

**Challenge:** Use your expert and the `turnLock` [method](#) to collect all the gems.

In this puzzle, you can use both `turnLock` and `move` to help your character collect all the gems. There are many ways to solve this puzzle, so take some time to think through several different approaches before you get started. Good luck!

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```
let expert = Expert()
```

```
let character = Character()
```

```
func turnLock(up: Bool, numberOfTimes: Int){
    for i in 1...numberOfTimes {
        if up == true {
            expert.turnLockUp()
        } else {
            expert.turnLockDown()
        }
    }
}
```

```
func move(distance: Int) {
    for i in 1...distance {
        character.moveForward()
    }
}
```

```
func characterTurnAround() {
    character.turnLeft()
    character.turnLeft()
}
```

```
func expertTurnAround() {
    expert.turnLeft()
    expert.turnLeft()
}
```

```
func characterCollectGem() {
    character.moveForward()
    character.moveForward()
    character.collectGem()
}

func collectGemRoutine() {
    expert.turnLeft()
    expert.turnLock(up: true, numberOfTimes: 1)
    characterCollectGem()
    characterTurnAround()
    character.move(distance: 2)
    character.turnRight()
}

character.move(distance: 2)
character.collectGem()
character.turnRight()
expert.turnLock(up: true, numberOfTimes: 4)
characterCollectGem()
characterTurnAround()
character.move(distance: 2)
character.turnLeft()
character.move(distance: 2)
character.turnRight()
character.move(distance: 4)
character.turnLeft()
character.move(distance: 2)
character.turnLeft()
character.move(distance: 4)
expert.turnLeft()
expert.turnLock(up:true, numberOfTimes: 4)
characterCollectGem()
```

```
characterTurnAround()  
character.move(distance: 6)  
expert.turnLock(up: false, numberOfTimes: 3)  
character.turnRight()  
character.moveForward()  
character.turnRight()  
character.move(distance: 5)  
character.turnRight()  
characterCollectGem()  
characterTurnAround()  
character.move(distance: 2)  
character.turnRight()  
collectGemRoutine()  
character.move(distance: 2)  
character.turnRight()  
collectGemRoutine()  
expert.turnLeft()  
expert.turnLock(up: false, numberOfTimes: 3)  
character.move(distance: 2)  
character.collectGem()
```