

Watch the video to learn what is going to happen with this project. Not only will you compete with your class but you will also compete with the other section I have of CSE. If we have enough time, I will import the winning code from my training and also the winning code from my colleagues classes….could be fun!

1. I want you to play rock paper scissors amongst yourselves.
   1. Best of three
   2. Count down is “rock, paper, scissors, shoots” you display your choice on “shoot”
   3. Document your here:
      1. If you have a tie, document it! Im wanting you to notice patterns.
      2. Compete against at least 8 ppl

| Competitor | Your choice | Their Choice | Winner |
| --- | --- | --- | --- |
| Drew Dudley | Scissors | Paper | Harsha Malipeddi |
| Drew Dudley | Rock | Scissors | Harsha Malipeddi |
| Drew Dudley | Paper | Paper | Tie |
| Eli Waltz | Rock | Paper | Eli Waltz |
| Eli Waltz | Scissors | Rock | Eli Waltz |
| Eli Waltz | Scissors | Paper | Harsha Malipeddi |
| Jeremy John Franco | Rock | Scissors | Harsha Malipeddi |
| Jeremy John Franco | Scissors | Scissors | Tie |
| Jeremy John Franco | Scissors | Rock | Jeremy John Franco |
| Myan Quinn | Scissors | Rock | Myan Quinn |
| Myan Quinn | Paper | Rock | Harsha Malipeddi |
| Myan Quinn | Scissors | Rock | Myan Quinn |
| Sara Kadam | Scissors | Scissors | Harsha Malipeddi |
| Sara Kadam | Paper | Scissors | Sara Kadam |
| Sara Kadam | Paper | Scissors | Sara Kadam |
| Hari Vasistha | Scissors | Scissors | Tie |
| Hari Vasistha | Paper | Rock | Harsha Malipeddi |
| Hari Vasistha | Scissors | Scissors | Tie |

1. 1. What kind of strategy did you use in your in person game?

| Did you throw rock first everytime? Did you throw paper after they threw scissors? etc  First, I threw scissors after the opponent threw paper. After that, I picked random choices for some rounds and most of the rounds I choose the same choice. |
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* 1. Research strategies online, tell me about that research right here:

| * Randomly choose your move each time. * Play the sign that loses to the repeated sign. * For example, if your opponent has played rock twice, your best choice is to play scissors next. * Observe your opponents patterns and try to predict their next move by acting against their previous throw. |
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* 1. Create your own strategy and tell me about it here:
     1. You can NOT use the random function in this!

| In the rock paper scissors game, my strategy is to choose paper every time except for the first and second round. |
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* 1. What kind of coding concept will this encompass from our class? (loops, conditionals, mathematical operators, etc.)

| The coding concepts in the rock paper scissors game will encompass loops, random module, mathematical operators, conditionals, classes, and functions. |
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Download the RPS simulator to your computer, unzip it and place it into a 3.2.5 RPS folder. Remember all documents need to be in one folder and they must be unzipped.

4. After examining the printed results/output tell me the following

| Which team had the most victories? | Team 2 |
| --- | --- |
| What patterns do you see? | Team 1:  If the player chooses rock then the opponent chooses paper.  If the player chooses paper then the opponent chooses scissors.  If the player chooses scissors then the opponent chooses rock.  Team 2:  They pick a random choice.  Team 3:  They play rock first and then they play with paper and scissors alternatively.  Team 4:  If a player chooses rock, then the opponent chooses rock.  If a player chooses paper, then the opponent chooses paper.  If a player does a random move, then the opponent will choose either rock, paper, or scissors.  Team 5:  The player beats their last move and makes a prediction on what the opponent will choose. |

5. Read the comments before the psrock.round\_robin function call and the comments in the main.py files:

| A.The top part of the report is returned by what part of the program? | Lines 20-33 in the main.py |
| --- | --- |
| B. The bottom part of the report is returned by what part of the program? | Lines 35-44 in the main.py |
| C. Why are the reports printed in the order they are? | The file names in the RPS folder are in order so it executes the reports in order.  Output: --------------------------------------------------------------------------------  Win-loss-tie report for team1:  rrspprrspspprppspprr team1: Beat last move if repeating 5-7-8  prrsssrspsprsrprpssp team2: Random  rrssrsrsspssrpsrrppp team1: Beat last move if repeating 6-8-6  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors  rrpppprsprpssssspsss team1: Beat last move if repeating 10-2-8  rrrrrspsprpppppspppp team4: RockEarlyPaperEven  rrpspsrrsssppsrrrssr team1: Beat last move if repeating 4-8-8  rppsrsrpprrrssrppprr team5: BeatLastMove  --------------------------------------------------------------------------------  Win-loss-tie report for team2:  prrsssrspsprsrprpssp team2: Random 7-5-8  rrspprrspspprppspprr team1: Beat last move if repeating  pssspsrpsspppsprprpp team2: Random 5-4-11  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors  pspsrrpsrsssrsrssrps team2: Random 6-6-8  rrrrrrprpspspppspsps team4: RockEarlyPaperEven  prrppsssrrprprrsspss team2: Random 6-8-6  rsppssrrrppspspprrsr team5: BeatLastMove  --------------------------------------------------------------------------------  Win-loss-tie report for team3:  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors 8-6-6  rrssrsrsspssrpsrrppp team1: Beat last move if repeating  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors 4-5-11  pssspsrpsspppsprprpp team2: Random  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors 4-5-11  rrrrrpprpsprpspsprpp team4: RockEarlyPaperEven  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors 10-0-10  rprsrsrsrsrsrsrsrsrs team5: BeatLastMove  --------------------------------------------------------------------------------  Win-loss-tie report for team4:  rrrrrspsprpppppspppp team4: RockEarlyPaperEven 2-10-8  rrpppprsprpssssspsss team1: Beat last move if repeating  rrrrrrprpspspppspsps team4: RockEarlyPaperEven 6-6-8  pspsrrpsrsssrsrssrps team2: Random  rrrrrpprpsprpspsprpp team4: RockEarlyPaperEven 5-4-11  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors  rrrrrpprppprppprpppp team4: RockEarlyPaperEven 3-12-5  rpppppsspssspssspsss team5: BeatLastMove  --------------------------------------------------------------------------------  Win-loss-tie report for team5:  rppsrsrpprrrssrppprr team5: BeatLastMove 8-4-8  rrpspsrrsssppsrrrssr team1: Beat last move if repeating  rsppssrrrppspspprrsr team5: BeatLastMove 8-6-6  prrppsssrrprprrsspss team2: Random  rprsrsrsrsrsrsrsrsrs team5: BeatLastMove 0-10-10  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors  PS C:\Users\saisreeharshamalip28\Desktop\CSE\Unit 3\3.2\RPS> & "C:/Program Files/Python39/python.exe" "c:/Users/saisreeharshamalip28/Desktop/CSE/Unit 3/3.2/RPS/main.py"  --------------------------------------------------------------------------------  Win-loss-tie report for team1:  rrspprrrsprrpssssrrp team1: Beat last move if repeating 8-6-6  prsrsssrrssprppsssrs team2: Random  rrpppsrpsspsrsrrrprs team1: Beat last move if repeating 3-8-9  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors  rrpppppsssppssppssss team1: Beat last move if repeating 9-0-11  rrrrrppppspppsppppps team4: RockEarlyPaperEven  rrpsprrssrprppprrsss team1: Beat last move if repeating 6-8-6  rppsrspprrpspssspprr team5: BeatLastMove  --------------------------------------------------------------------------------  Win-loss-tie report for team2:  prsrsssrrssprppsssrs team2: Random 6-8-6  rrspprrrsprrpssssrrp team1: Beat last move if repeating  rrssrppppprrsprpprrs team2: Random 5-9-6  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors  pprpsssssrsprpspsrrs team2: Random 9-6-5  rrrrrrpsppppprppprpr team4: RockEarlyPaperEven  prrppprsprrspppprrpp team2: Random 9-9-2  rsppsssprspprsssspps team5: BeatLastMove  --------------------------------------------------------------------------------  Win-loss-tie report for team3:  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors 8-3-9  rrpppsrpsspsrsrrrprs team1: Beat last move if repeating  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors 9-5-6  rrssrppppprrsprpprrs team2: Random  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors 4-7-9  rrrrrrprpsprppprprpp team4: RockEarlyPaperEven  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors 10-0-10  rprsrsrsrsrsrsrsrsrs team5: BeatLastMove  --------------------------------------------------------------------------------  Win-loss-tie report for team4:  rrrrrppppspppsppppps team4: RockEarlyPaperEven 0-9-11  rrpppppsssppssppssss team1: Beat last move if repeating  rrrrrrpsppppprppprpr team4: RockEarlyPaperEven 6-9-5  pprpsssssrsprpspsrrs team2: Random  rrrrrrprpsprppprprpp team4: RockEarlyPaperEven 7-4-9  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors  rrrrrrprpppsprpsprps team4: RockEarlyPaperEven 5-7-8  rppppppspsssrspsrsps team5: BeatLastMove  --------------------------------------------------------------------------------  Win-loss-tie report for team5:  rppsrspprrpspssspprr team5: BeatLastMove 8-6-6  rrpsprrssrprppprrsss team1: Beat last move if repeating  rsppsssprspprsssspps team5: BeatLastMove 9-9-2  prrppprsprrspppprrpp team2: Random  rprsrsrsrsrsrsrsrsrs team5: BeatLastMove 0-10-10  rspspspspspspspspsps team3: Rock first, then alternate paper and scissors  rppppppspsssrspsrsps team5: BeatLastMove 7-5-8  rrrrrrprpppsprpsprps team4: RockEarlyPaperEven  --------------------------------------------------------------------------------  Win-loss-tie report for round robin:  26-22-32 team1: Beat last move if repeating  29-32-19 team2: Random  31-15-34 team3: Rock first, then alternate paper and scissors  18-29-33 team4: RockEarlyPaperEven  24-30-26 team5: BeatLastMove |

7.

| Which team won? | Team 3 |
| --- | --- |
| Does the number of games impact the winning strategy? | Yes |
| How much time was saved in gathering the data this way instead of your class doing the same number of games? (estimate) | It saved us half of the time. |

8. Create a new team/strategy in VSCODE by creating a new python document inside of the RPS folder.

9. Copy and paste a different team's code into this file and save it with your team name.

10. Modify the code in main.py so you can run a tournament for six teams, which includes your new team. There are three places you need to modify the code in main.py, make the changes and use a #firstnamelastname to mark your changes. Take a screenshot of this code and paste in here:

|  |
| --- |

11-16:

Give me a screenshot of your RPS Strategy Code here:

|  |
| --- |

Explain what your code is doing either by using comments in your code or by typing in your explanation here:

| My RPS strategy code is picking paper for every round except for the first and second round. |
| --- |

You will now submit your strategy(.py file) to the canvas module. Mr. Peggs will download it and put it into the simulator to run against the entire class. This will be done on Thursday May 16th.