1. Mistakes and incompleteness of the formulation:
2. **Hidden layer(Layer1) incompleteness:** Each hidden node receives only a single input variable, without proper weighted summation.
3. **Biases mistake:** All the hidden nodes incorrectly share the same bias(), but actually every hidden node has its independent bias.
4. **Symbol mistake:** In the objective function, The output is only subtracted from only one of the hidden layer outputs while being added to the other outputs of hidden layer and the bias of output layer.
5. Mathematical programming problem without using integer variables：

Mixed integer programming problem：

1. Here the MIQP problem becomes: