Group: Usman Ahmed, Wayne Tobias, Ed Hawkins, Kirk Martin

Week 2 Day 1

Aim: SWBAT create a game of Rocks Paper Scissors using conditionals and parameters.

Standards:
9-12.CT.4 Implement a program using a combination of student-defined and third-party functions to organize the computation
9-12.CT.5 Modify a function or procedure in a program to perform its computation in a different way over the same inputs, while preserving the result of the overall program.
9-12.CT.9 Systematically test and refine programs using a range of test cases, based on anticipating common errors and user behavior.

Do Now: See Think Wonder

In your notebook,

- List 3 things that you notice in the following assignment.
- List 2 things you think you need to do to complete this assignment.
- List 1 thing that you wonder about when analyzing this problem.

Students will spend 5 minutes reading over the directions to the lab before we go through clarifying issues regarding the following text.

AP Computer Science Principles
Introduction to Python
Project 2: Create a Rock Paper Scissors Game

For this project, you will use Python to create a Rock Paper Scissors Game. The computer will randomly pick Rock, Paper, or Scissors for itself and will ask the player for their selection of Rock, Paper, or Scissors.

1. The Basic version of the game should include the following:

- The computer randomly picks a number from 1 – 3 (1 for Rock, 2 for Paper, 3 for Scissors)
- The computer asks the player to enter 1, 2 or 3 (1 for Rock, 2 for Paper, 3 for Scissors)
- The computer checks to determine the winner of the round
    - If the player and the computer pick the same, the round is a draw
    - Rock beats Scissors
    - Scissors beats Paper
    - Paper beats Rock
- The computer outputs the computer's choice, the player's choice, and the result of the round (Player wins, Computer wins, or Draw)

2. For the Intermediate version of the game add the following to the Basic version:

- The game is Best of 3:
    - For each round, the computer outputs result as in the Basic version
    - When either the Computer or the Player has won 2 rounds, the computer outputs the winner of the match

3. For the Advanced version of the game add the following to the Intermediate version:

- The player specifies the number of rounds needed to win:
    - The computer asks the player how many rounds are needed to win
    - For each round, the computer outputs the result as in the Basic and Intermediate versions
    - When either the Computer or the Player has won the match, the computer outputs the winner of the match and how many rounds the winner has won

Activity: Students will spend 2 days completing the following lab. They will be graded after 2 days using the following rubric.

RUBRIC

4 - Exceeds	3 - Meets	2 - Approaching	1 – Not Yet
The game works properly and has all of the features listed for the Advanced version.	The game works properly and has all of the features listed for the Intermediate version.	The game works properly and has all of the features listed for the Basic version.	The program is mostly complete but the game does not function completely.