Table of Contents


```
function [] = PS08_yieldcompare_hkolagan_raghavav()

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% ENGR 132
% Program Description
%   uses relational and logical operators and associated built-in
 functions,
%   as appropriate, to answer the questions in Step 2.
%
% Function Call
%  PS08_yieldcompare_hkolagan_raghavav()
%
% Input Arguments
%   NONE
%
% Output Arguments
%   NONE
%
% Assigment Information
%   Assignment:       PS 08, Problem 2
%   Author:             Harith Kolaganti, hkolagan@purdue.edu
%   Team ID:            005-12
%   Paired Programmer:  Vedant Srinivas Raghavan, raghavav@purdue.edu
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
format compact
```

INITIALIZATION

```
allData = load('Data_corn_yield.txt');
year = allData(10,:);
NW = allData(1,:);
NC = allData(2,:);
NE = allData(3,:);
WC = allData(4,:);
C = allData(5,:);
```

```
EC = allData(6,:);
SW = allData(7,:);
SC = allData(8,:);
SE = allData(9,:);
```

CALCULATIONS

Number of years in which the west central district have yields higher than the east central district, the central district, or the average yield for the whole Central region.

```
A1 = sum([(WC > EC) | (WC > C) | (WC > ((C + WC + EC)/3))]);

% Year(s) in which the west central district have higher yields than
 both the northwest district and the
% southwest district.
B1 = find(((WC > NW) & (WC > SW)) ~= 0);

B2 = year(B1);

% Year(s) in which the Southern region have an average yield lower
 than the Central region average or
% the Northern region average
C1 =  (((C + WC + EC)/3) > ((SE + SC + SW)/3)) | (((NE + NW + NC)/3) >
 ((SE + SC + SW)/3));

C2 = year(C1);

% Number of years was the Northern region's average higher than the
 Southern region's average but lower
% than the Central region's average.
D1 = sum((((NE + NW + NC)/3) > ((SE + SC + SW)/3)) & (((NE + NW +
 NC)/3) < ((C + WC + EC)/3)));
```

FORMATTED TEXT DISPLAYS

Display all answers clearly in the MATLAB Command Window. Do not hardcode any values in the fprintf statements.

```
fprintf('\nThe West Central district had yields higher than the East
 Central district, the central district, or the average yield for the
 whole Central region for %d years\n', A1)
fprintf('\nWest central district had higher yields than both the
 northwest district and the southwest district during ')
disp(B2)
fprintf('\nThe Southern region had an average yield lower than the
 Central region average or the Northern region average during ')
disp(C2)
```

```
fprintf('\nThe Northern region’s average was higher than the Southern
 region’s average but lower than the Central region’s average for %d
 years\n', D1)
```

```
The West Central district had yields higher than the East Central
 district, the central district, or the average yield for the whole
 Central region for 5 years

West central district had higher yields than both the northwest
 district and the southwest district during         2014        2013
      2010

The Southern region had an average yield lower than the Central region
 average or the Northern region average during         2014
 2013        2012        2011        2010

The Northern region’s average was higher than the Southern region’s
 average but lower than the Central region’s average for 2 years
```

ACADEMIC INTEGRITY STATEMENT

I/We have not used source code obtained from any other unauthorized source, either modified or unmodified. Neither have I/we provided access to my/our code to another. The project I/we am/are submitting is my/our own original work.

Published with MATLAB® R2016a