MITx: 6.00.1x Introduction to Computer Science and Programming Using Python

Courseware (/courses/MITx/6.00.1_4x/3T2014/courseware)

Updates & News (/courses/MITx/6.00.1_4x/3T2014/info)

Calendar (/courses/MITx/6.00.1_4x/3T2014/89309559b0414f6d8cbef9e48ca19f4b/) Wiki (/courses/MITx/6.00.1_4x/3T2014/course_wiki)

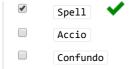
Discussion (/courses/MITx/6.00.1_4x/3T2014/discussion/forum) Progress (/courses/MITx/6.00.1_4x/3T2014/progress)

L12 PROBLEM 1 (5/5 points)

Consider the following code:

```
class Spell(object):
   def __init__(self, incantation, name):
       self.name = name
       self.incantation = incantation
   def __str__(self):
       return self.name + ' ' + self.incantation + '\n' + self.getDescription()
   def getDescription(self):
       return 'No description'
   def execute(self):
       print self.incantation
class Accio(Spell):
   def __init__(self):
       Spell.__init__(self, 'Accio', 'Summoning Charm')
class Confundo(Spell):
   def __init__(self):
       Spell.__init__(self, 'Confundo', 'Confundus Charm')
   def getDescription(self):
       return 'Causes the victim to become confused and befuddled.'
def studySpell(spell):
   print spell
spell = Accio()
spell.execute()
studySpell(spell)
studySpell(Confundo())
```

1. What are the parent class(es)? Note that the term "parent class" is interchangable with the term "superclass".



2. What are the child class(es)? Note that the term "child class" is interchangable with the term "subclass".



3. What does the code print out? Try figuring it out in your head before you try running it in Python.

Hint: This code prints out 5 lines. Enter each line that is printed out in its own box, in sequential order.

Accio

Answer: Accio

Summoning Charm Accio

Answer: Summoning Charm Accio

Answer: No description

Answer: No description

Confundus Charm Confundo

Answer: Confundus Charm Confundo

Causes the victim to become confused and befuddled.

Answer: Causes the victim to become confused and befuddled.

- 4. Which getDescription method is called when studySpell(Confundo()) is executed?
 - The getDescription method defined within the Spell class
 - The getDescription method defined within the Accio class
 - The getDescription method defined within the Confundo class



EXPLANATION:

The one inside the Confundo class is called. Why? Because methods in the child class override those in the parent class if they exist in both classes.

5. How do we need to modify Accio so that print Accio() will print the following description?

```
Summoning Charm Accio
This charm summons an object to the caster, potentially over a significant distance.
```

```
class Accio(Spell):

def __init__(self):

Spell.__init__(self, 'Accio', 'Summoning Charm')

def getDescription(self):

return 'This charm summons an object to the caster, potentially over a significant distance.'
```

Correct

Help

```
class Accio(Spell):
    def __init__(self):
        Spell.__init__(self, 'Accio', 'Summoning Charm')

def getDescription(self):
    return 'This charm summons an object to the caster, potentially over a significant distance.'
```

Test results

Check

Hide Answer

Show Discussion



About (https://www.edx.org/about-us) Jobs (https://www.edx.org/jobs) Press (https://www.edx.org/press) FAQ (https://www.edx.org/student-faq) Contact (https://www.edx.org/contact)



EdX is a non-profit created by founding partners Harvard and MIT whose mission is to bring the best of higher education to students of all ages anywhere in the world, wherever there is Internet access. EdX's free online MOOCs are interactive and subjects include computer science, public health, and artificial intelligence.



(http://www.meetup.com/YourMeetup)



(http://www.facebook.com/EdxOnline)



(https://twitter.com/YourPlatformTwitterAcco



(http://youtube.com/user/edxonline) © 2014 edX, some rights reserved.

Terms of Service and Honor Code - Privacy Policy (https://www.edx.org/edx-privacy-policy)