**TASK SHEET 4**

Problem 1:

Write a Python program to display the current date and time.

Sample Output :

Current date and time :

2014-07-05 14:34:14

Problem 2:

Write a Python program that calculates the area of a circle based on the radius entered by the user.

Sample Output :

r = 1.1

Area = 3.8013271108436504

Problem 3:

Write a Python program that accepts a sequence of comma-separated numbers from the user and generates a list and a tuple of those numbers.

Sample data : 3, 5, 7, 23

Output :

List : ['3', ' 5', ' 7', ' 23']

Tuple : ('3', ' 5', ' 7', ' 23')

Problem 4:

Write a Python program to check the nth-1 string is a proper substring of the nth string in a given list of strings.

Input:

['a', 'abb', 'sfs', 'oo', 'de', 'sfde']

Output:

True

Input:

['a', 'abb', 'sfs', 'oo', 'ee', 'sfde']

Output:

False

Problem 5:

Write a Python program that accepts a sequence of comma separated 4 digit binary numbers as its input. The program will print the numbers that are divisible by 5 in a comma separated sequence.

Sample Data : 0100,0011,1010,1001,1100,1001

Expected Output : 1010  
  
Problem 6:

Given a list of words, concatenate them into a single string separated by spaces.

Problem 7:  
Create a function to reverse a given string.

Problem 8:  
Write a program that takes a sentence as input and counts the number of words in it.

Problem 9:  
Implement a function that checks if a given string is a pangram (contains all letters of the alphabet).

Problem 10:

Given a string, write a function to remove all vowels from it and return the modified string.  
  
Problem 11:

Write a Python program to find the length of the longest word in a sentence.  
  
Problem 12:

Create a function that takes a sentence as input and returns the sentence in reverse order.

Problem 13:

Given a list of names, count the number of names that start with a vowel.  
  
Problem 14:

Write a function to remove all duplicate characters from a given string.  
  
Problem 15:

Implement a program that takes a sentence and a word as input and checks if the word is present in the sentence.