EXERCISE 2: BUILT-IN FUNCTIONS AND MODULES

1. Show the printout of the following statements:
    a. print('{0: 9.3f}'.format(57.467657))
    b. print('{:>9.2f}'.format(5789.4))
    c. print('{:*>25s}'.format("Programming is fun"))
2. What are the results of the following statements?
    a. s = 'How are you'
       print('%.3s'%s)
    b. x = 10
       print('%#o'%x)
    c. y = 125.68
       print('%.2e'%y)
    d. z = 3.14159
       print('%06.2f'%(z))
3. For each of the following variables, what is the type?.
    a. y = input("What is your age?")
    b. z = int(input("how many children do you have?"))
4. Write a program that asks the user to enter day, month, year and display date in format: dd/mm/yy.
5. Open help for the **math** module
    a. What does math.ceil() do? What about math.floor()?
    b. What are the data contstants in the math module?
6. Open help for the **random** module
    a. Try the following:

```
In [10]: import random
         # create object that generates random numbers
         r = random.Random()
         # randrange() function return an int, one of 1,2,3,4
         val = r.randrange(1,5)
         print(val)

         3
```

b. Read the documentation for **randrange**() function and generate a random odd number less than 100.
c. Generate a floating point number in the interval [0.0, 1.0) using **random**() function.

7. Open help for the **calendar** module.
   a. Try the following:

```
In [8]: import calendar
        cal = calendar.TextCalendar()
        cal.pryear(2019)
```

   b. Observe that the week starts on Monday. Read the documentation for **TextCalendar()**, and see how to display week start on Thursday?
   c. Find a function to print just the month in which your birthday occurs this year.
   d. Try this:

```
In [27]: c = calendar.LocaleTextCalendar(5,"VIETNAMESE")
         c.pryear(2019)
```

   e. Experiment with **calendar.isleap()**

```
In [29]: calendar.isleap(2019)
```