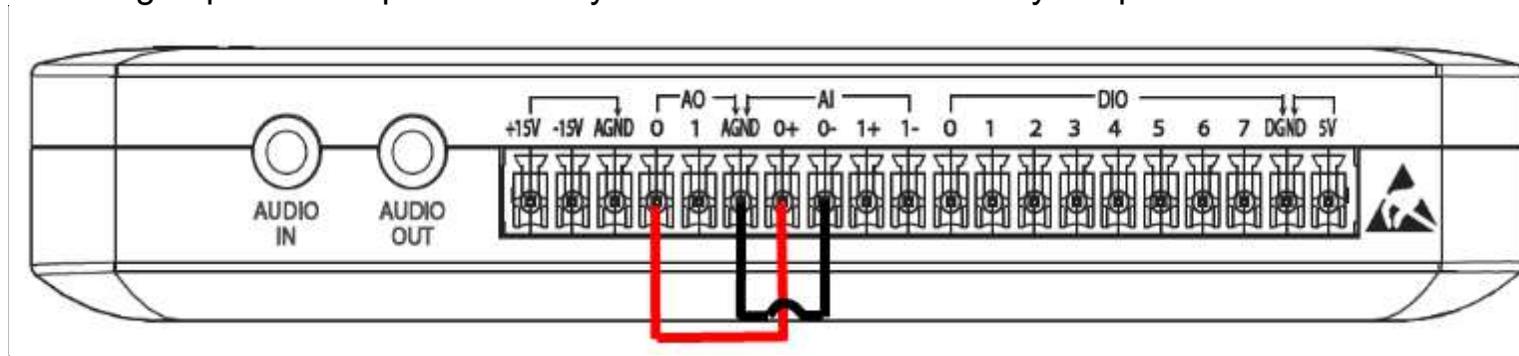# Lab 7 exercises

1. assignment

Connect the analogoutputs and inputs of the MyDAQ device as indicated by the picture.

Using the *NI ELVISmx* tool interface (use windows start search) run the Function Generator .
Produce a LabVIEW VI to acquire the analog signal connected to the AI0 terminal of the MyDAQ device and display the acquired dana using a *Waveform Graph* or a *Wavevform Chart*. The *Front Panel* should provide three self-explanatory control buttons:

- "Start signal acqusition"
- "Stop signal acqusition"
- „STOP VI"

The VI should be realised using the DAQ Assistant function.

Using the *ELVIS Signal Generator* generate an analog signal and check it through the LabVIEW VI.
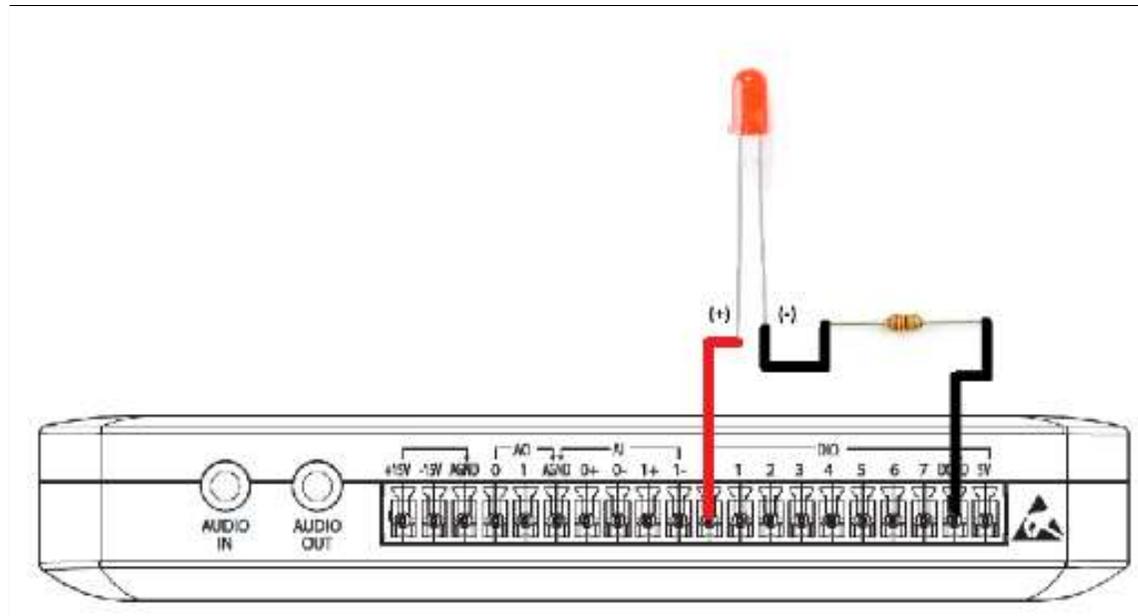
2. assignment

Produce a VI which generates a random number in the 0 – 10 range on the press of the „Generate" button.
If the generated number is event he LED connected to a digital input of the MyDAQ device should light up (ON),
otherwise it should stay OFF.
In case the generated value is 0 the LED should not turn ON.
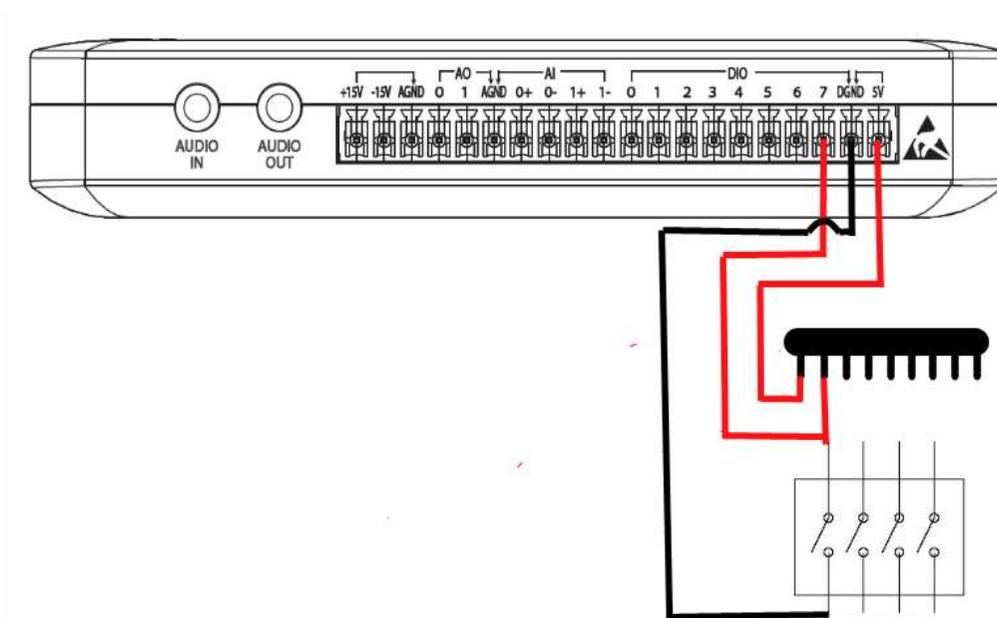On VI STOP the LED should not stay ON.
The LED is to be connected according to the following schematic (use a resistor).

3. assignment

Upgrade the previous assignment in such a way that the VI is stopped using a switch connected to one of the MyDAQ digital inputs.
The connection schematic is given in the picture.

4. assignment

Connect the analog inputs of the MyDAQ by the 1. assignment schematic. Use the *Function Generator* to generate a low frequency (1Hz) sine signal with an amplitude of 4V. Upgrade the previously programed VI so that an LED lights up (ON) when the value of the input signal is over 3V. When the value goes back under 3V the LED should switch off.

The connection schematic is given in the picture.