EXAMPLES

PYTHON

EXAMPLE 1: ROCK PAPER SCISSORS

- Create a program which does the following:
  - Asks the user to input their choice for Rock, Paper, or Scissors (You can ask them to choose from ‘R’, ‘P’, ’S’)
  - Use the ***random*** module to simulate a choice by the computer
  - Compares the two choices and prints out one of the following:
    - “The computer wins!”
    - “The user wins!”
    - “There’s a tie!”

EXAMPLE 1: ROCK PAPER SCISSORS CTD.

- Once you've completed your own version of Rock Paper Scissors, look at the following implementation options.
- Which way of the following did you write the program – or did you use a totally different method? How would you do it with one of the other options?
  - 1) Conditional statements to directly compare choices
  - 2) Lists of winning and losing choices
  - 3) A dictionary where the keys correspond to one player's choice and the values are the winning or losing choice for the other player

EXAMPLE 2: LIST COMPREHENSIONS

- Alter your Rock Paper Scissors program to ask the user whether they want to keep playing after every turn
- As long as the user keeps playing, keep a list of lists that stores the two player choices and a variable that tells you whether the user won or lost.
- Using a list comprehension, create a new list that only includes data on the rounds the user won. At the end of every round, print out that new list.

EXAMPLE 3: LAMBDA FUNCTIONS

- Reimplement the winning round list created with a list comprehension in the last example by combining a lambda function with *filter*.
- Sort the list of the user's winning round info based on what the user played

EXAMPLE 4: READING AND WRITING TO A FILE

- At the end of every round, write the result of that round to a text file.
- When the user is done playing, read and print every line from the text file to the console.