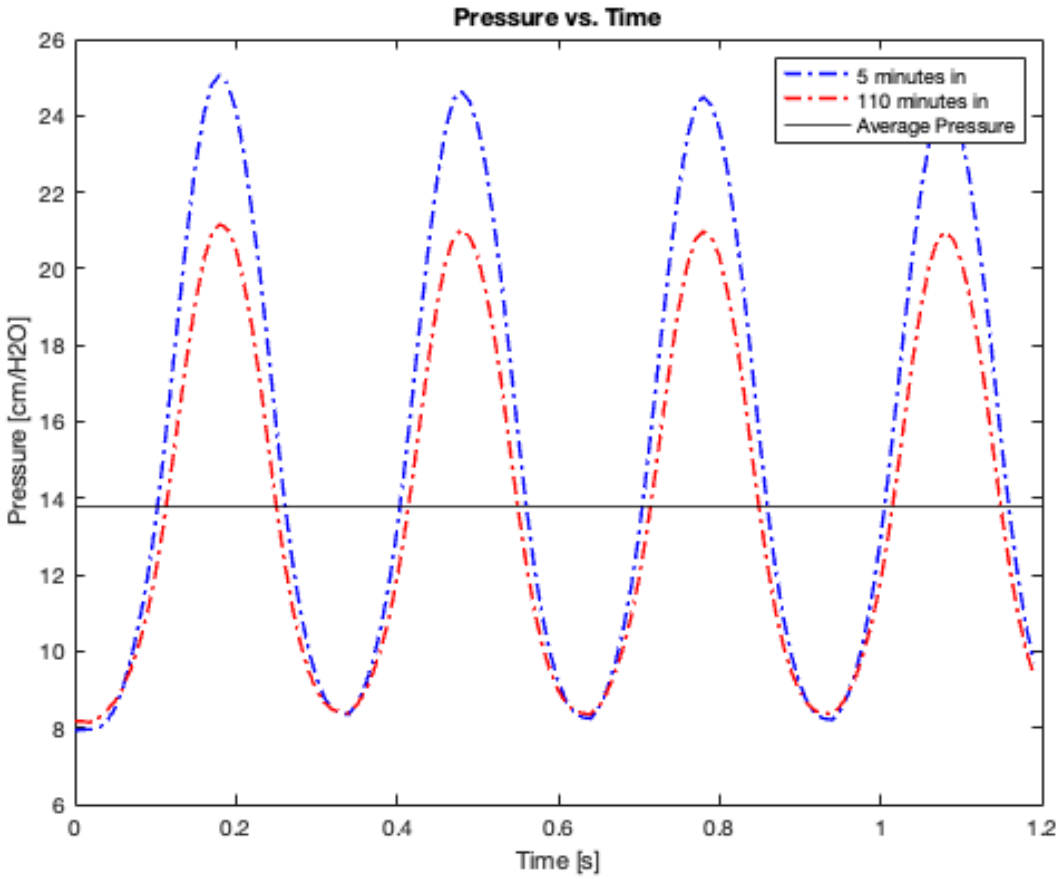
```
clear all
close all
clc

the_file_name = "M4-10_snapdat.xlsx";
T = get_data(the_file_name);

inputs = ["P V", "T P", "T V"];

proper_input = false;
data_inputs = zeros(1, 2);

while proper_input == false
    disp("Enter the type of graph you wish to plot.")
    disp("The options are Volume vs Pressure, Pressure vs Time, Volume vs
 Time.")
    %user_input = input("Please input in the 'P V', 'T P', 'T V' syntax:  ",
 "s");
    user_input = 'T P';
    disp("please select 2 different numbers 1 - 8 inclusive")

    %{
    for i = 1:2
        data_inputs(i) = input("Enter " + i + "/2 data points:  ");
    end
    %}

    data_inputs = [1, 8];

    for n = 1:length(inputs)
        if user_input == inputs(n) && 1 <= data_inputs(1) && data_inputs(1) <=
 8 && 1 <= data_inputs(2) && data_inputs(2) <= 8
            proper_input = true;
            break
        end

    end

    if proper_input == true && (data_inputs(1) ~= data_inputs(2))
        disp("loading plot please wait...")
    else
        clc
        disp("Improper input please reread the instructions and try
 again.", 'r')
        proper_input = false;
    end
end


for n = 1:2
    times(n) = (((data_inputs(n) - 1) * 15) + 5);
end
```

```
if user_input == "P V"

    graph_lines = get_graph_lines(user_input, data_inputs);

    plot(T.(graph_lines(1)), T.(graph_lines(2)), 'b', LineStyle="-.",
 LineWidth=1.35)
    hold on
    plot(T.(graph_lines(3)), T.(graph_lines(4)), 'r', LineStyle="-.",
 LineWidth=1.35)
    legend(times(1) + " minutes in", times(2) + " minutes in")
    title("Volume vs. Pressue")
    xlabel("Pressure [cm/H2O]")
    ylabel("Volume [ml]")

elseif user_input == "T P"

    graph_lines = get_graph_lines(user_input, data_inputs);

    plot(T.(graph_lines(1)), T.(graph_lines(2)), 'b', LineStyle="-.",
 LineWidth=1.35)
    hold on
    plot(T.(graph_lines(3)), T.(graph_lines(4)), 'r', LineStyle="-.",
 LineWidth=1.35)
    yline(mean(T.(graph_lines(4))), 'k', LineWidth=0.9)
    legend(times(1) + " minutes in", times(2) + " minutes in", "Average
 Pressure")
    title("Pressure vs. Time")
    xlabel("Time [s]")
    ylabel("Pressure [cm/H2O]")

elseif user_input == "T V"

    graph_lines = get_graph_lines(user_input, data_inputs);

    plot(T.(graph_lines(1)), T.(graph_lines(2)), 'b', LineStyle="-.",
 LineWidth=1.35)
    hold on
    plot(T.(graph_lines(3)), T.(graph_lines(4)), 'r', LineStyle="-.",
 LineWidth=1.35)
    yline(mean(T.(graph_lines(4))), 'k', LineWidth=0.9)
    legend(times(1) + " minutes in", times(2) + " minutes in", "Average
 Volume")
    title("Volume vs. Time")
    xlabel("Time [s]")
    ylabel("Volume [ml]")

end

function [output] = get_data(the_file_name)
   output = readtable(the_file_name) ;
end

Enter the type of graph you wish to plot.
```

```
The options are Volume vs Pressure, Pressure vs Time, Volume vs Time.
please select 2 different numbers 1 - 8 inclusive
loading plot please wait...
```



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