

MITx: 6.00.1x Introduction to Computer Science and Programming ...

<u>Help</u>



Week 5: Object Oriented Programming > 9. Classes and Inheritance > Exercise: spell

Welcome to the edX Platform **Exercise: spell**

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• Entrance
Survey

Exercise: spell

9 points possible (graded)

ESTIMATED TIME TO COMPLETE: 12 minutes

Consider the following code:

- DownloadPython andGet Motivated!
- Week 1: Python Basics
- Week 2: Simple Programs
- ► Week 3: Structured Types
- Week 4: Good Programming Practices
- Midterm Exam
- Week 5:ObjectOrientedProgramming

9. Classes and Inheritance

Finger Exercises

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10. An Extended Example

Finger Exercises

Problem Set 5

Problem Set due Mar 2, 2017 15:30 PST

- Week 6: Algorithmic Complexity
- ▶ <u>Sandbox</u>

```
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".

□ Spell		
Accio		

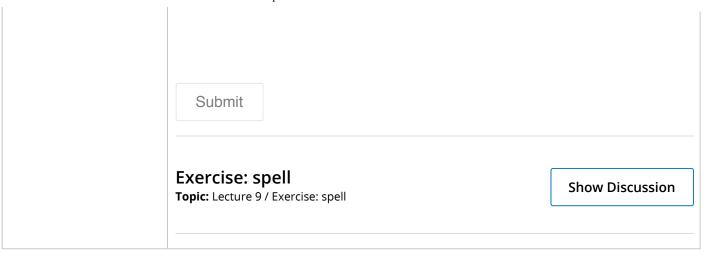
Confundo

interchangable with the term "subclass".
□ Spell
Accio
Confundo
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.
1.
2.
3.
4.
5.

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 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. 1 class Accio(Spell): def __init__(self): 2 3 Spell.__init__(self, 'Accio', 'Summoning Charm')

Proce ESC than TAB or click outside of the code editor to exit

Unanswered



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