OOP Lesson 1

A basic class

```
In [ ]:  class Person:
             def __init__(self, name, age): #intalizer - (constructor)
                 self.name = name #property , class member variable, attruibute, field
                 self.age = age   #property , class member variable, attruibute, field

         p1 = Person("Paul", 48) #object   - class instance
         #p1.age = "hello"    #this shows that accessing the data directly is bad
         print(p1.name)
         print(p1.age)
```

Paul
hello

```
In [ ]:  class Person:
           """The person class is a basic human with name and age"""
           def __init__(self, name : str, age : int) -> None:
             self.__name = name
             self.age = age

           def get_name(self) -> str:
             """Returns string conatining the persons name"""
             return self.__name

           def set_name(self, name : str) -> None:
             """Set the persons name, expecting a string"""
             if type(name) == str:
               self.__name = name
             else:
               print("[Error] : cannot set name")

         #you can't chane __name directly now.
         p1 = Person("Paul", 48)
         p1.set_name("Paul Smith")

         print(p1.get_name())
         print(p1.age)

         #print(p1.__name)  #this will crash as its not accessible
```

Paul Smith
48

Now your turn

Design a class to represent an RPG character.

It must have a name, race, class(eg Paladin), strength, health.

Try to experiment with getters and setters to protect the data. Make 2 characters with your class(you opp class code)