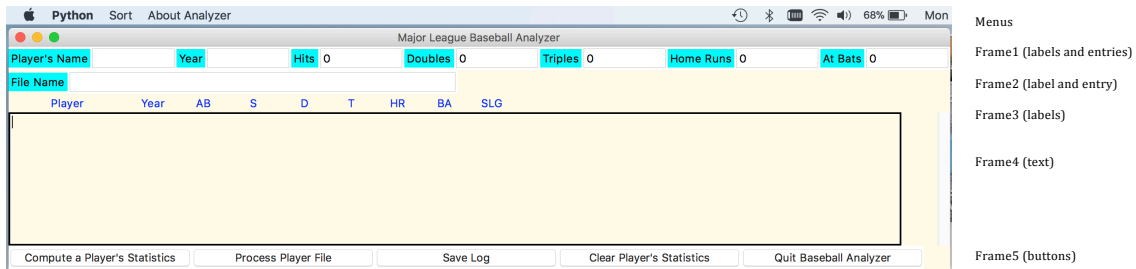


Assignment 6: Baseball GUI

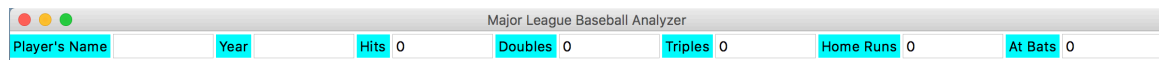
Due:

Your task is to build a complete functioning GUI shown below:

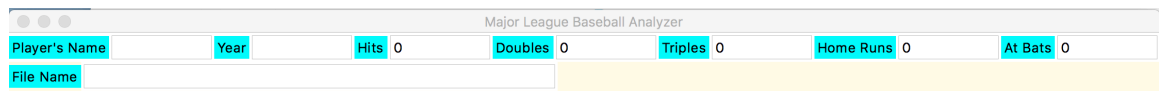


Building GUI:

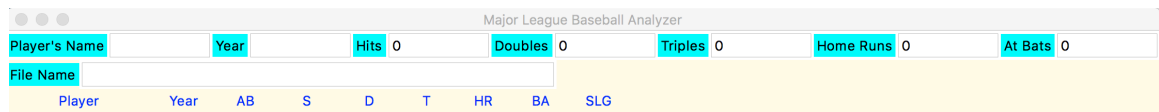
1. Place Frame1 into the window and place seven labels and seven entry widgets into this frame as show below:



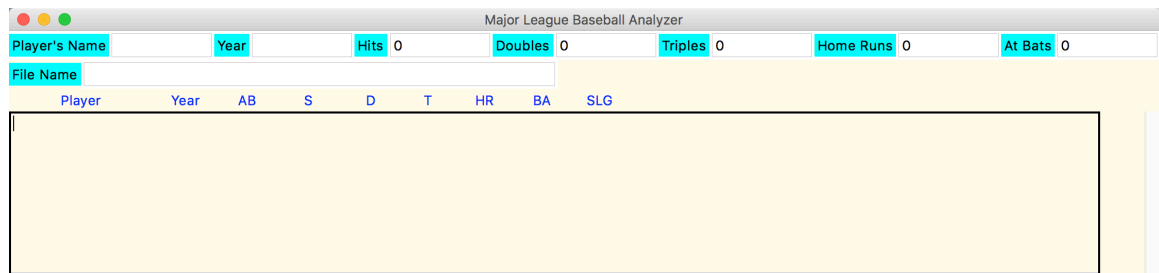
2. Place Frame2 into the window and place one label and one entry widget in this frame as follows:



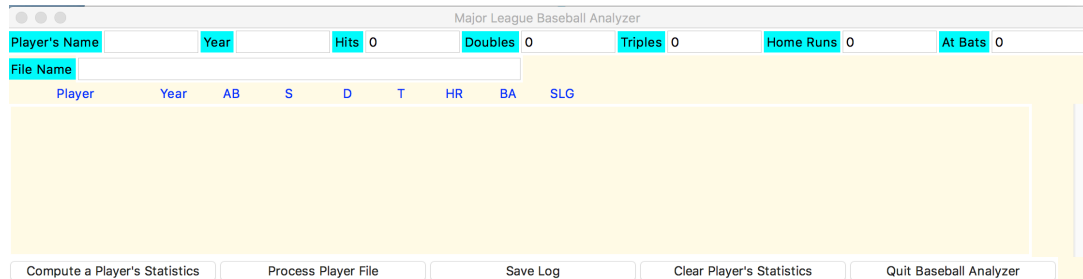
3. Place Frame3 into the window and place labels into this frame as follows:



4. Place Frame4 into the window and place a text widget and scroll bar into this frame as follows:



5. Place Frame5 into the window and place five buttons into this frame as follows:



6. Now implement the function associated with the first button (Compute a Player's Statistics) to get the data placed in the entry widgets in Frame1, associated with a player's statistics as follows.

Major League Baseball Analyzer

Player's Name: Hank Aaron Year: 1971 Hits: 162 Doubles: 22 Triples: 3 Home Runs: 47 At Bats: 495

File Name:

Player Year AB S D T HR BA SLG

Buttons: Compute a Player's Statistics, Process Player File, Save Log, Clear Player's Statistics, Quit Baseball Analyzer

When this button is clicked the player's statistics are displayed in the text widget (hint: create a PlayersYear object with this data and call the `__str__()` function in the PlayersYear class to insert the statistics in the text widget, shown below).

Major League Baseball Analyzer

Player's Name: Hank Aaron Year: 1971 Hits: 162 Doubles: 22 Triples: 3 Home Runs: 47 At Bats: 495

File Name:

Player Year AB S D T HR BA SLG

Hank Aaron 1971 495 90 22 3 47 0.327 0.669

Buttons: Compute a Player's Statistics, Process Player File, Save Log, Clear Player's Statistics, Quit Baseball Analyzer

7. Now implement the function associated with the second button (Process Player File) to open the file in the entry widget in Frame2 and read all players in the file.

Major League Baseball Analyzer

Player's Name: Year: Hits: 0 Doubles: 0 Triples: 0 Home Runs: 0 At Bats: 0

File Name: dimaggio.txt

Player Year AB S D T HR BA SLG

Buttons: Compute a Player's Statistics, Process Player File, Save Log, Clear Player's Statistics, Quit Baseball Analyzer

When this button is clicked all outputs are inserted in the text widget as follows:

Major League Baseball Analyzer

Player's Name: Year: Hits: 0 Doubles: 0 Triples: 0 Home Runs: 0 At Bats: 0

File Name: dimaggio.txt

Player Year AB S D T HR BA SLG

Joe DiMaggio 1936 637 118 44 15 29 0.323 0.576

Joe DiMaggio 1937 621 119 35 15 46 0.346 0.673

Joe DiMaggio 1938 660 117 32 13 32 0.294 0.527

Joe DiMaggio 1939 524 108 32 6 30 0.336 0.592

Joe DiMaggio 1940 572 111 28 9 31 0.313 0.556

Joe DiMaggio 1941 622 109 43 11 30 0.310 0.559

Joe DiMaggio 1942 680 123 29 13 21 0.274 0.447

Joe DiMaggio 1946 567 93 20 8 25 0.257 0.453

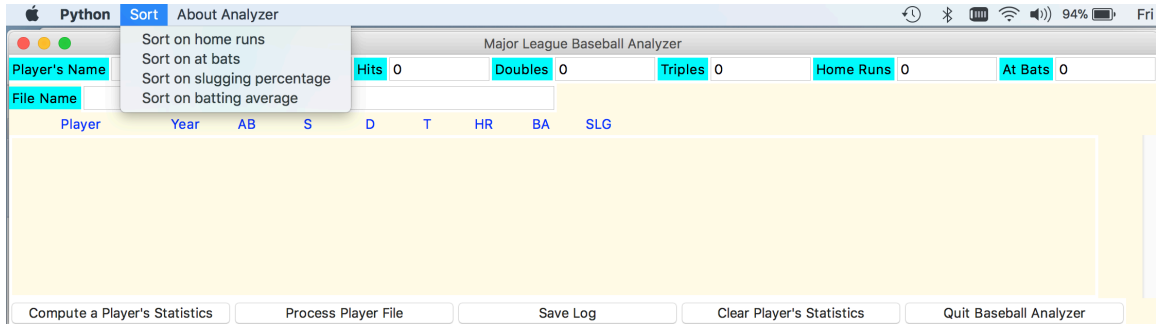
Joe DiMaggio 1947 601 107 31 10 20 0.280 0.464

Joe DiMaggio 1948 669 114 26 11 39 0.284 0.531

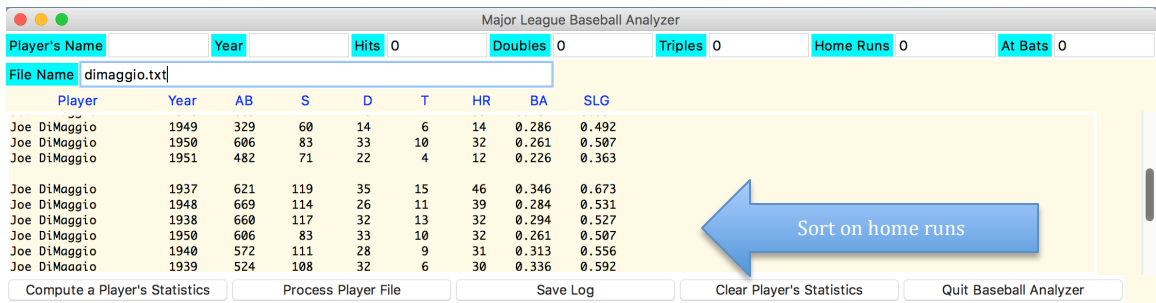
Buttons: Compute a Player's Statistics, Process Player File, Save Log, Clear Player's Statistics, Quit Baseball Analyzer

Hint: use the function you wrote in assignment 4 to open the file and read the baseball statistics (note this function returns a list of PlayersYear objects). Now use the `__str__()` function to process each PlayersYear object to produce above display (you may have to adjust the width of the labels in the Frame3 so the output lines up with the labels).

8. a) Next implement the function associated with the last button (Quit Baseball Analyzer) to quit the program.
- b) Similarly, implement the function associated with the button (Clear Player's Statistics). When clicked this button cause all entry widgets to be reset to the empty string " or to the integer 0 and the text widget to be reset to the empty string ".
9. Next create a menu (Sort) and submenus, as follows:

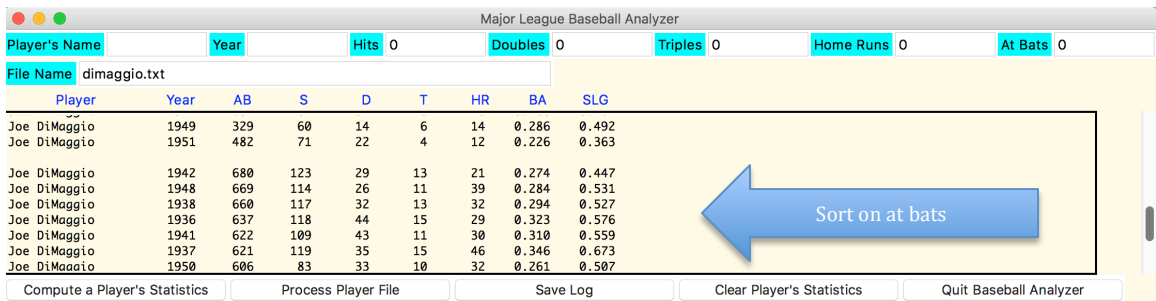


- a) When choosing "Sort on home runs", the information placed in the text widget is as follows:



Note that there is a blank line between outputs in the text widget!

- b) When choosing "Sort on at bats", the information placed in the text widget is as follows:



- c) When choosing "Sort on slugging percentage", the information placed in the text widget is as follows:

Major League Baseball Analyzer

Player's Name: Year: Hits: 0 Doubles: 0 Triples: 0 Home Runs: 0 At Bats: 0

File Name: dimaggio.txt

Player	Year	AB	S	D	T	HR	BA	SLG
Joe DiMaggio	1951	482	71	22	4	12	0.226	0.363
Joe DiMaggio	1949	329	60	14	6	14	0.286	0.492
Joe DiMaggio	1937	621	119	35	15	46	0.346	0.673
Joe DiMaggio	1939	524	108	32	6	30	0.336	0.592
Joe DiMaggio	1936	637	118	44	15	29	0.323	0.576
Joe DiMaggio	1941	622	109	43	11	30	0.310	0.559
Joe DiMaggio	1940	572	111	28	9	31	0.313	0.556
Joe DiMaggio	1948	669	114	26	11	39	0.284	0.531
Joe DiMaggio	1938	660	117	32	13	32	0.294	0.527

Sort on slugging percentage

Compute a Player's Statistics Process Player File Save Log Clear Player's Statistics Quit Baseball Analyzer

d) When choosing "Sort on batting average", the information placed in the text widget is as follows:

Major League Baseball Analyzer

Player's Name: Year: Hits: 0 Doubles: 0 Triples: 0 Home Runs: 0 At Bats: 0

File Name: dimaggio.txt

Player	Year	AB	S	D	T	HR	BA	SLG
Joe DiMaggio	1942	680	123	29	13	21	0.274	0.447
Joe DiMaggio	1951	482	71	22	4	12	0.226	0.363
Joe DiMaggio	1937	621	119	35	15	46	0.346	0.673
Joe DiMaggio	1939	524	108	32	6	30	0.336	0.592
Joe DiMaggio	1936	637	118	44	15	29	0.323	0.576
Joe DiMaggio	1940	572	111	28	9	31	0.313	0.556
Joe DiMaggio	1941	622	109	43	11	30	0.310	0.559
Joe DiMaggio	1938	660	117	32	13	32	0.294	0.527
Joe DiMaggio	1949	329	60	14	6	14	0.286	0.492

Sort on batting average

Compute a Player's Statistics Process Player File Save Log Clear Player's Statistics Quit Baseball Analyzer

10. Next, implement the function associated with the button "Save Log" to save all the text in the text widget to a file called *session_log.txt*.

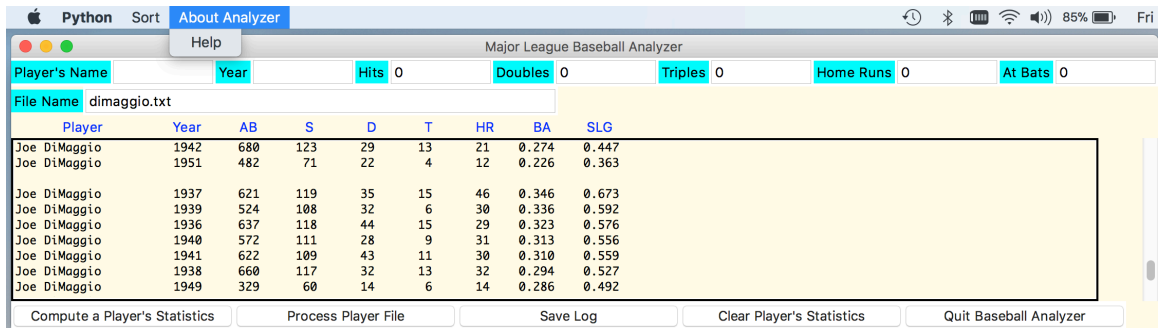
PlayersYear

Name: Date Modified:

session_log.txt

Joe DiMaggio	1936	637	118	44	15	29	0.323	0.576
Joe DiMaggio	1937	621	119	35	15	46	0.346	0.673
Joe DiMaggio	1938	660	117	32	13	32	0.294	0.527
Joe DiMaggio	1939	524	108	32	6	30	0.336	0.592
Joe DiMaggio	1940	572	111	28	9	31	0.313	0.556
Joe DiMaggio	1941	622	109	43	11	30	0.310	0.559
Joe DiMaggio	1942	680	123	29	13	21	0.274	0.447
Joe DiMaggio	1946	567	93	20	8	25	0.257	0.453
Joe DiMaggio	1947	601	107	31	10	20	0.280	0.464
Joe DiMaggio	1948	669	114	26	11	39	0.284	0.531
Joe DiMaggio	1949	329	60	14	6	14	0.286	0.492
Joe DiMaggio	1950	606	83	33	10	32	0.261	0.507
Joe DiMaggio	1951	482	71	22	4	12	0.226	0.363
Joe DiMaggio	1937	621	119	35	15	46	0.346	0.673
Joe DiMaggio	1948	669	114	26	11	39	0.284	0.531
Joe DiMaggio	1938	660	117	32	13	32	0.294	0.527
Joe DiMaggio	1950	606	83	33	10	32	0.261	0.507
Joe DiMaggio	1940	572	111	28	9	31	0.313	0.556
Joe DiMaggio	1939	524	108	32	6	30	0.336	0.592
Joe DiMaggio	1941	622	109	43	11	30	0.310	0.559
Joe DiMaggio	1936	637	118	44	15	29	0.323	0.576
Joe DiMaggio	1946	567	93	20	8	25	0.257	0.453
Joe DiMaggio	1942	680	123	29	13	21	0.274	0.447
Joe DiMaggio	1947	601	107	31	10	20	0.280	0.464
Joe DiMaggio	1949	329	60	14	6	14	0.286	0.492
Joe DiMaggio	1951	482	71	22	4	12	0.226	0.363
Joe DiMaggio	1942	680	123	29	13	21	0.274	0.447
Joe DiMaggio	1948	669	114	26	11	39	0.284	0.531

11. Finally, create a second menu called "About Analyzer" with one submenu "Help" as follows:



Implement the function associated with the “Help” menu choice to display a messagebox like the one below with information about how this GUI works:

