**CO1102 Programming Fundamental Workshop Week 5 - Solution**

# Objectives:

* To become familiar decomposition, function
* To become familiar with implementation of function

# Task 1

The following program reads a text file representing a temperature of 7 different cities based on the format given below. Write a code to complete the given two functions so that it prints the minimum and maximum temperature.

“temp.txt”

*Manchester,Sunday,9*

*Leicester,Monday,9*

*Coventury,Tuesday,11*

*Birmingham,Wednesday,11*

*London,Thursday,8*

*Nottingham,Friday,9*

*Reading,Saturday,12*

**def min\_Tempreture(table):**

**minTemp=table[0][2]**

**for row in range(1,len(table)):**

**if table[row][2]<minTemp:**

**minTemp=table[row][2]**

**return minTemp**

**def max\_Tempreture(table):**

**maxTemp=table[0][2]**

**for row in range(1,len(table)):**

**if table[row][2]>maxTemp:**

**maxTemp=table[row][2]**

**return maxTemp**

**infile= open( "temp.txt" )**

**table=[]**

**Sum\_Tempreture=0**

**for line in infile :**

**line=line.split(",")**

**line[2]=int(line[2])**

**table.append(line)**

**print("The minimum tempreture of the week is: ",min\_Tempreture(table)," and maximum tempreture of the week is: ",max\_Tempreture(table))**

# Task 2

Write a program to accept 2 inputs from user, a string and a list of letters. It should then display True if the entered string consists of all the letters in a given list.

**def is\_secret\_guessed(secret\_word, aList):**

**for letter in aList:**

**if letter not in secret\_word:**

**return False**

**return True**

**str="Love"**

**letter=['L','o','v','e',]**

**print(is\_secret\_guessed(str, letter))**

# Task 3

Write a Python program that given an unsorted list of integers and prints the number in the list with the smallest absolute value. For example, if the list is [3,−5,2,−6,−1] the program should print -1, and if the list is [4,−21,2,−20] your program should print 2. You can assume that the list is called numList and already contains at least one number: you do not need to write code to read the numbers from a ﬁle or ask the user to input them.

**def​ smallestAbsoluteValue​(​list\_given​):**

**smallest ​=​ list\_given​[​0​]​ ​#assume for the moment that the 0th item is the smallest**

**for​ anItem ​in​ list\_given​:​ ​#consider every item**

**​if​ absVal​(​anItem​)​ ​<​ absVal​(​smallest​):**

**smallest ​=​ anItem ​# we do not store the absolute version as we**

**return​ smallest**

**def​ absVal​(​aNumber​):**

**if​ aNumber ​<​ ​0​:**

**​return​ ​-​aNumber ​#pass back the negated version (now positive)**

**​return​ aNumber ​#if got here it must already be positive so no need to negate**

# Task 4

Write a function named joinList(aList,separator) where aList is a list and separator is a string. The function must return a string that concatenates all items in aList using the separator between them. You can assume that each item in the input list is either a string or a number. You are **not** allowed to use built-in python functions such as join()

For example, assume that aList = ["apple",7,"mango","orange"]

* joinList(aList,":") must return "apple:7:mango:orange"
* joinList(aList,",") must return "apple,7,mango,orange"

**def joinList(aList,separator):**

**string = str(aList[0])**

**for i in range (1, len(aList)):**

**string=string + separator + str(aList[i])**

**return string**

**aList = ["apple",7,"mango","orange"]**

**print(joinList(aList,'\*'))**