College Football Score Generator

This is my version of a college football quick-play game, which will give you the result of a game in a few seconds, with a few die rolls. I created it to address a couple of problems that bothered me with other quick-play games. But I hesitate to even call it a game, so I'm calling it a score generator.

This version has statistically sound team ratings[1], with strength-of-schedule built in to the ratings. So there are no extra calculations needed when setting up each matchup, and within each division at least, any two teams can be matched up with reasonable results. In other quick-play games that I have played, the strength-of-schedule always added an extra step, and in some cases, produced very unreasonable ratings.

This version also generates realistic scores. So a team will score 21 points much more often than 19 points, according to the real-life frequencies of those scores. Also important is that it generates a realistic variance of scores, again based on real-life frequencies. This means that the favorites and underdogs will win the correct proportion of games.

I have included a system for clutch performance, intended to replicate a team's real-life win/loss record. It's optional in the sense that if you do not believe in using clutch systems, you can skip the last step of the rules. For me, when replaying a season, I've decided that I do want to replicate the performance of teams in close games, but I understand the arguments both ways.

[1] There is a large amount of research on systems for rating college football teams. My system is somewhat similar to the one described here:
Harville, David. "The Use of Linear-Model Methodology to Rate High School or College Football Teams." Journal of the American Statistical Association. June 1977: 278-289.
My system adds separate ratings for offense and defense, and uses a robust linear model, but the basic setup is the same.
If you are interested, check out some of the other articles here:
http://homepages.cae.wisc.edu/~dwilson/rsfc/rate/biblio.html

Rules

1. Determine the Score Ratings for the two teams.

Take the Offense rating for the first team and add the Defense rating of the second team. Repeat, using the second team's Offense rating and the first team's Defense Rating.

For the examples, I'll use these two teams:

Team	*Offense*	*Defense*	*Clutch*
Powerhouse St	*30*	*-5*	*-5*
Wossamotta U	*18*	*3*	*20*

Ex: Powerhouse St's Score Rating is 30 + 3 = 33.
Wossamotta U's Score Rating is 18 + (-5) = 13.

2. If it is a home game for one team, adjust for home field advantage.

Add 1 point to the home team's Score Rating, and subtract 2 points from the visitor's.

Ex: With Wossamotta U at home, their Score Rating is 13 + 1 = 14.
Powerhouse St's Rating is 33 – 2 = 31.

3. Determine each team's score for the game by rolling percentile dice, and using the Score Table.

On the Score Table, find the column that corresponds to the first team's Score Rating. Roll percentile dice (i.e., two ten-sided dice) to generate a number between 00 and 99. Cross-reference this roll with the team's Score Rating to generate that team's score for the game. Repeat for the second team.

Ex: Wossamotta U has a Score Rating of 14. They roll a 5 on the first d10 and a 6 on the second d10, which is read as 56. Using the Score Table, we see that they have scored 14 points in this game.
Powerhouse St has a Score Rating of 31. They roll a 1 and a 7, which is read as 17, and on the Score Table we see that they have scored 23 points this game.

In the rare case where a team's Score Rating does not appear as a column on the Score Table, just use the column that is closest. This usually happens when a team's score rating is negative, or close to zero.

4. Possible clutch comback by the trailing team.

If the final score from step #3 is within 14 points, there may be a chance for a clutch comeback by the trailing team. Determine the trailing team's Clutch rating for this game by subtracting the Clutch rating of the opponent.

> *Ex: Wossamotta U is trailing, 14-23. Since this difference is within 14 points, there is a chance for a comeback. Wossamotta U's Clutch rating is 20 – (-5) = 25.*

Roll another d10, and add it to the trailing team's Clutch rating for this game. Use this number to check the Clutch Table below. If the resulting number of points from the Clutch table is enough to make up the difference in the score, then the trailing team has made a comeback to win or tie the game!

Clutch + d10	Points
<10	0
10-19	3
20-29	7
30-39	10
40+	14

> *Ex: Wossamotta U rolls a 7. Adding this to their Clutch rating of 25 for this game equals 32. Checking the Clutch table, we get a result of 10 points. Wossamotta U has scored enough to win the game with a final score of 24-23!*

> *Ex: If Wossamotta U rolled a 0, that would get added to 25 to equal 25. On the Clutch table, this is a result of 7 points. Since it is not enough to tie the game, they do not score the points, and the final score would remain 23-14. (This seems counter-intuitive, but it's intended to keep the point totals closer to real-life. If all you care about is who won or lost, it doesn't matter anyway.)*

Often you will see that the trailing team's adjusted Clutch rating is so low that they have no chance of coming back, and you can skip the die roll.

> *Ex: If Powerhouse St was behind, their Clutch rating would be -5 – 20 = -25, and they would not be able to come back at all.*

Tie Scores

If the score is tied after step #3, then proceed with step #4 as normal. The team with the chance to score and win is the team with a positive adjusted Clutch rating for that game. (In the example game, that would be Wossamotta U with an adjusted Clutch rating of 25.) If both sides have the same Clutch rating, so that they both have an adjusted Clutch rating of 0 for that game, then neither team has a chance to score in step #4.

If the score is tied after step #4, then the winner is determined by a single roll of the d10. On a 0-4, the first team wins, and on a 5-9, the second team wins. Give the winning team another 3 points for a game-winning field goal.