

**Q1** Write a Python program that asks the user to enter a full name in the following format :LastName, FirstName MiddleName (for Example: "Hun, Attila The"). The input will have a **single space after the comma** and only a **single space** between the first name and the middle name. The last name and first name should not be more than 10 characters long. You are to use the methods in the str class in Python to convert the input string to a new String having the form:  
**<FirstName><MiddleInitial>.<LastName>**

**For example the input string “Hun, Attila The” changes to:**

**< Attila >< T>.<Hun >**

- FirstName is displayed centered in a field 10 characters wide within angular brackets
- MiddleInitial is displayed right-justified in a field 5 characters wide within angular brackets followed by a dot
- LastName is displayed left-justified in a field 10 characters wide within angular brackets

Be sure to test it with more than one input and not just "Hun, Attila The".

**HINT:**

1. Consider the following names as inputs: "Hun, Attila The" and "Newton, Sir Isaac". You need to find the locations of the special characters that separate the pieces. What separates the last name from the first name in each of the strings? What separates the middle name from the first name in each of the strings?
2. Write a search for each of those special characters using the **index** method in the str class. That will give you the index of the separator between the last and first names and also the index of the separator between the first and middle names.

**Sample Output 1:**

```
Enter name [LastName, FirstName MiddleName]>Newton, Sir Isaac
The new name is:< Sir >< I>.<Newton >
```

**Sample Output 2:**

```
Enter name [LastName, FirstName MiddleName]>Spencer, Brian Joe
The new name is:< Brian >< J>.<Spencer >
```

**NOTE:** You may assume that the user always enters a non-empty string in the format specified in the question. You may also assume that first,middle and last name will always be there. For example you don't need to test if middle name is missing.

**Q2** FizzBuzz is a children's counting game where players count out starting at 1. For numbers that are multiples of 3 , they say "Fizz". For numbers that are multiples of 5 they say "Buzz". For numbers that are multiples of both 3 and 5, they say "FizzBuzz". For all other numbers they say the number. Write a function called `play_fb` that takes in a maximum number in its parameter and displays the appropriate output as per the rules of the game. Here is the main function that you need to include in your program:

```
def main():  
    number = int(input('Enter maximum number to start counting >'))  
    play_fb(number)  
  
main()
```

### **Sample Output**

```
Enter maximum number to start counting >15  
1  
2  
3 Fizz  
4  
5 Buzz  
6 Fizz  
7  
8  
9 Fizz  
10 Buzz  
11  
12 Fizz  
13  
14  
15 FizzBuzz
```

**Q3** Write a program that reads in an unspecified number of integers separated by spaces and finds the occurrences of each number.

### Sample Output

```
Enter numbers separated by spaces :1 2 3 3 2 2 2 1 3 4 5 3
{'1': 2, '3': 4, '2': 4, '5': 1, '4': 1}
1 occurs 2 times
3 occurs 4 times
2 occurs 4 times
5 occurs one time
4 occurs one time
```

NOTE: You **must** use the dictionary to solve the problem. Also note that if the number occurs only once then **time not times** is printed.

You can always assume that the user enters number separated by a single space i.e no input validation is required.