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%Section #202
% Project 3 : Hurricane Mapper, Spring 2019
%%
function animatePlotHurricane(hurricaneData)
%plots and animates a specific hurricane
%Input: hurricaneData - Structure for a specific hurricane with six fields:
%           name, date, Xs, Ys, wind, pressure
%Output: a plot, where each data point of the hurricane is plotted ONE by
%         ONE (so it looks animated), as a dot in MarkerSize 15, and the
%         color of the dot is determined based on the strength at that given
%         point.
%
% HINTS: -use the calcCategory() function to get the color of the dots
%         - pause for 0.01 seconds for the animation between points
%         - this function does not print, it plots
%         -this function does not see the background- that is to be done in
%         the main script

% loading the data and assigning them names based on the input
hurXs = hurricaneData.Xs; %x values for the hurricane
hurYs = hurricaneData.Ys; %y values for the hurricane
wind = hurricaneData.wind; %wind information for the hurricane

% calling the function calcCategory to get the color for the plot
[category, color] = calcCategory(wind);

% using a for loop to plot the data points
for i = 1:length(hurXs)
    plot(hurXs(i),hurYs(i),'MarkerSize', 15, 'Color', color(i,:), 'Marker', 'o', ...
        'MarkerFaceColor', color(i,:));
    hold on
    pause(0.01); %pausing to animate the figure
    drawnow;

end

end %function
```