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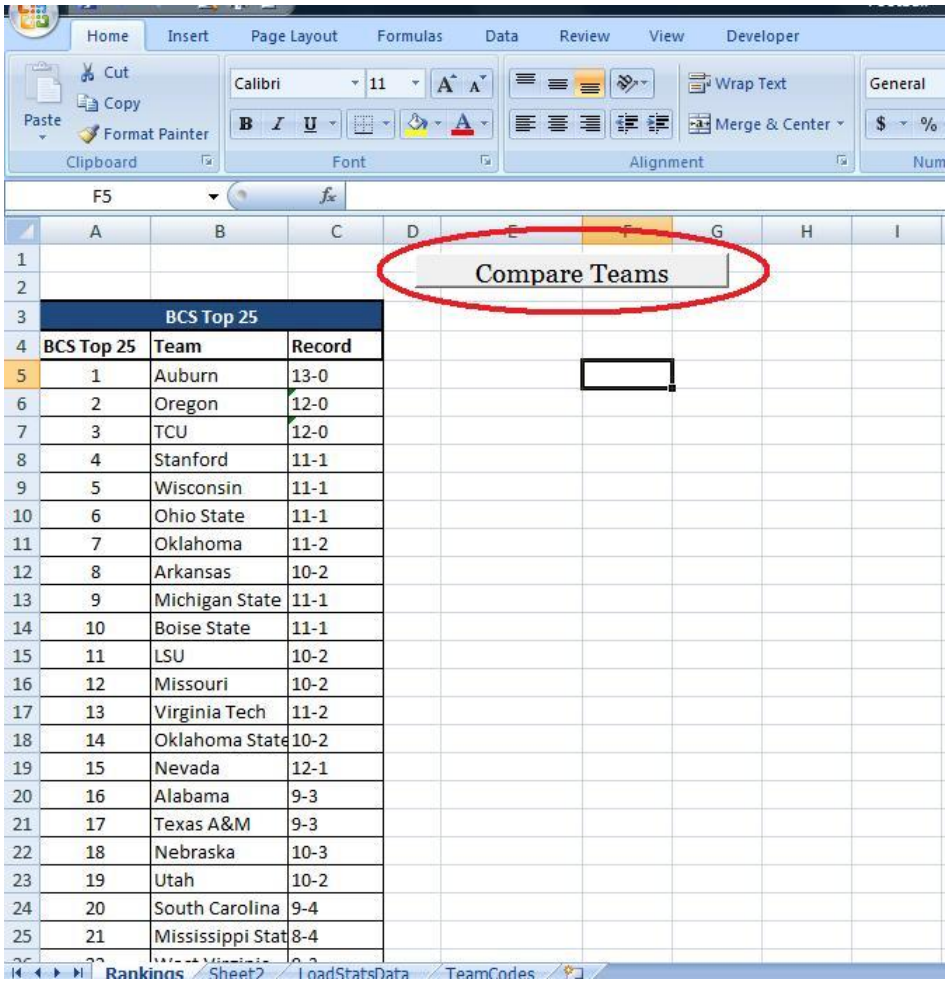
Semester Project Write-Up

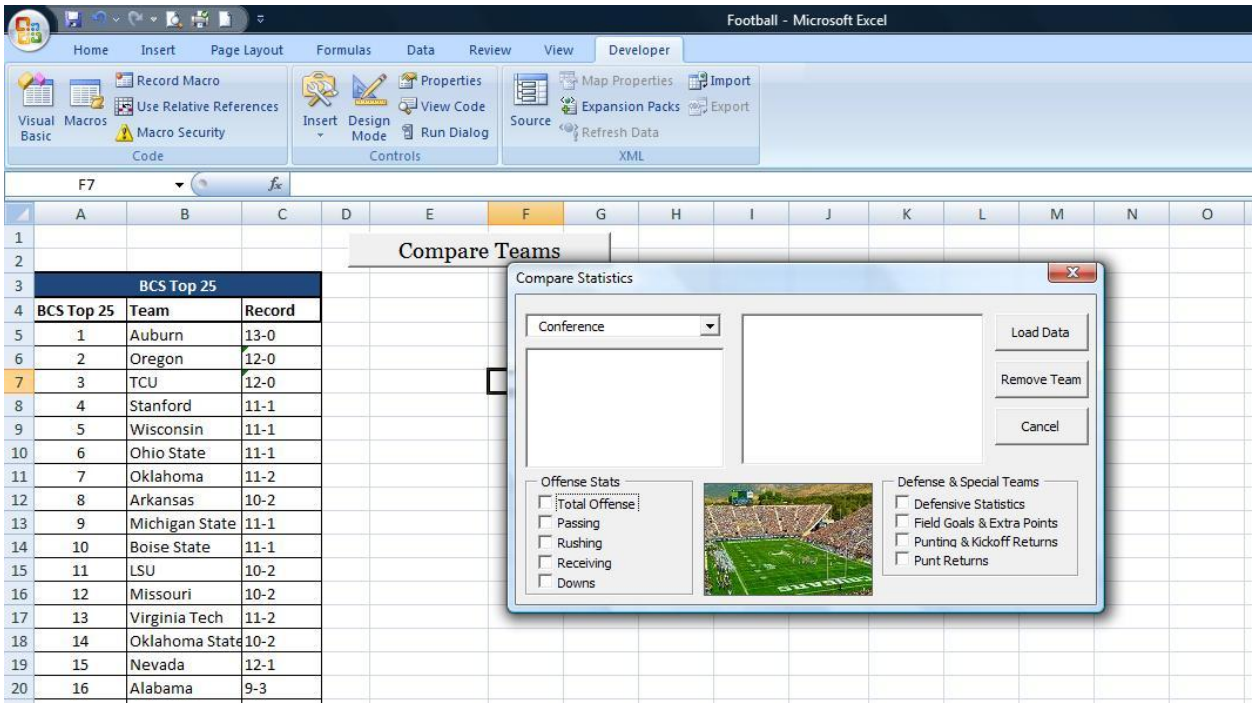
Football Statistics

Implementation Documentation

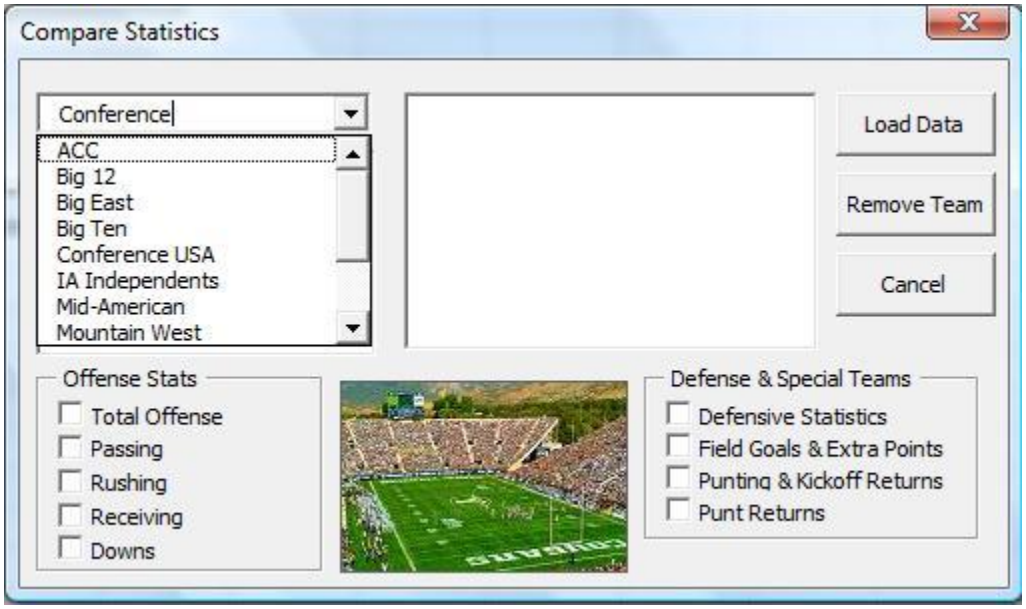
When the user first logs in to the excel file it goes online and downloads the current BCS information to the front page of the work book. I chose for this to happen when the user initializes the worksheet because in college football, the top 25 are always important to know. I wanted to add in a feature where the person using the form could chose which poll they wanted to look at, since there is the USA today, Associated Press, and ESPN rankings. Although they are important as well, the BCS numbers are the crucial ones, and was starting to feel like I had bitten more off then I could chew with the rest of the project.



Next to the BCS statistics I put a button with the caption “Compare Teams”. When the user clicks on this a sub procedure runs that calls the User Form I created for the user to interact with. On the user form (featured on the next page) there is a picture of the BYU stadium. I thought that this made it seem less ugly and gray. It is a static picture, and doesn’t change I added it, as I said, to make the form a little more astatically pleasing.

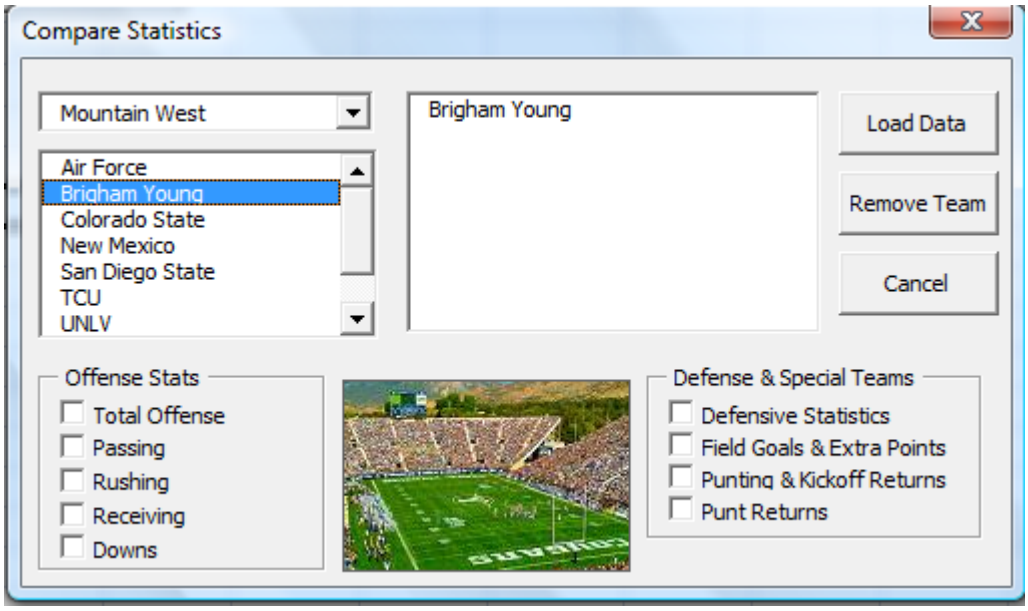


When the user form initiates the first time the fields are blank; from now on though it will likely have data already inside of it. I decided to do Me.Hide instead of Unload Me because I thought there was a good chance that people would want to adjust the information they had been working with by adding new teams, or adjusting the statistics they want to look at. To start using the form, the user will select a conference from the drop down box.

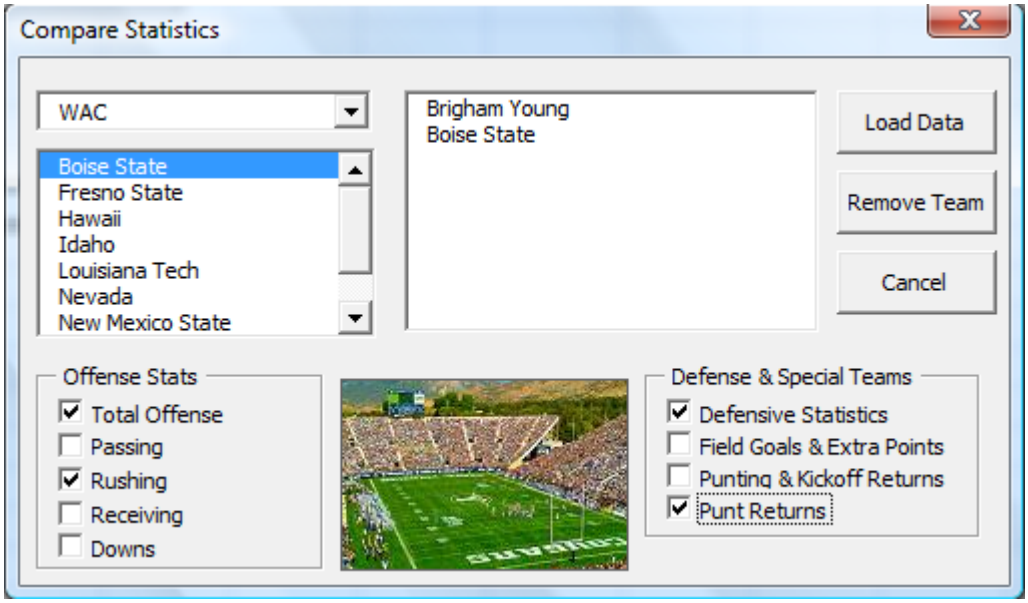


After a conference has been selected, the list box below the Conference drop-box will populate with all of the teams that are in that conference. In order to select a team to be a part of the query, the user will double click on whatever team it is he would like to pull information on.

That teams name will then be listed in the list-box to the right. They can choose as many teams as they would like. If they accidentally choose a team that they didn't want to include in their data set, they can select the team in the large list box, and then press Remove Team. If they decide that they have changed their mind and they don't have time to compare the teams, they can press cancel which will unload the form.



Once they have selected the teams they would like to compare, they need to choose the statistics they want to compare the teams across. They do this by checking the box next to whatever statistic they would like to look at. After they have chosen the teams and the stats they want to look at, they will click Load Data, and the real work begins.



When they click Load Data the user form will go through each stat to see if it has been checked. If it has then it will call a sub procedure and pass it a value that will take it to the correct web page that will down-load the information specific to that statistic. After it has pulled off the information it will place it in the worksheet built to hold the data pulled from the internet. For each statistic a header is created so that the user understands what each number corresponds to, and they also understand what is being compared. The problem that came up here is that for a few the data sets the header is two lines, and for some it is only one. While this in and of itself wouldn't cause problems, when I paste it into the main worksheet I didn't want the different data sets to paste over each other. The If statement I wrote to paste the information into the Rankings worksheet is as follows.

```
If  Range("F4") = "" Then
  Range("E4").Select
ElseIf  Range("F5") = "" Then
  Range("E5").Select
Else
  Range("F4").Select
  Selection.End(xlDown).Select
  ActiveCell.Offset(1, -1).Range("A1").Select
End If
```

This block of code works wonders as long as there aren't any gaps in between the data. This is where bringing the headers in as two rows, even if there was information on only one row became a real problem. After much time racking my brain, I wrote the piece of code that I am the most proud of.

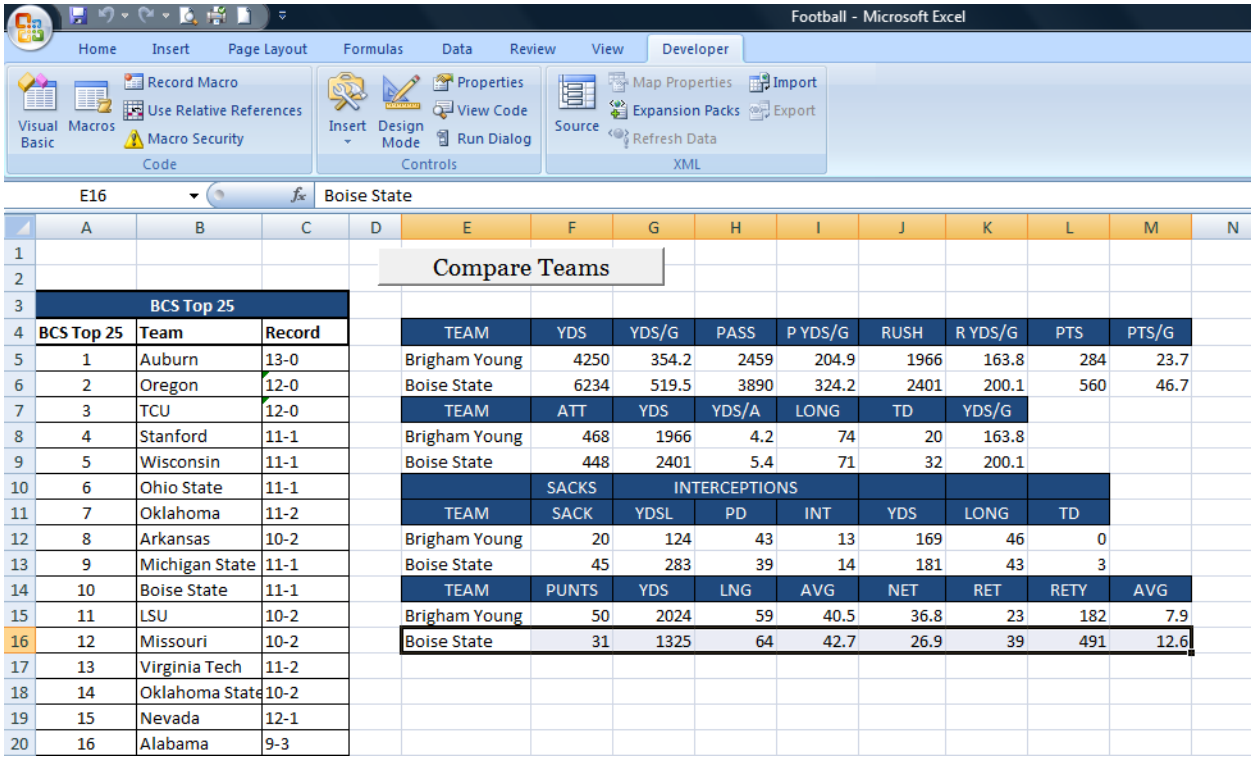
```
If   ActiveCell.Offset(-1, 2).Value = "" Then
  Range(ActiveCell.Offset(0, 1), ActiveCell.End(xlToRight)).Select
Else
  Range(ActiveCell.Offset(-1, 1), ActiveCell.End(xlToRight)).Select
End If
```

This code is amazing because it can tell whether or not it is a two line header because it looks at the cell up one and two too the right of the active cell (which has been activated through a control F function that found the cells that I am looking for). If this were a double header there would be something in that cell. If it is a single header, then that value will be blank. Depending on whether or not there is information in that cell it will either copy two lines or one.

After the header has been found it is copied to the Rankings sheet where its format is changed a little so the headers stand out more. It bolds the words, fills the cells with a teal color, and provides a thin outline for each cell.

The next data set that is brought in is the statistics for each University team. It is found in a way similar to that of the header. The only real difference is that there is a for next loop that makes certain that all of the Universities in the list box are located for each Data set. As each University's Data is found in the information using a control F automated search, the data to the right of the information is pulled in to and pasted under the existing header. I avoided pasting over information by using the same If statements that I pasted above.

This entire process (Header and the information for each team) repeats for each statistic box that has been checked so that it ends up looking like this.



BCS Top 25		
BCS Top 25	Team	Record
1	Auburn	13-0
2	Oregon	12-0
3	TCU	12-0
4	Stanford	11-1
5	Wisconsin	11-1
6	Ohio State	11-1
7	Oklahoma	11-2
8	Arkansas	10-2
9	Michigan State	11-1
10	Boise State	11-1
11	LSU	10-2
12	Missouri	10-2
13	Virginia Tech	11-2
14	Oklahoma State	10-2
15	Nevada	12-1
16	Alabama	9-3

TEAM	YDS	YDS/G	PASS	P YDS/G	RUSH	R YDS/G	PTS	PTS/G
Brigham Young	4250	354.2	2459	204.9	1966	163.8	284	23.7
Boise State	6234	519.5	3890	324.2	2401	200.1	560	46.7

TEAM	ATT	YDS	YDS/A	LONG	TD	YDS/G
Brigham Young	468	1966	4.2	74	20	163.8
Boise State	448	2401	5.4	71	32	200.1

	SACKS	INTERCEPTIONS					
TEAM	SACK	YDSL	PD	INT	YDS	LONG	TD
Brigham Young	20	124	43	13	169	46	0
Boise State	45	283	39	14	181	43	3

TEAM	PUNTS	YDS	LNG	AVG	NET	RET	RETY	AVG
Brigham Young	50	2024	59	40.5	36.8	23	182	7.9
Boise State	31	1325	64	42.7	26.9	39	491	12.6

When the user decided they want to do another query, they push the "Compare Teams" button and the selections they chose before will still be there. Once they have chosen new parameters, the contents and formats of the cells where the information was stored before are wiped clean so that there are no formatting issues when the new data sets come in.

Learning and Conceptual Difficulties Encountered

As I have gone through this write up I have been thinking about the struggles I went through to get this worksheet to function properly. It didn't hit me until after many hours of struggling with the code that I would personally be able to figure it out, as long as I was creative enough to A) Search for the answer in various places, and B) think outside the box when it came to writing the actual code. I learned that even though I am not very skilled as a programmer, I was able to figure things out as long as I took the time to ponder the answers.

Now that I have finished my project, I have discovered that there are many elements that I would have enjoyed putting into the project that I didn't have the time for at this point. I would like to add some charts to the sheet so that people can have a visual explanation of the stats they

are looking at. I would also like to add another Statistics button that allows the user to look at statistics specific to players, and not just team Data.

I feel as if all of these tasks are completely within my grasp. I will continue to work with this excel sheet over the next few months; which is likely how long it will take to add all of the other things I would like to add to it.