

Engin 103  
May 6, 2008

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## Project 3

| Project | Description   | Team             | May 6 Assigned Improvements  |
|---------|---|------------------|--|
| A       | Predict the max. temp. for the next day using previous days' temperatures, using polynomial and other models  | 8                | Use only Max temperatures  |
| B       | Predict the oil price for next week using previous weeks' prices, using polynomial and other models           | 6                |  |
| C       | Detect the frequency spectrum of a given signal using Fourier Transforms                                      |                  |  |
| D       | Say the decimal number for a four-digit binary number   | 4                | Alert user if a non-binary digit is entered into the Numeric Controls  |
| E       | Make a 8 keys piano   | 3                | Make sound continue as button is hold down   |
| F       | Solve the quadratic equation with distinction of cases for the discriminant                                   | 1                | Output text regarding type of solution based on the discriminant   |
| G       | A VI that can calculate the areas of 4 different geometrical shapes   | 5 (3D)<br>7 (2D) | Team 5: Highlight the problem selected by the user<br>Team 6: Fix the outputs on relationship between areas of 2D shapes |
| H       | A VI that produces interesting sounds from the combination of 2 or more sine waves with different frequencies | 10               | Use Case Structure to show sounds from arithmetic sum and air sum of two sinusoids of different frequencies              |
| I       | A VI that produces a chirp sound, that is a sound   | 2                |  |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  | whose frequency is<br>changing with time |  |  |  |
|--|--|--|--|--|--|

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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) Describe the modifications required for your team Virtual Instrument. Insert a revised snapshots of the Front Panel and Block Diagram to satisfy the modifications, explain what has been changed and why.**

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

**This is the last question for Spring '08**

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