controlling flags to solve this.

6. Write a program to get the first letter of each word in a string using regex in Java. For example: the input string is "This is CSE Students" and output of the program is: TiCS.

7. Write a program to demonstrate the differences of various quantifiers e.g. Greedy Quantifiers VS Reluctant Quantifiers VS Possessive Quantifiers.