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Program Name: jblubau1_hw13_script
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Date Created: 11/17/2016
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Author: Joseph Blubaugh
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```
Purpose: Homework Assignment 13
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```
***** */
```

```
libname datadb 'C:\Users\Joseph\Projects\learning\Statistics\STAT_604\Materials' access=readonly;
```

```
libname output 'C:\Users\Joseph\Projects\learning\Statistics\STAT_604\Data';
```

```
filename outpdf 'C:\Users\Joseph\Projects\learning\Statistics\STAT_604\Homework\jblubau1_hw13_output.pdf';
```

```
* Split name from school;
```

```
data runners;
```

```
    set datadb.runners;
```

```
    length Team $ 19;
```

```
    Team = strip(scan(Player, 2, ','));
```

```
    Player = scan(Player, 1, ',' );
```

```
run;
```

```
* Alter name for common variables;
```

```
data offenses;
```

```
    set datadb.offences;
```

```
    rename yds = TeamYds
```

```
    avg = TeamAvg
```

```
    TDs = TeamTDs
```

```
    rank = TeamRank
```

```
    Ydspgm = TeamYdspgm
```

```
    Name = Team;
```

```
    drop ties;
```

```
run;
```

```
* Sort the data before merging;
```

```
proc sort data=runners;
```

```
    by team;
```

```
run;
```

```
proc sort data=offenses;
```

```
    by team;
```

```
run;
```

```
* 2) Create the 3 datasets using merge;
```

```
data output.alldata
```

```
    teamdata(drop=runner)
```

```
    norunners(drop=runner runpct rank player pos cl gm carries net tds avg ydspgm);
```

```
    merge offenses(in=tm) runners(in=rn);
```

```
    by team;
```

```
    format teamydspgm comma3.;
```

```
    runpct = ydspgm / teamydspgm;
```

```
    if tm = 1 and rn = 1 then output teamdata;
```

```
    if tm = 1 and rn = 0 then output norunners;
```

```
    if tm = 1 or rn = 1 then
```

```
        if rank ne . then runner = 'Yes';
```

```
        if rank = . then runner = 'No';
```

```
        output output.alldata;
```

```
run;
```

```

* 3) Setup PDF in landscape mode;
options orientation=landscape nonumber dtreset;

* 4) Reorder norunners by team rank;
proc sort data=norunners;
    by teamrank;
run;

ods pdf file=outpdf;

* 5) Print the top 10 teams;
proc print data=norunners(obs=10) noobs label;
    var teamrank team plays teamyds teamavg teamydspgm wins losses;
    label teamrank = "Rank"
           team = "Team"
           plays = "Total Plays"
           teamyds = "Total Yards"
           teamavg = "Yards per Play"
           teamydspgm = "Yards per Game";
    title1 'NCAA Football Rushing Analysis';
    title2;
    title3 'Top 10 Offences with No Top Runners';
    footnote 'Data Downloaded from NCAA.org';
run;

* 6) Fix the options to suppress dates;
options nodate;
ODS NOPROCTITLE;

* 7) Create a count table for position and class;
proc freq data=output.alldata;
    tables cl*pos / nocum nocol nopercnt missing;
    label pos = "Position"
           cl = "Class";
    footnote;
    title2 'Number of Players in each Position by Class';
run;

* 8) Use proc means to create a table on calculated field;
proc means data = output.ALldata maxdec=2 mean median q1 q3;
    var runpct;
    class Cl Pos;
    format RushPct comma2.;
    title2;
    title3 'Percent of Team Average by Class and Position';
run;

* 9) Use tabulate to create the same report;
proc tabulate data = output.alldata;
    var Runpct;
    class Cl Pos;
    tables cl*pos all, runpct*(n mean median q1 q3);
    format runpct comma2.;
    title3 'Percent of Team Average by Class and Position';
run;
ods pdf close;

```