**Bài 1: Hoàn thành 25/150 bài tập cơ bản ở trang :**

1. **Formatted Twinkle Poem**

Write a Python program to print the following string in a specific format (see the output).  
*Sample String :* "Twinkle, twinkle, little star, How I wonder what you are! Up above the world so high, Like a diamond in the sky. Twinkle, twinkle, little star, How I wonder what you are"  
*Output :*

Twinkle, twinkle, little star,

How I wonder what you are!

Up above the world so high,

Like a diamond in the sky.

Twinkle, twinkle, little star,

How I wonder what you are

**Code Python:**

print("Twinkle, twinkle, little star, \n\tHow I wonder what you are! \n\t\tUp above the world so high, \n\t\tLike a diamond in the sky. \nTwinkle, twinkle, little star, \n\tHow I wonder what you are!")

1. **Python Version Checker**

Write a Python program to find out what version of Python you are using.

import platform

print(platform.python\_version())

1. **Current DateTime Display**

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

import datetime

now = datetime.datetime.now()

print("Current date and time : ")

print(now.strftime("%Y-%m-%d %H:%M:%S"))

1. **Circle Area Calculator**

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

fname = input("Input your First Name : ")

lname = input("Input your Last Name : ")

print("Hello " + lname + " " + fname)

1. **Reverse Full Name**

Write a Python program that accepts the user's first and last name and prints them in reverse order with a space between them.

fname = input("Input your First Name : ")

lname = input("Input your Last Name : ")

print("Hello " + lname + " " + fname)

1. **List and Tuple Generator**

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.

values = input("Input some comma-separated numbers: ")

list = values.split(",")

tuple = tuple(list)

print('List : ', list)

print('Tuple : ', tuple)

1. **File Extension Extractor**

Write a Python program that accepts a filename from the user and prints the extension of the file.

filename = input("Input the Filename: ")

f\_extns = filename.split(".")

print("The extension of the file is : " + repr(f\_extns[-1]))

1. **First and Last Colors**

Write a Python program to display the first and last colors from the following list.  
color\_list = ["Red","Green","White" ,"Black"]

color\_list = ["Red", "Green", "White", "Black"]

print("%s %s" % (color\_list[0], color\_list[-1]))

1. **Exam Schedule Formatter**

Write a Python program to display the examination schedule. (extract the date from exam\_st\_date).

exam\_st\_date = (11, 12, 2014)

print("The examination will start from : %i / %i / %i" % exam\_st\_date)

1. **Number Expansion Calculator**

Write a Python program that accepts an integer (n) and computes the value of n+nn+nnn.

a = int(input("Input an integer: "))

n1 = int("%s" % a)

n2 = int("%s%s" % (a, a))

n3 = int("%s%s%s" % (a, a, a))

print(n1 + n2 + n3)

1. **Function Documentation Printer**

Write a Python program to print the documents (syntax, description etc.) of Python built-in function(s).

print(abs.\_\_doc\_\_)

1. **Monthly Calendar Display**

Write a Python program that prints the calendar for a given month and year.

import calendar

y = int(input("Input the year : "))

m = int(input("Input the month : "))

print(calendar.month(y, m))

1. **Multi-line Here Document**

Write a Python program to print the following 'here document'.

print("""

a string that you "don't" have to escape

This

is a  ....... multi-line

heredoc string --------> example

""")

1. **Days Between Dates**

Write a Python program to calculate the number of days between two dates.

from datetime import date

f\_date = date(2014, 7, 2)

l\_date = date(2014, 7, 11)

delta = l\_date - f\_date

print(delta.days)

1. **Sphere Volume Calculator**

Write a Python program to get the volume of a sphere with radius six.

pi = 3.1415926535897931

r = 6.0

V = 4.0/3.0 \* pi \* r\*\*3

print('The volume of the sphere is: ', V)

1. **Difference from 17**

Write a Python program to calculate the difference between a given number and 17. If the number is greater than 17, return twice the absolute difference.

def difference(n):

    if n <= 17:

        return 17 - n

    else:

        return (n - 17) \* 2

print(difference(22))

print(difference(14))

1. **Number Range Tester**

Write a Python program to test whether a number is within 100 of 1000 or 2000.

def near\_thousand(n):

    return ((abs(1000 - n) <= 100) or (abs(2000 - n) <= 100))

print(near\_thousand(1000))

print(near\_thousand(900))

print(near\_thousand(800))

print(near\_thousand(2200))

1. **Triple Sum Calculator**

Write a Python program to calculate the sum of three given numbers. If the values are equal, return three times their sum.

def sum\_thrice(x, y, z):

    sum = x + y + z

    if x == y == z:

        sum = sum \* 3

    return sum

print(sum\_thrice(1, 2, 3))

print(sum\_thrice(3, 3, 3))

1. **Prefix "Is" String Modifier**

Write a Python program to get a newly-generated string from a given string where "Is" has been added to the front. Return the string unchanged if the given string already begins with "Is".

def new\_string(text):

    if len(text) >= 2 and text[:2] == "Is":

        return text

    else:

        return "Is" + text

print(new\_string("Array"))

print(new\_string("IsEmpty"))

1. **String Copy Generator**

Write a Python program that returns a string that is n (non-negative integer) copies of a given string.

def larger\_string(text, n):

    result = ""

    for i in range(n):

        result = result + text

    return result

print(larger\_string('abc', 2))

print(larger\_string('.py', 3))

1. **Even or Odd Checker**

Write a Python program that determines whether a given number (accepted from the user) is even or odd, and prints an appropriate message to the user.

num = int(input("Enter a number: "))

mod = num % 2

if mod > 0:

    print("This is an odd number.")

else:

    print("This is an even number.")

1. **Count 4 in List**

Write a Python program to count the number 4 in a given list.

def list\_count\_4(nums):

  count = 0

  for num in nums:

    if num == 4:

      count = count + 1

  return count

print(list\_count\_4([1, 4, 6, 7, 4]))

print(list\_count\_4([1, 4, 6, 4, 7, 4]))

1. **String Prefix Copies**

Write a Python program to get n (non-negative integer) copies of the first 2 characters of a given string. Return n copies of the whole string if the length is less than 2.

def substring\_copy(text, n):

  flen = 2

  if flen > len(text):

    flen = len(text)

  substr = text[:flen]

  result = ""

  for i in range(n):

    result = result + substr

  return result

print(substring\_copy('abcdef', 2))

print(substring\_copy('p', 3))

1. **Vowel Tester**

Write a Python program to test whether a passed letter is a vowel or not.

def is\_vowel(char):

    all\_vowels = 'aeiou'

    return char in all\_vowels

print(is\_vowel('c'))

print(is\_vowel('e'))

1. **Value in Group Tester**

Write a Python program that checks whether a specified value is contained within a group of values.

def is\_group\_member(group\_data, n):

    for value in group\_data:

        if n == value:

            return True

    return False

print(is\_group\_member([1, 5, 8, 3], 3))

print(is\_group\_member([5, 8, 3], -1))

**Bài 2: Viết hàm thực hiện các chức năng sau:**

**1. Tính: a) (a + b),**

**b) a/b**

**c) ab**

a = float(input("Nhập số a : "))

b = float(input("Nhập số b : "))

txt1 = "Kết quả của (a + b) = ({} + {}) ="

txt2 = "Kết quả của (a / b) = ({} / {}) ="

txt3 = "Kết quả của (a ^ b) = ({} ^ {}) ="

print(txt1.format(a,b), a+b)

print(txt2.format(a,b), a/b)

print(txt3.format(a,b), a\*\*b)

**2. Tính diện tích hình chữ nhật khi biết bán kính**