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# Project 3

| Project | Description | Team | May 7 Assigned Improvements |
|---|---|---|---|
| A | Predict the max. temp. for the next day using previous days' temperatures, using polynomial and other models | 6 | Replace the Exponential Fit by another Fit available in LabVIEW<br>Connect the right value for the For Loop N to generate the polynomial for The prediction |
| B | Predict the oil price for next week using previous weeks' prices, using polynomial and other models | 10 | |
| C | Detect the frequency spectrum of a given signal using Fourier Transforms | 4 | Add sound for the signal |
| D | Say the decimal number for a four-digit binary number | 5 | Add an introductory audio playback to explain what is being done in this VI |
| E | Make a 8 keys piano | 2 | Front Panel; add two buttons, one that would sound all 8 keys from low to high; the other one in reverse order. |
| F | Solve the quadratic equation with distinction of cases for the discriminant | 8 | Add a plot to show the quadratic function once coefficients A,B,C are selected. This will allow the user to see what solutions to expect |
| G | A VI that can calculate the areas of 4 different geometrical shapes | 3 | Add an option to see the ratio Volume/Area for all shapes |
| H | A VI that produces interesting sounds from the combination of 2 or more sine waves with different frequencies | 9 | |
| I | A VI that produces a chirp sound, that is a sound whose frequency is changing with time | 7 | |
| J | Sound recorder and playback | 1 | Record and Play back in the same Run |

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| | | | | (without the need to click on the run button again). |

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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:**

**49) Describe the modifications required for your team Virtual Instrument.**

**50) Describe one project you saw from the other teams that stood out the most, include a brief summary of the LabVIEW elements they used**

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