

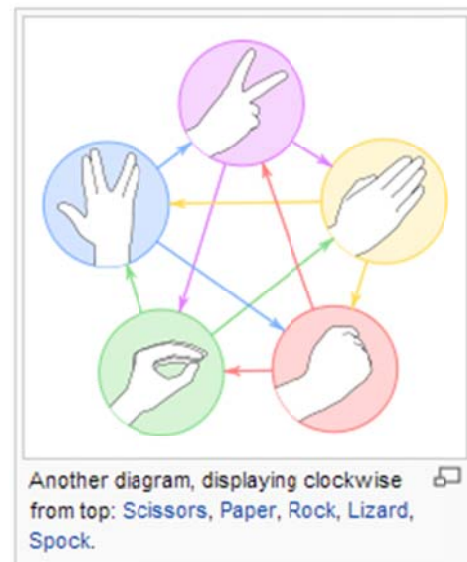
Instructions

- Download Lab_4.py from Sakai.
 - The only deliverable for this lab is to upload your completed program as an Assignment on Sakai. The deadline for uploading your program is 5pm Friday.
 - Program files submitted through the Sakai Assignment page must use the following naming format:
 - Lastname_Firstinitial_Lab_lab#.py
 - For example, for Lab #3, my file would be named: *Thomas_S_Lab_4.py*
 - All programming assignments must follow the Style Guide and include meaningful comments.
- I. The program you have downloaded plays Rock-Paper-Scissors against a human (you). The instructor will go over the details with you to help you understand how it works. Don't go to step II until you understand exactly how it works.
- II. A contemporary version of this decision-making process is Rock-Paper-Scissors-Lizard-Spock. Your challenge is to take what you have learned from the Lab_4 program and extend it to play Rock-Paper-Scissors-Lizard-Spock. Just in case you haven't mastered this complex game here is a description straight from Wikipedia and a diagram that should help:

The rules of Rock-paper-scissors-lizard-Spock are:

- Scissors cut paper
- Paper covers rock
- Rock crushes lizard
- Lizard poisons Spock
- Spock smashes (or melts) scissors
- Scissors decapitate lizard
- Lizard eats paper
- Paper disproves Spock
- Spock vaporizes rock
- Rock breaks scissors

There are ten possible pairings of the five gestures; each gesture beats two of the other gestures and is beaten by the remaining two.



In order to represent the 5 options in a program I suggest using the following assignments:

0 – rock 1 – spock 2 – paper 3 – lizard 4 – scissors

You'll have to figure out the mathematical relationship that indicates a winner or loser.

- III. Once your program plays the game correctly, make the following enhancement. Place all of your program steps (excluding function definitions) in a loop that will execute 10 times. That is, your program should automatically play the game 10 times and then terminate.
- IV. OPTIONAL. If you finish the first three steps quickly you can make the following additional minor enhancement. Have your program count the number of ties, human wins, and computer wins in a round of 10 plays. Print out the results after the ten games have been played.

- Upload your completed program to Sakai → Assignments

SCORING RUBRIC:

3 pts – Program runs with no syntax errors.

3 pts – number2string function works correctly

1 pt - number2string has appropriate comment string

3 pts – string2number function works correctly

1 pt - string2number has appropriate comment string

2 pts - Program prints "Human chooses XXX" where XXX is a string of the form "rock", "paper", "scissors", "lizard" or "Spock".

2 pts - Program prints "Computer chooses XXX" where XXX is a string of the form "rock", "paper", "scissors", "lizard" or "Spock".

2 pts - Program prints an appropriate message such as "It's a tie!", "Player wins!" or "Computer wins!" to report outcome.

3 pts - Program chooses correct winner according to the rules given above.