



Python OOP Week 8 HW

Question 1

Write a Python Class named Calculator. The Calculator Class will NOT have any attributes so it will also not need the `__init__` method. The Class should have 4 methods. The names of the methods will be add, subtract, divide and multiply. Each of the 4 methods will take exactly two parameters/inputs which are the two numbers that we are adding, subtracting, dividing or multiplying and return the result. For example, the subtract method will look like the following...

```
def subtract(self, x, y):  
    return x - y
```

Question 2

Write a Python Class named Dog. The Dog Class will have 3 attributes which are name, age and color. Name and color will be strings and age will be an integer. You will need to program the `__init__` method. You will need to program two methods. The first one is to increase the age by 1 and you can call this method `increase_age_by_1` (this method does not return anything). The second method is called `make_sound` and all this method needs to do is print out a message that says, "Hello my name is <Insert the dog's name> bark bark!".

Question 3

Use your Calculator Class from question 1 to write a program to calculator the answer for the following math equation $\rightarrow 4 \times x^2 + x - 5$ (four times x times x plus x minus 5)

x can be any number and will be a variable in your code. Here is some code to help you out...

```
x = 10
```

```
my_calculator = <Some code here to setup and create a Calculator object>
```

```
answer = <Use the Calculator object to calculate the answer>
```

```
print("The answer is: " + str(answer))
```