Jaydeep Rotithor

Assignment 3 design changes

In assignment 3, my design did not undergo too many significant changes. I designed classes for each object(rock, paper, scissors, tool in general, and RPSGame, which contains the functionality to play the game). I did use dynamic memory allocation in the tool classes, but I needed on in RPSGame, since it was essential to play of the game. The most difficult part of the project was setting different strengths for the tools. At first, I had difficulty in doing this, but then I created a separate function in each class dedicated to this. I did this because I did not want to throw this functionality into the non-default constructors, since that would require me to create new objects, and I would need to completely redo my main function to account for this. My method for searching for data was very simple, in that I returned the strength of the computer's object and had 3 different fight functions that each processed that and if a match was found, then the strengths would be compared.

Testing:

Input	Expected	Expected = Output?
0 for different strength prompt	All strengths are 1	Yes
1 for different strength prompt	Can set different strengths	Yes
w for different strength prompt	Error, reprompt	Yes
1,Non-integer for different strength prompt	Error, reprompt	Yes
1, 3,4,6 for strengths	Different strengths set	Yes
A character other than r,c,p or e for tool	Error, reprompt	Yes
R, computer chose s	Human wins	Yes
R is twice as strong as paper, r, computer chooses p	Tie	Yes