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%Section #202
% Project 3 : Hurricane Mapper, Spring 2019

%%
function allHurricaneData = getAllHurricaneData(allHurricanesFileName)
%takes an input CSV file that has a single column with the names of the
%hurricanes CSV files and extracts hurricane data from the files into a
%struture array

%Input: allHurricaneFileName - string, which is the name of the CSV file
%Return: allHurricaneData - structure array that have the data for all of
%
%           the hurricanes with six feilds:
%           name,date,Xs,Ys,wind,pressure

%concatinating data to work in this example
allHurricanesFileName = ['data/',allHurricanesFileName];

% Loading all of the data
FID1 = fopen(allHurricanesFileName);

% Creating the hurricane structure
names = textscan(FID1, '%s');

% intitalizing the vector names for the list to be used later
HurricanesFileName = '';

% using a for loop to find the names for the files
for i = 1:length(names{1})
    HurricanesFileName = [HurricanesFileName; names{1}(i)]; %changed here
end

% In Austin D. Office hours Friday 4-12-2019
%loading all of the files given and getting the data
for j = 1:length(HurricanesFileName)
    allHurricaneData(j).name = HurricanesFileName{j}(1:end-4);
    % getting the data to concatinate
    opMat = ['data/',HurricanesFileName{j}];
    % loading the file
    data = importdata(opMat);
    allHurricaneData(j).date = {data.textdata{2:length(data.textdata)}};
    allHurricaneData(j).Xs = data.data(:,3);
    allHurricaneData(j).Ys = data.data(:,4);
    allHurricaneData(j).wind = data.data(:,5);
    allHurricaneData(j).pressure = data.data(:,6);

end

% closing all of the files
fclose ('all');

allHurricaneData = allHurricaneData;
```

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end %function
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