

Project 2: TDD Development of Fantasy Football Software

A box score for a football game looks something like this:

LIONS

PACKERS

Passing

Player	C/Att	Yds	TD	Int
16 Jared Goff	26/36	246	2	1

Rushing

Player	Car	Yds	Avg	TD
16 Jared Goff	4	46	11.5	0
32 D'Andre Swift	8	37	4.6	0
30 Jamaal Williams	7	25	3.6	0

Receiving

Player	Rec	Yds	Avg	TD
88 T.J. Hockenson	8	66	8.2	1
87 Quintez Cephus	4	63	15.8	1
32 D'Andre Swift	4	41	10.2	0
17 Trinity Benson	1	24	24.0	0
14 Amon-Ra St. Brown	3	18	6.0	0
11 Kalif Raymond	2	18	9.0	0
30 Jamaal Williams	3	12	4.0	0
45 Jason Cabinda	1	4	4.0	0

Kicking

Player	FG	Pct	Lng	Pts
4 Austin Seibert	1/1	100.0	43	5

Your goal will be to write (and, more importantly, to test) the software that converts this data into the correct number of points for each player in an online fantasy football league.

Note: All students will use the data shown for their box scores; however, each student is responsible for creating their own box score files

We will assume that, for this league, scoring works as follows:

Passing

- 1 point for every four completions (no fractional points)
- 1 point for every 20 yards passing (no fractional points)
- 4.5 points for every touchdown (TD) thrown
- .5 points for the first interception thrown; -1 points for every Int. thrown thereafter

Rushing

- .1 points for every yard rushed (incl. fractional points)
- 6 points per rushing touchdown
- 2 bonus points if the player's Avg. yards/carry is at least 6 yards/carry

Receiving

- .1 points for every yard receiving (incl. fractional points)
- 1 point for every two catches (no fractional points)
- 6 points per receiving touchdown

Kicking

- 3 points per field goal (FG)
- 1 point per extra point (XP)
- 0.4 points for every missed field goal
- 2 bonus points if the longest field goal made for the game is 50+ yards

Note: This league awards no points for 2-pt conversions or special teams TDs.

Your program should work as follows:

Given a file with a box score (such as the one shown above), your program should read that file and figure out how many fantasy points each player listed scored for that game.

Your project should be completed as follows:

Step 1. (HW 2a) Write requirements and a test plan for your program. Note: You should use equivalence classes and boundary testing when writing your plan.

Step 2. (HW 2b) Document a TDD implementation strategy for your program.

Step 3. (HW 2c) Using TDD techniques (and your previously-developed strategy), write code for that will calculate Rushing and Receiving points for each player in the box score. Note: This could take as many as six iterations! Don't procrastinate!

Step 4. (HW 2d) Using TDD techniques, write code for that will calculate Rushing and Receiving points for each player in the box score. (See note above; the same applies here.)

Step 5. (Proj 2) Finish the code, run the test plan and document the results. Note: You may still have some requirements that need taken care of, depending on your implementation strategy.