Duell

Python

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# Bug Report

Dice doesn’t update correctly on downward computer roll

Check on lateral\_move – doesn’t work properly (computer is able to move laterally over other dice)

Check on frontal\_move – always works.

# Data Structures/Classes

Classes:

* Tournament
* Die
* Board
* Game

# Log

* December 1, 2016
  + Worked on the set up of the game including the basic board in the starting position. The game generates a random number for the computer and the turn taking is implemented (2 hours)
  + The user is asked which die they want to move and some of the validation is done (2 hours)
  + Defined the following classes:
    - Tournament – get\_human\_score, get\_computer\_score, set\_computer\_score, set\_human\_score, set\_winner
    - Die – roll\_die, get\_frontal, get\_lateral, get\_top, get\_right
    - Board – print\_table, check\_partial, frontal\_path, validate\_move, lateral\_path
    - Game - begin\_game
* December 2, 2016:
  + Code refactoring (30 minutes)
* December 3, 2016
  + Debugging user move and completion of user input (2 hours)
  + Serialization – reading from a file and writing to a file (1 hour)
    - Defined the File class with the following functions:
      * write\_to\_file
      * read\_from\_file
* December 4, 2016
  + Computer Logic (1 hours):
    - If the computer is able to win, do that
    - If the key die is being threatened, move the key die
    - If any opponent’s die can be captured, capture it
    - Move anything
  + Debugging computer logic (1 hour)

# Screen Shots

# Why Python

I chose Python for the extra credit assignment because I felt that Python is an extremely good language to know and more and more employers are looking for students that know Python. According to Indeed.com, it is #6 on the list of most in-demand programming languages.

I took a summer class in Python, so it wasn’t a brand new programming language and many of the features I was already familiar with, but I still learned a lot from doing this project. I really liked the fact that Python comes with a lot of built in libraries that are easy to use and implement. In this project, I used the regular expressions (re) library in order to parse my text files for serialization. I also liked the structure of the language – since Python is not a free-form language, it is easy to read and naturally very organized. While using this language, I didn’t like the fact that there is no do-while loop. When it comes to input validation, the do-while loop is the easiest way to make sure that the user is inputting the correct information and since there is no support for this, the structure of the code is a little more verbose. I also think it’s a little harder to work with a scripting language because you don’t necessarily know that there is something wrong with your code unless you happen to reach a specific circumstance which will cause it to throw an error in the middle of running.