Parables and Pythons

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Lesson 4: 03 October 2018

CLASS AGENDA

- Bible Study
  - test
- The Golden Age of British Comedy
  - You’ve got two empty halves of coconuts and you’re banging them together!
- Computer Programming with Python
  - New Concepts:
    - (more) Conditional Statements
    - For loops
  - Hands-On Practice
    - Input, output, conditional, and for loop statements
- Homework

BIBLE STUDY: THE PARABLES OF JESUS

THREE MISUNDERSTOOD PARABLES

- There are several well known and some lesser known parables that are often misunderstood.
  - Not so much about the "moral" of the story, but what the symbols mean, interpretation in general, or application to our lives.
  - Sometimes people read what they want to read.
- These three are often misunderstood:
  - Good Samaritan (Luke 10:25-37)
  - Laborers in the Vineyard (Matthew 20:1-16)
  - Pearl of Great Price (Matthew 13:45-46)

GOOD SAMARITAN (LUKE 10:25-37)

- You remember this story – it's about a man who is injured but a priest (a member of the Jewish religious hierarchy) and Levite ignore him passing by on the other side of the street, but a non-Jew (a Samaritan) stops, treats the man and takes care of him.
- Our usual understanding of this famous story goes astray in several ways.
  - The wounded man was avoided because he was unclean.
  - The Levite and priest are bad people.
  - The Samaritan is a traitor to his own people.
  - The wounded man represents the oppressed or in modern times the minorities.

GOOD SAMARITAN (LUKE 10:25-37)

- Some suggest the priest and Levite bypass the wounded man because they are attempting to avoid becoming “unclean.”
  - Nonsense! All this interpretation does is make Jewish Law look bad.
  - The priest is not going up to Jerusalem where purity would be a concern – he is “going down” to Jericho.
  - No law prevents Levites from touching corpses, and there are numerous other reasons why ritual purity is not relevant here.
  - Jesus mentions the priest and Levite because they set up a third category: Israelite. To mention the first two is to invoke the third.
  - If I say, “Larry, Moe …” you will say “Curly.” However, to go from priest to Levite to Samaritan is like going from Larry to Moe to Osama bin Laden.
  - This analogy leads us to another misunderstanding.

GOOD SAMARITAN (LUKE 10:25-37)

- The parable is often seen as a story of how the oppressed minority – immigrants, gay people, people on parole – are "nice" and therefore we should check our prejudices.
  - Samaritans, then, were not the oppressed minority: they were the enemy. We know this not only from the historian Josephus, but also from Luke.
  - Just one chapter before our parable, Jesus seeks lodging in a Samaritan village, but they refuse him hospitality.
  - Moreover, Samaria had another name: Shechem. At Shechem, Jacob's daughter Dinah is raped or seduced by the local prince. At Shechem, the murderous judge Abimelech is based.
- Consider this:
  - We are the person in the ditch, and we see the Samaritan. Our first thought: "He's going to rape me. He's going to murder me."
  - Then we realize: Our enemy may be the very person who will save us. Indeed, if we simply ask "where is Samaria today?"

LABORERS IN THE VINEYARD (MATTHEW 20:1-16)

- This parable is about a landowner who hires workers for his vineyard. The story explains how he pays each worker the same regardless of how long he worked that day – much to the consternation of those who worked all day.
- The parable is sometimes read with an anti-Jewish lens, so that the first-hired are the "Jews" who resent the gentiles or the sinners entering into God's vineyard. Nonsense again!
  - Jesus' first listeners heard not a parable about salvation in the afterlife but about economics in the present. They heard a lesson about how the employed must speak on behalf of those who lack a daily wage.
  - They also discovered a prompt for people with resources: attend to those who do not have jobs, and make sure everyone has what is needed.
  - Jesus does not invent this idea of advocating for the unemployed and sharing resources. The same concerns occur in Jewish tradition from King David onward.

PEARL OF GREAT PRICE (MATTHEW 13:45-46)

- This parable describes a man who sells everything in order to obtain his prized pearl. It is usually allegorized to tell us about the centrality of faith, or the church, or Jesus, or the Kingdom of Heaven. However, there are debates about what the pearl represents.
  - We don't recognize the parable's initial absurdity today – the merchant (a wholesaler who sells us what we don't need at a price we cannot afford) sells everything he has for a pearl.
  - He can't eat it, or sit on it; it will not cover much if it's all he wears. But, he thinks this pearl will fulfill him.
  - What if the parable challenges us to determine our own pearl of great price? If we know our ultimate concern, we should be less acquisitive. We won't sweat the small stuff.
  - More, we become better able to love our neighbors, because we will know what is most important to them.
  - Jesus' short stories provoke us because they tell us what we already know to be true, but don't want to admit.

THE GOLDEN AGE OF BRITISH COMEDY

- https://www.youtube.com/watch?v=lillW-ovx0Y

COMPUTER PROGRAMMING

Hands On Learning

CONDITIONAL STATEMENTS - REVIEW

- Sometimes in a program, we may need to make decisions that change how the program reacts, produces output, identifies errors, warnings, etc.
- Recall from our last experiment we asked the user to enter a value between 1 and 6. How do we know whether the user did what was asked?
- We can use a conditional like this:

```
if <something is true> then
    <do operation A>
else
    <do operation B>
```

- Notice we do “A” when the condition (an expression is evaluated) is true.
- Otherwise, we do “B”.
- This is how programmers ’control’ the program flow (execution).
- Let’s try this in a more advanced example using the IDLE editor.

ADVANCED CONDITIONAL STATEMENTS

- Sometimes you may need to make several choices.
- We can "chain" conditionals like this:

```
if <something1 is true> then
    <do operation A>
elif <something2 is true> then
    <do operation B>
elif <something3 is true> then
    <do operation C>
else
    <do operation D>
```

- Notice we use "elif" for subsequent conditionals. This strange abbreviation is used instead of "else if".

CODE BLOCKS

- Did you notice the indentation in the conditional statement?
- This is how Python knows the code belongs to that condition.
- We call this a ”code block” and it can contain one or more statements so long as they are all indented the same number of spaces (or tabs).
- Example:

```
if (intValue == 2):
    k = intValue + 17
    y = k * 4
    print("k = {0}, y = {1}".format(k,y))
```

- Here, we see the three lines of code after the conditional (if) is a single code block.

LOOPS: THE FOR LOOP

- Sometimes we need to do something in a program more than once.
- We may need to execute a set of statements several times.
- A common example is executing a code block a specific number of times.
- We have the “for” loop for executing a “for each value in” statement.
- Example: suppose we want to execute a code block 10 times.
- The for loop goes like this:

```
for <variable> in range(<start>, <end>):
    <code to execute>
```

- Note: the range() function end is exclusive. So, if we want to do something 10 times, using (1, 10) won’t work. Why?

HANDS ON EXPERIMENT #6
USING THE FOR LOOP

- Let’s modify the last experiment a bit.
- Create a new file and enter these lines of code and save it as experiment6.py.

```
chosenValue = input("Please enter a number between 1 and 6: ")
intValue = int(chosenValue)
for i in range(0,intValue):
    if (i == 0):
        iterStr = "first"
    elif (i == 1):
        iterStr = "second"
    elif (i == 2):
        iterStr = "third"
    else:
        iterStr = "{0}th".format(i+1)
    print("This is the {0} execution.".format(iterStr))
```

- Next, run the script again using the Run | Run Module menu.
- What do you see?

PUTTING IT ALL TOGETHER: THE DICE SIMULATOR

- Now, let’s put everything we learned together and write a dice simulator.
- The program should:
  - Ask the user for the dice (number of sides)
  - Ask the user for the number of dice to simulate
  - Use the random number generator function to produce a value for each dice.
  - Print out the values as they are generated.
- Random number generator works like this:

```
import random
valD6 = random.randint(1, 6)
```

- This tells the random number generator class to call the `randint()` function to return an integer (whole number) between 1 and 6.

HANDS ON EXPERIMENT #7
DICE SIMULATOR

- Create a new file and enter these lines of code and save it as dice_simulator1.py.

```
import random
numSides = int(input("What size dice do you want to use? "))
if (numSides % 2) == 1:
    print("ERROR: you must use an even number!")
else:
    numDice = int(input("How many dice do you want to roll? "))
    for i in range(0,numDice):
        diceVal = random.randint(1, numSides)
        print("Roll: {0}".format(diceVal))
```

- Next, run the script using the Run | Run Module menu.
- What do you see?
- Try an odd number for the size dice and see what happens.
- Play with this until you're satisfied it works.

HOMEWORK

All homework assignments can be handed in on hardcopy (with your name at the top) or emailed to me at drcharlesbell@gmail.com.

HOMEWORK #2 - REVIEW

- This is the correct solution to the Celsius to Fahrenheit assignment:

```
#
# Parables and Pythons
#
# Homework 2: Celsius to Fahrenheit
#
# This script reads a value from the user in Celsius and converts it
# to Fahrenheit.
#
celsius = input("Please enter a temperature in Celsius: ")
fahrenheit = 9.0/5.0 * float(celsius) + 32.0
print("{0}C == {1:.2f}F".format(celsius, fahrenheit))
print("bye!")
```

HOMEWORK #2 - REVIEW

- Example execution:

```
RESTART: /Users/cbell/Documents/RCofC/Teaching/Parables and Pythons/homework/celsius_to_fahrenheit.py
Please enter a temperature in Celsius: 30
30C == 86.00F
bye!
>>>
 RESTART: /Users/cbell/Documents/RCofC/Teaching/Parables and Pythons/github/Parables-and-Pythons/examples/fahrenheit_to_celsius.py
Please enter a temperature in Fahrenheit: 86
86F == 30.00C
bye!
>>>
```

HOMEWORK ASSIGNMENT #3

- (2 points) Change the example dice simulator to simulate rolling two dice at the same time.
    - Ask the user for the size of each die (number of sides).
    - Ask the user for the number of times to roll both dice.
    - Print out the results for each roll.
    - Hint: “You rolled a 6 and a 3.”
- (2 bonus points) Make the program run until the user is finished.
    - Hint: use a for loop with a prompt after the simulation.
- (2 bonus points) Do the first bonus using a While loop.

QUESTIONS OR COMMENTS?