HW1

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編譯：

```
henryc@52-0460994-H1:/mnt/c/Users/henry/desktop/College/Junior/DataSturcture/HW1_NN$ make
```

Run：

```
henryc@52-0460994-H1:/mnt/c/Users/henry/desktop/College/Junior/DataSturcture/HW1_NN$ cd bin
henryc@52-0460994-H1:/mnt/c/Users/henry/desktop/College/Junior/DataSturcture/HW1_NN/bin$ ./backprop
```

```
henryc@52-0460994-H1:/mnt/c/Users/henry/desktop/College/Junior/DataSturcture/HW1_NN$ ./backprop
Enter the number of Layers in Neural Network:
3
Enter number of neurons in layer[1]:
2
Enter number of neurons in layer[2]:
2
Enter number of neurons in layer[3]:
1

Created Layer: 1
Number of Neurons in Layer 1: 2
Neuron 1 in Layer 1 created
Neuron 2 in Layer 1 created

Created Layer: 2
Number of Neurons in Layer 2: 2
Neuron 1 in Layer 2 created
Neuron 2 in Layer 2 created

Created Layer: 3
```

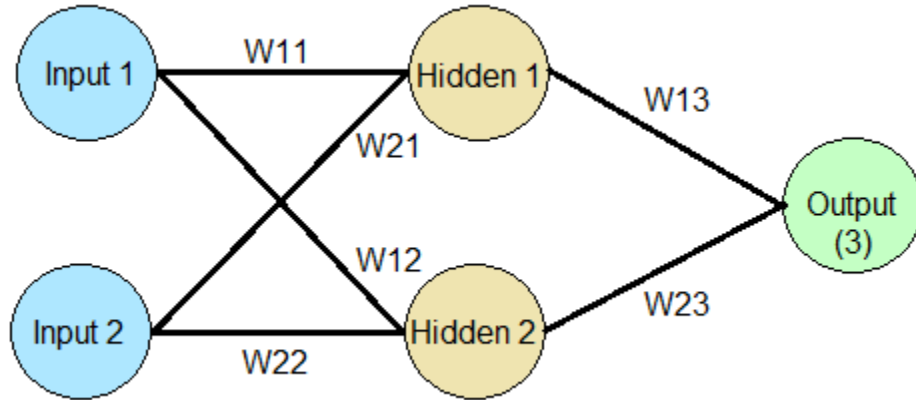在這次的 Neural network implement 中

總共有三層

輸入層 兩個 Neuron

有四種輸入：

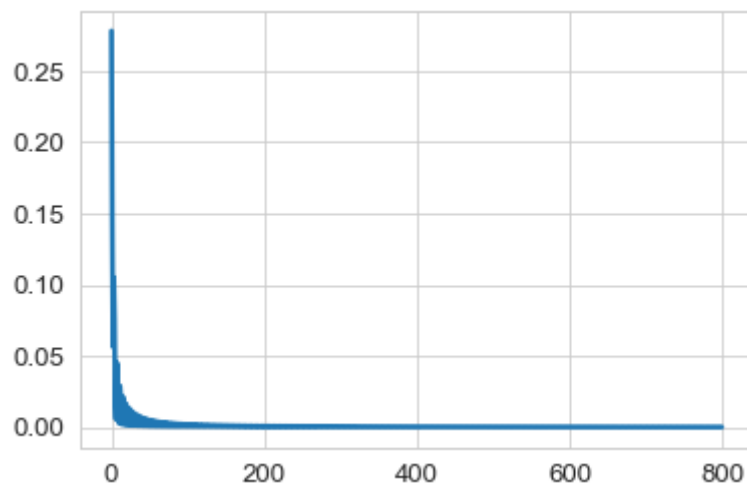0 0、0 1、1 0、1 1

隱藏層 兩個 Neuron

輸出層 一個 Neuron

輸出為 0 或 1

示意圖：

Cost function：

從上圖可以看的出來隨著疊代次數的增加，其 cost 會逐漸降低。

而其將低的速度會隨著 learning rate 的改變而有所影響。