(CM1103 Coursework 2016: Report Figures and Question 1.e)

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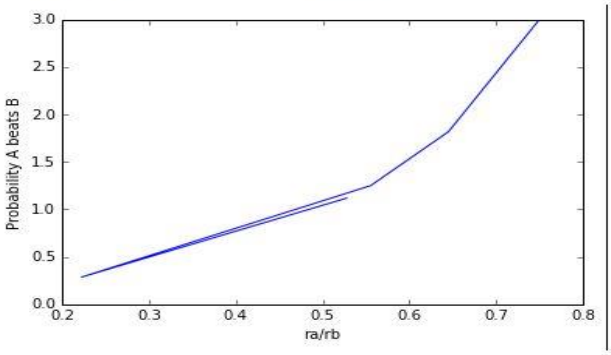
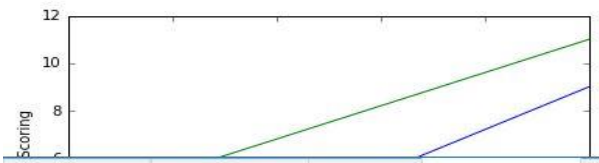
Project: (Squash Game)

Here are captures of the interactive IPython sessions after running the examples on the assignment:-

```
Python 3.5.2 |Anaconda 4.2.0 (64-bit)| (default, Jul  5 2016, 11:41:13) [MSC v.1900 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 5.1.0 -- An enhanced Interactive Python.
?         -> Introduction and overview of IPython's features.
%quickref -> Quick reference.
help      -> Python's own help system.
object?   -> Details about 'object', use 'object??' for extra details.

In [1]: runfile('C:/Users/wesam/Desktop/SquashProject/squashProject.py', wdir='C:/Users/wesam/Desktop/SquashProject')

In [2]: game(70,30)
Out[2]: (11, 5)

In [3]: csv_Reader("test.csv")
Out[3]: [(60, 20), (100, 55), (50, 40), (20, 70), (95, 85)]

In [4]: matplot(csv_Reader("test.csv"))
```




```
In [5]: ParsVsEnglish(30,70)
```




```
Python console | Internal console | History log | IPython console
```

Figure [1] : tests game(70,30), csv_Reader("test.csv") and matplot(csv_Reader("test.csv")).

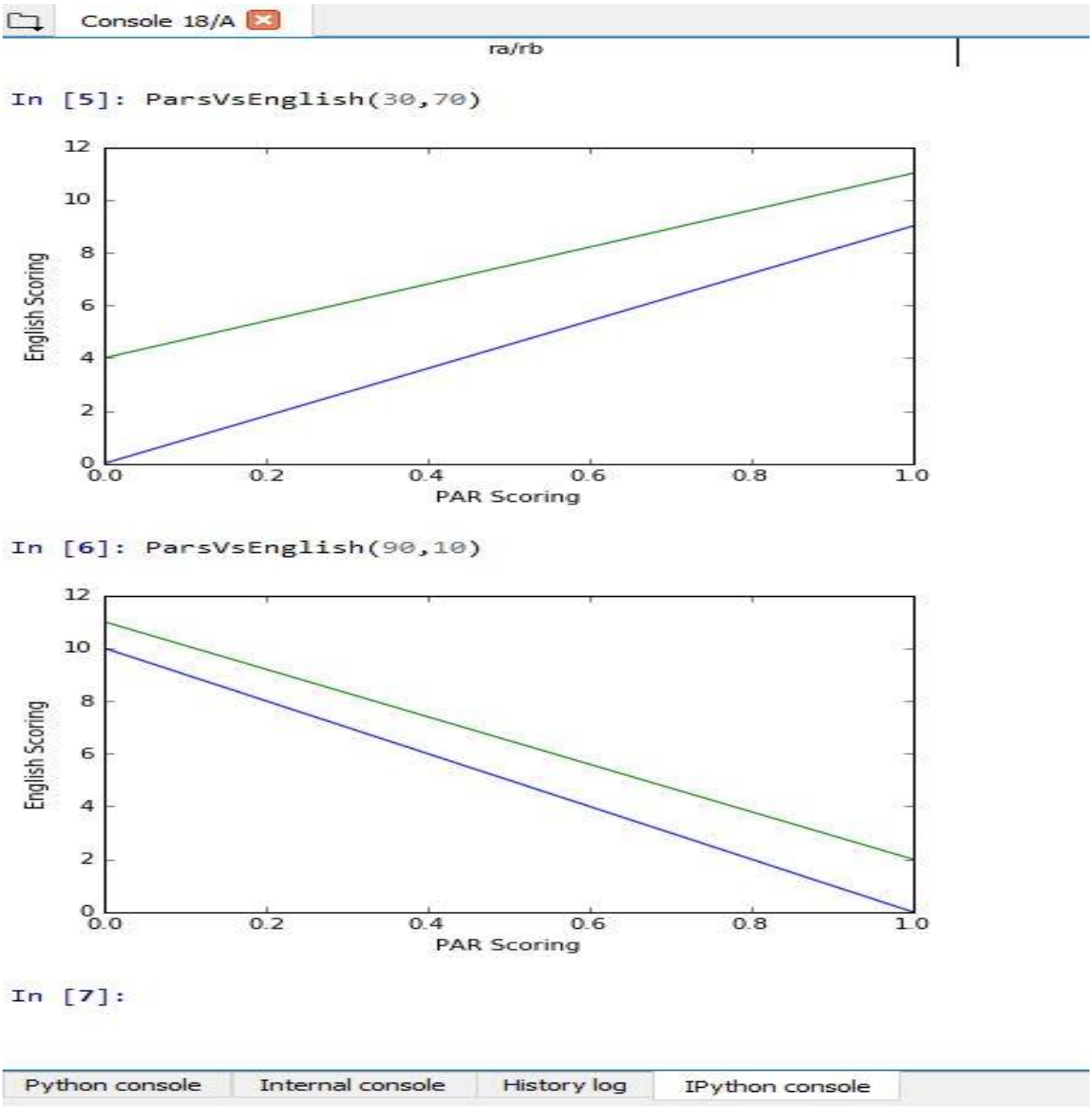
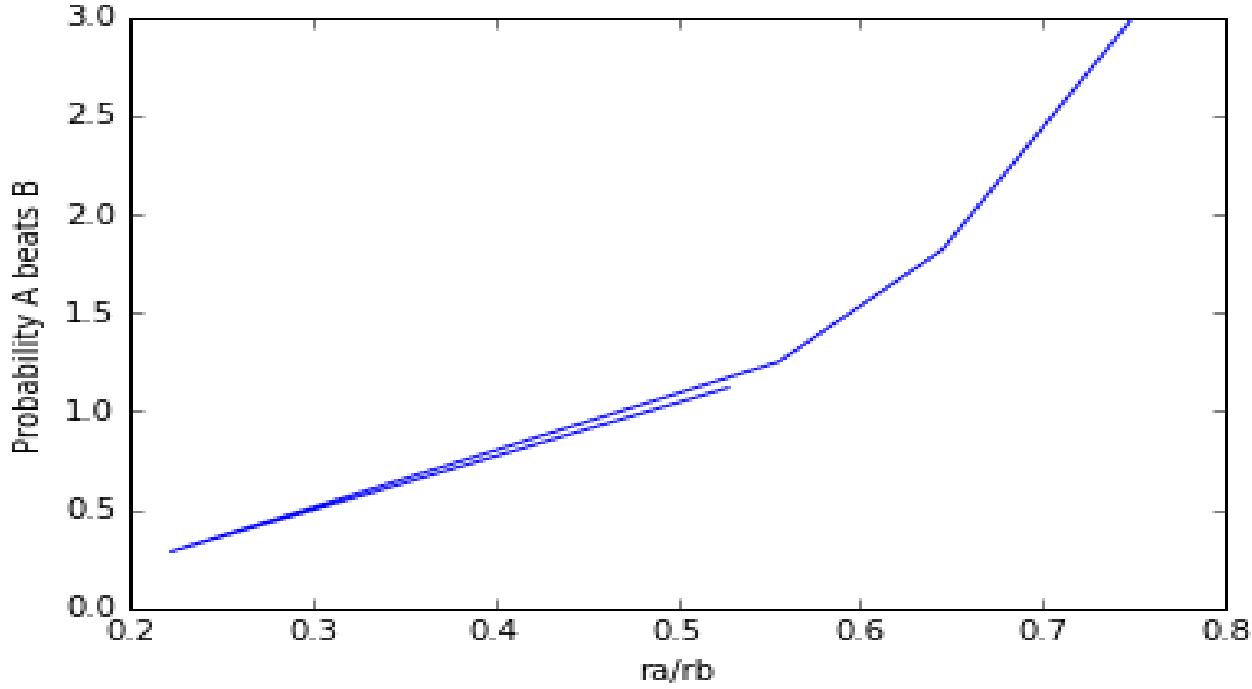


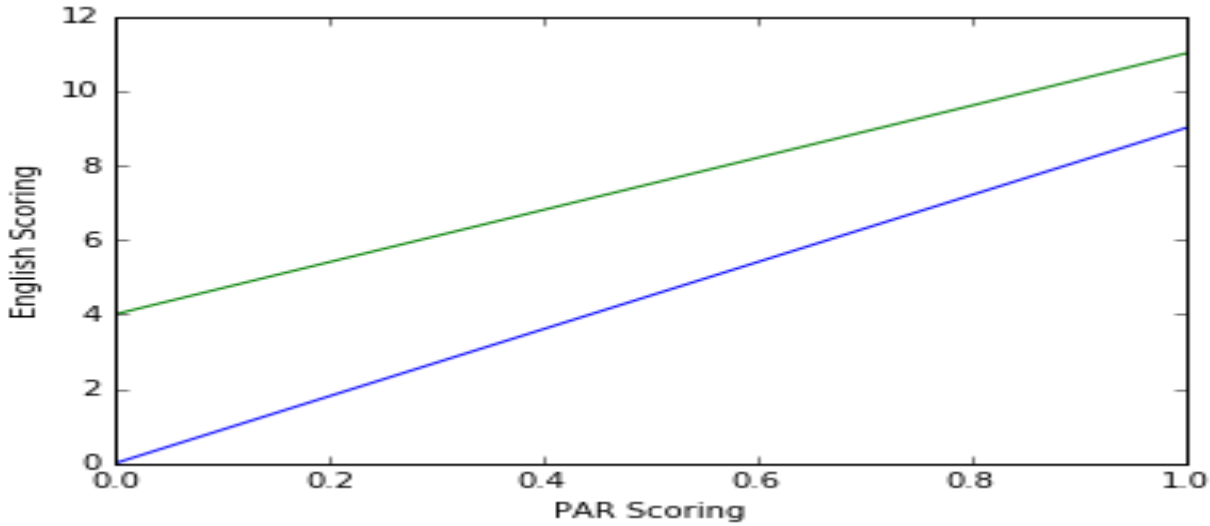
Figure [2]: test ParsVsEnglish(30, 70) and ParsVsEnglish(90, 10) function.

Report for question 1d and 2 :-



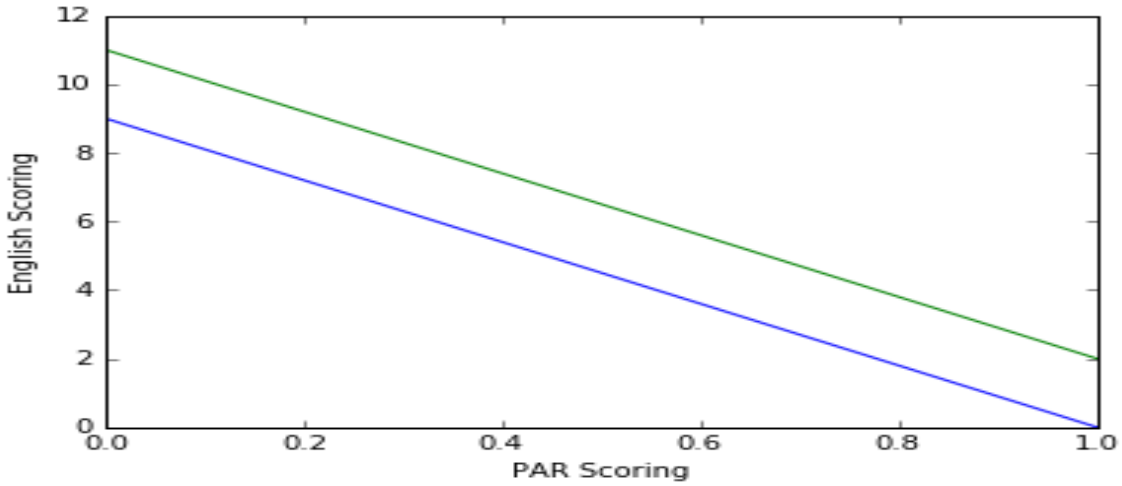
Figure[3]: matplot(csv_Reader("tests")).

The graph above indicates the *P(A wins)* against *ra/rb.* The data has been collected after calling the csv_Reader() function from question 1c which results of a list of tuples. The values are then have been calculated using the P(A wins) equation and then displayed on the graph along with the ra/rb.



Figure[4]: ParsVsEnglish(30, 70).

Figure[4] shows the comparison between the English Scoring and PARS (Point-a-rally Scoring). The y-axis represents the English scoring and the x-axis represents PAR scoring. Whereas the green lines for the PARS and the blue is for the English.



Figure[5]: ParsVsEnglish(90, 10)

The point of comparing the function using four different values for players abilities is to show that after calling the function ParsVsEnglish using the value arguments (30, 70) and (90,10), the outputs are always the same regarding the length of the PARS rule where it takes longer than the English rules. Since PARS game finishes at 11; the English scoring can be extended to 10 points maximum. Therefore, the length would always be longer in PARS whether the probability for A is higher than B or vice versa.