Exercise: spell

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9 points possible (graded)

ESTIMATED TIME TO COMPLETE: 12 minutes

Consider the following code:

```python
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`

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

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

```

Press ESC then TAB or click outside of the code editor to exit