Lab 6

Assignment 1

Build a VI which contains two front panel input clusters for inputing data on boxing fighters. One is named Boxer1, and the other Boxer2. Each of the clusters contains following boxer information:

- first name (string)
- last name (string)
- weight (numerical value)
- gender (combobox – M or F)

The front panel also contains an LED indicator signalling „same category" which lights up if the two input boxers belong in the same weight category and are of the same gender. Two boxers belong in the same category if their weight difference is less than 20 kg. The check is performed when the „check compatibility" button is pressed.

To reach a certain element inside a cluster you should use the *Unbundle* or *Unbundle by Name* function from the cluster pallette.

Assignment 2

Using the *State Machine* arhitecture build a VI with 3 LED indicators and 2 front panel buttons. When the VI is run none of the LEDs is lit. When the button *Change State* is pressed the 1st LED lights up. When the button is pressed a second time another LED lights up (2 are lit) and when the button is pressed a third time all 3 LEDs are lit. After that, if the button is pressed again only the 1st LED stays lit, and the circle continues. The VI is stopped when the *STOP* button is pressed, but only if only one LED is lit at that moment – otherwise nothing happens. After the VI stops none of the LEDs should remain lit.

Assigment 3

Build a VI which enables users to input data about animals (**name**:text, **type**: enum with 3 option – dog, cat and parrot, **weight**: decimal number larger than 0). Every time the user wishes to input data for a new animal he should input data and press the button *Save Animal*. New data can be input until *Stop Input* is pressed. After the input mode is stopped the VI should calculate average weight for every type of animal (av.weight for dogs, average weight for cats and average weight for parrots) and display it in a message.