22C:16 Quiz 12
Date: May 1st, 2012

1. [**5 points**] Consider the following class definition.

```
class change():

    def __init__(self, p, n, d, q):
        self.pennies = p
        self.nickels = n
        self.dimes = d
        self.quarters = q

    def addMoney(self, p, n, d, q):
        self.pennies += p
        self.nickels += n
        self.dimes += d
        self.quarters += q

    def getMoney(self):
        money = .01*self.pennies
        money += .05*self.nickels
        money += .1*self.dimes
        money += .25*self.quarters
        return money
```

Here is some code that uses the above class. What output is produced by this code?

```
c = change(3, 4, 5, 4)
print getMoney()
c.addMoney(1, 0, 0, 4)
print getMoney()
```

2. Define a class called `examScores`. Each instance of this class contains a list of student names along with their scores in an exam. We would use this class by creating an "empty" instance of it and then adding student names and scores to it. Here is an example:

```
scores = examScores()
scores.addScore("Chew Bacca", 98)
scores.addScore("Luke Skywalker", 76)
scores.addScore("Han Solo", 98)
```

Besides the constructor method and the `addScore` method, the class should contain the implementation of two other methods:

- `bestStudent()`: this returns the list of names of all students with the highest score. For the above example, `scores.bestStudent()` would return `["Chew Bacca", "Han Solo"]`.
- `numStudents()`: this returns the number of students in the class. For the above example, `scores.numStudents()` would return `3`.