


[SPOILERS] Practice Problem for Section 8 -- Solution

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Pavel Lepin COMMUNITY TA · 11 days ago 

```
## Solution template for section 8 practice problem
```

```
## Targets 1.9.3
```

```
require_relative '../section-8-provided'
```

```
class Character
```

```
  def initialize hp
```

```
    @hp = hp
```

```
  end
```

```
  def resolve_encounter enc
```

```
    if !is_dead?
```

```
      play_out_encounter enc
```

```
    end
```

```
  end
```

```
  def is_dead?
```

```
    @hp <= 0
```

```
  end
```

```
  private
```

```
  def play_out_encounter enc
```

```
    ## YOUR CODE HERE
```

```
    enc.redispach_to self
```

```
  end
```

```
end
```

```
class Knight < Character
```

```
  def initialize(hp, ap)
```

```

    super hp
    @ap = ap
end

def to_s
  "HP: " + @hp.to_s + " AP: " + @ap.to_s
end

## YOUR CODE HERE

def resolve_floor_trap floor_trap
  take_damage floor_trap.dam
end

def resolve_monster monster
  take_damage monster.dam
end

def resolve_potion potion
  @hp += potion.hp
end

def resolve_armor armor
  @ap += armor.ap
end

private

def take_damage dam
  if @ap == 0
    @hp -= dam
  else
    if dam > @ap
      ap = @ap
      @ap = 0
      take_damage(dam - ap)
    else
      @ap -= dam
    end
  end
end

end

class Wizard < Character
  def initialize(hp, mp)

```

```

    super hp
    @mp = mp
end

def to_s
  "HP: " + @hp.to_s + " MP: " + @mp.to_s
end

## YOUR CODE HERE

def is_dead?
  super || @mp < 0
end

def resolve_floor_trap floor_trap
  if @mp > 0
    @mp -= 1
  else
    @hp -= floor_trap.dam
  end
end

def resolve_monster monster
  @mp -= monster.hp
end

def resolve_potion potion
  @hp += potion.hp
  @mp += potion.mp
end

def resolve_armor armor
end

class FloorTrap < Encounter
  attr_reader :dam

  def initialize dam
    @dam = dam
  end

  def to_s
    "A deadly floor trap dealing " + @dam.to_s + " point(s) of damage lies ahead!"
  end
end

```

```

## YOUR CODE HERE
def redispatch_to char
  char.resolve_floor_trap self
end
end

class Monster < Encounter
  attr_reader :dam, :hp

  def initialize(dam, hp)
    @dam = dam
    @hp = hp
  end

  def to_s
    "A horrible monster lurks in the shadows ahead. It can attack for " +
      @dam.to_s + " point(s) of damage and has " +
      @hp.to_s + " hitpoint(s)."
  end

  ## YOUR CODE HERE
  def redispatch_to char
    char.resolve_monster self
  end
end

class Potion < Encounter
  attr_reader :hp, :mp

  def initialize(hp, mp)
    @hp = hp
    @mp = mp
  end

  def to_s
    "There is a potion here that can restore " + @hp.to_s +
      " hitpoint(s) and " + @mp.to_s + " mana point(s)."
  end

  ## YOUR CODE HERE
  def redispatch_to char
    char.resolve_potion self
  end
end

```

```

class Armor < Encounter
  attr_reader :ap

  def initialize ap
    @ap = ap
  end

  def to_s
    "A shiny piece of armor, rated for " + @ap.to_s +
      " AP, is gathering dust in an alcove!"
  end

  ## YOUR CODE HERE
  def redispatch_to char
    char.resolve_armor self
  end
end

if __FILE__ == $0
  Adventure.new(Stdout.new, Knight.new(15, 3),
    [Monster.new(1, 1),
     FloorTrap.new(3),
     Monster.new(5, 3),
     Potion.new(5, 5),
     Monster.new(1, 15),
     Armor.new(10),
     FloorTrap.new(5),
     Monster.new(10, 10)]).play_out
end

```

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