RPSLS (Rock, Paper, Scissors, Lizard, Spock)

Introduction

For this project, you will be building a console version of the Rock Paper Scissors Lizard Spock game! RPSLS is a great way to get more familiar with key Object-Oriented Programming concepts, like classes/objects, properties, methods, and inheritance. This project will require thinking critically about where inheritance makes the most sense, and writing the logic of the game in such a way that any kind of player can play the game with the same results, and minimal modification of the code. Bear in mind your SOLID principles and keep it simple!

Technologies

Python, Visual Studio Code with Debugging, Git/GitHub

Learning Objective

Apply the concepts of Object-Oriented Programming to build a console application that incorporates inheritance and SOLID principles of programming.

💡 *Do not start your project until you have an instructor approved game algorithm and list of classes!*

Resources

PowerPoints

- Inheritance

Documents

- RPSLS User Stories

Relevant Projects

- Robots vs. Dinosaurs

Other Resources

- [Explanation of game rules](#)
    - Rock crushes Scissors

        Scissors cuts Paper

        Paper covers Rock

        Rock crushes Lizard

        Lizard poisons Spock

        Spock smashes Scissors

        Scissors decapitates Lizard

        Lizard eats Paper

        Paper disproves Spock

        Spock vaporizes Rock

Create a new Python project in Visual Studio Code and collaborate using Git/GitHub as you program your way through the features of this project.

Setup Steps

1. Create a GitHub repository for the project and commit your created project to the repo.

2. In the project, add the debugger for Python in Visual Studio Code

3. Create a `main.py` file to serve as the entry point for your application when you run it

4. Start creating classes. Start thinking through what every class "has" and "does" based on the user stories.

5. Before you begin coding, write an algorithm that represents the steps necessary to play a game of rock, paper, scissors, lizard, Spock in a best-of-three format. By writing out the steps, it will make you think about every piece needed to bring the game to life.

   Please submit to your instructor Slack channel once completed for approval to start coding. Below is an example of how to get started:

   a. Step 1: Display the rules of the game

   b. Step 2: Ask how many human players will be playing

   c. ... etc

End Result

This is an example of what your user could see in the console when playing. Note the clear prompts for input and messages that show the result of each round.

```
Welcome to Rock Paper Scissors Lizard Spock.

each match will be best of three games
Use the nubmer keys to enter your selection


Scissors cut Paper
Paper covers Rock
Rock crushes Lizard
Lizard poisons Spock
Spock smashes Scissors
Scissors decapitates Lizard
Lizard eats Paper
Paper disproves Spock
Spock vaporizes Rock
Rock crushes Scissors

How many players? 1, 2 or 3 for a surprise
1
Choose 0 for Rock.
Choose 1 for Paper.
Choose 2 for Scissors.
Choose 3 for Lizard.
Choose 4 for Spock.

Choose your gesture.  0

Player one chose Rock
AI has picked Rock

Its a tie, play again!




Next round, first player to win twice is the winner!

Choose 0 for Rock.
Choose 1 for Paper.
Choose 2 for Scissors.
Choose 3 for Lizard.
Choose 4 for Spock.

Choose your gesture.  3

Player one chose Lizard
AI has picked Paper

Player one is the winner!
```