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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% The main script gives the user a set of options. The user then works %
% his/her way through the interface giving the required input when needed %
%
% Input: The user's choice of option (and a csv file if first option is %
% selected) %
% Output: None %
%
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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% Define menu items
menuItems = {'Load new data', 'Check for data errors', 'Generate plots',
'Display list of grades', 'Quit'};

% Allocates variable for filename
filename = '';

% Asks the student to input a file of type .csv
prompt = 'Please input a .csv file ';
filename = inputdlg(prompt, 'Input file', [1, 50]);

while true
    % Returns to main if cancel is selected
    if size(char(filename)) == [0,0]
        file = '';
        break

    % Creates error message if ok is selected without an input
    elseif size(char(filename)) == [1,0]
        uiwait(msgbox('Error: Empty input', 'Error'))
        filename = inputdlg(prompt, 'Input file', [1, 50]);

    % Creates error message if the input cannot be found in the directory
    elseif exist(char(filename)) == 0
        uiwait(msgbox('Error: File doesn't exist in the current directory', 'Error'))
        filename = inputdlg(prompt, 'Input file', [1, 50]);

    % If no errors occur the file is loaded and displayed
    else
        file = filename{1};
        Table = readtable(file);
        [N,M] = size(Table);
        fprintf('There are %0.0f students in the table\nThere are %0.0f assignments in the
        table\n', N, (M - 2))
        disp(Table);
        break
    end
end

while true
    % Display menu options and ask user to choose a menu item
    choice = menu('Menu', menuItems);

%-----
%
% Load new data
%-----

    if choice == 1
        run main.m
        return
    end
end

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%-----
%                               Check for data errors
%-----

elseif choice == 2

    % Creates error message is no file has been loaded
    if isempty(file)
        uiwait(msgbox('Error: No file loaded'))

    % Runs function if file has been loaded
    else
        Table = errorClear(file);
    end

%-----
%                               Generate plots
%-----

elseif choice == 3

    % Creates error message is no file has been loaded
    if isempty(file)
        uiwait(msgbox('Error: No file loaded'))

    % Runs function if file has been loaded
    else
        grades = Table(:, 3:width(Table));
        gradesPlot(grades);
    end

%-----
%                               Display list of grades
%-----

elseif choice == 4

    % Creates error message is no file has been loaded
    if isempty(file)
        uiwait(msgbox('Error: No file loaded'))

    % Runs function if file has been loaded
    else
        displayListOfGrades(Table);
        disp(displayListOfGrades(Table))
    end

%-----
%                               Quit
%-----

elseif choice == 5
    % Clears workspace, closes all windows, breaks loop and closes program
    close all
    clear
    break
end
end

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