

You can find multiple choice review questions (when they are available) in D2L under:
Assessments->Quizzes

For all questions, unless otherwise specified assume that there are no syntax errors in any programs or program fragments.

Short answer (code writing):

Begin with the starting program.

Class definition in module 'Company.py':

```
WORTHLESS = 0
```

```
class Company:
```

```
    def __init__(self, aName, newNetWorth):
        self.name = aName
        self.netWorth = newNetWorth
```

```
    def __str__(self):
        aState = ""
        aState = aState + "Company: " + self.name
        aState = aState + "    " + "Worth $" + str(self.netWorth)
        return(aState)
```

(As always you must be familiar with the terminology of the topic before attempting a question. And you should not only study the material but try to apply it as much as possible – attempting the assignments is the bare minimum, I gave suggestions of other practice work in lecture)

Write the code for an additional method 'takeOver' that will take an object of type 'Company' as a parameter. As the name implies one company will take over or acquire the entire net worth of another company. In this case the object whose takeover method has been called will have its net worth increased by an amount equal to the target company. The target company will then have a net worth of zero (thus the definition of named constant 'WORTHLESS'.

There's a few instructions from the start function of the Driver to illustrate how this works:

Instructions from start

```
print("Before take-over")
companyA = Company("Giant multi-national INC",456)
companyB = Company("Small potatoes mom & pop",12)
print(companyA)
```

```
print(companyB)
```

Output of the calls to print

```
Before take-over  
Company: Giant multi-national INC   Worth $456  
Company: Small potatoes mom & pop   Worth $12
```

Additional instructions from start

```
print("After take-over")  
print("(The net worth of the target company after should be $%d)"  
      %(WORTHLESS))  
companyA.takeOver(companyB)  
print(companyA)  
print(companyB)
```

Output of the additional calls to print

```
After take-over  
(The net worth of the target company after should be $0)  
Company: Giant multi-national INC   Worth $468  
Company: Small potatoes mom & pop   Worth $0
```

(If you need access to the starting source code it can be found at the following URL):

https://cspages.ucalgary.ca/~tam/2024/231P/exams/finalExam/O_O_code/starting/