Python HW #3

Name: Christopher Welch

1. Write code that will:
   - Create a list using the following integers: 58, 98, 82, 69, 90, 74, 68, 88, 71, 44
   - Sort the list numerically from smallest to largest
   - Iterate through the list that converts from a numerical grade (1-100) to a letter grade (A, B, C, D, F) and print the applicable grade to the console window, but preface each answer with "Your grade is : " before the letter grade

```python
numList = [58,98,82,69,90,74,68,88,71,44]
numList.sort()

for x in numList:
    if x < 60:
        x = 'F'
        print("Your grade is: ", x)
    elif x < 70 and x > 59:
        x = 'D'
        print("Your grade is: ", x)
    elif x < 80 and x > 69:
        x = 'C'
        print("Your grade is: ", x)
    elif x < 90 and x > 79:
        x = 'B'
        print("Your grade is: ", x)
    elif x > 89:
        x = 'A'
        print("Your grade is: ", x)
```

2. Write code that will:
   - Create a variable called Tom that specifies he is 24 yeas old
   - Determine what year Tom will turn 100 years old
   - Print out the year that Tom is 100 years old, but preface your answer with "Tom will be 100 years old in the year: " before your answer

```python
Tom = 24
ageCentury = 100
year = 2019
print("Tom will be %d in " % ageCentury, ageCentury - Tom + year)
```

3. Write code that that accepts a string from a User and calculate the number of digits and letters. For example, if input string is "Python 3.7", then the expected output printed to the console window is:

> For the string: Python 3.7, there are:
> Letters = 6
> Digits = 2
> Note, you will need to use the following python statement to get input from the User:
> - InStr = input("Please enter a string of any length and hit ENTER: ")

```python
isDigit = 0
isLetter = 0
InStr = input("Please enter a string of any length and hit ENTER: ")
for x in InStr:
    if x.isalpha():
        isLetter += 1
    if x.isdigit():
        isDigit += 1
print("Digits = ", isDigit)
print("Letters = %d" % isLetter)
```

4. Write code that will:
   - Create a dictionary called FruitInventory that contains 7 apples, 10 bananas, 3 pears, and 2 peaches
   - Create another dictionary called FruitPerUnitPrice that contains apples are $1, bananas are $2, pears are $3, and peaches are $4
   - Determine how much money is made if all of the fruit is sold
   - Print your answer to the console window, but preface your answer with "Total Money Made By Selling all the Fruit is: $"

```python
FruitInventory = {'Apples' : 7, 'Bananas' : 10, 'Pears' : 3, 'Peaches' : 2}
FruitPerUnitPrice = {'Apples' : 1, 'Bananas' : 2, 'Pears' : 3, 'Peaches' : 4}
totalNet = 0
for x in FruitInventory:
    totalNet += FruitInventory[x] * FruitPerUnitPrice[x]
print("Total Money Made By Selling all the Fruit is: $%d" % totalNet)
```

5. Write code that will:
   - Create a list called colors and contains red, black, and white
   - Create a list called cars and contains chevrolet, ford, cadillac, and gmc
   - Print out to the console window all possible color and car combinations; each on it's own line.

```python
colors = ['Red', 'Black', 'White']
cars = ['Chevrolet', 'Ford', 'Cadillac', 'GMC']
for x in colors:
    for y in cars:
        print(x, y)
```