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Project 3

Project	Description	Team	December 11 Assigned Improvements
A	Predict the max. temp. for the next day using previous days' temperatures, using polynomial and other models	5	Replace the Exponential fit by another fitting utility available in LabVIEW
B	Predict the oil price for next week using previous weeks' prices, using polynomial and other models	6	Replace the Exponential fit by another fitting utility available in LabVIEW
C	Detect the frequency spectrum of a given signal using Fourier Transforms	7	Have LabVIEW display the number of peaks found in the FFT in a numeric indicator
D	Say the decimal number for a four-digit binary number	3	Have it pick the file name instead of using 16 nested Case Structures
E	Make a 8 keys piano	2	Make an additional button that plays the 8 keys in sequence when pressed
F	Solve the quadratic equation with distinction of cases for the discriminant	10	Plot the quadratic function
G	A VI that can calculate the areas of 4 different geometrical shapes	1	Introduce selectors so it will only calculate for one selected shape at a time
H	A VI that produces interesting sounds from the combination of 2 or more sine waves with different frequencies	8	Plot the spectrum of your signal, check to see if it makes sense
I	A VI that produces a chirp sound, that is a sound whose frequency is changing with time	4	Add two more signals for a total of four, produce the chirp sound

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LOGBOOK: example of a logbook page

-Use a quadrille notebook; number all pages; date all entries
-Write your notes for all activities, thoughts, problems and solutions, and learning conclusions related to Engin 103. You should write down progress, outcomes, and conclusions on projects and teamwork; conclusions from class work (including LabVIEW) and homework.
-In addition you should answer in the logbook all questions listed in these notes in blue, as shown below:

51) Explain how did you implement the required modifications for Part II. Insert a revised snapshots of the Front Panel and Block Diagram to satisfy the modifications, explain what has been changed and why.

52) Explain one advanced LabVIEW element you have used or seen in the presentations: where to find it, where does it do, what are its inputs and outputs, and what can it be used for.

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