(Note: Part III and part IV are due 11:30 am Thursday April 25th)

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Instructions:

Part I: The flexible "While" loop

The program listed below accepts both numbers and texts. Numbers are added to an array while text will trigger a question of the user's intent to "quit" data entry.

```
% Title: While Loop for Numbers
%
% Date: October 10, 2011
% Program Written by: V. Fuentes
%
%
clc;
nonNumberFlag = true;
totalMatrix = zeros(1,100);
i = 1;
while nonNumberFlag

user_input = input('Please enter a number or "Q" to Quit ','s');
user_input = strtrim(user_input);
if ~(isletter(user_input))

        totalMatrix(i) = str2double(user_input);
        i = i+1;

else

        disp('Do you wish to quit');
        user_input2 = input('Please enter a yes or no ','s');
        if strncmpi(user_input2,'yes',1)
        nonNumberFlag = false;
        end

end
end
ansMatrix = totalMatrix(1,1:i-1);
disp(ansMatrix);
```

Part II: Plots labels and data

Program Listing:

```
% Pollen Count Program
% Title: experimental.m
% Written by: V. Fuentes
clc;
hold off;
NumberofDays=1:15;
PollenCount= randi(450,1,15);
bar(NumberofDays,PollenCount,'b');
xlabel('Day of the Experiment');
ylabel('Pollen Count');
%Compute the Statistical Data
mean = sum(PollenCount)/15;
hold;
plot(NumberofDays,mean,'-.og');
text(1,mean+10,'Mean Pollen Count');
plot(NumberofDays,400,'-.+g');
text(1,400+10,'Upper Standard Deviation Pollen Count');
plot(NumberofDays,75,'-.+g');
text(1,75+10,'Lower Standard Deviation Pollen Count');
```

Scenario Testing

Run the Pollen Count program and observe the plot.
Comment out the line with the “hold” statement and see how the plot changes.
On the “text” lines remove the “+10” and notice how the text is affected on the plots.

Part III:

Combine the code from part I and part II to create a program that allows a user to enter as many points as desired and then produces the Pollen Count graph.
Submit program by email (as .m & .PDF files) no later than 11:30 am Thursday April 25th

Part IV: Lab Project – Simultaneous Equations

1.

$3X + 2Y - Z = 15$
$2X + Y - 7Z = 2$
$6X + 2Y + 3Z = 10$

2.