Lab-5

1) X-NOR gate

1st run: 0.75, 2nd run 1

Time command:

```
[wes-237b@ubuntu:~/lab/lab5$ timme ./lab5
-bash: timme: command not found
[wes-237b@ubuntu:~/lab/lab5$ time ./lab5
Cost : 0.076954
Total number of epochs : 4999
Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.690853 (1.000000) - 1.000000
Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.233283 (0.000000) - 0.000000
Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.367974 (0.000000) - 0.000000
Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.850926 (1.000000) - 1.000000
Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.690853 (1.000000) - 1.000000
Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.233283 (0.000000) - 0.000000
Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.367974 (0.000000) - 0.000000
Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.850926 (1.000000) - 1.000000
Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.690853 (1.000000) - 1.000000
Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.233283 (0.000000) - 0.000000
Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.367974 (0.000000) - 0.000000
Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.850926 (1.000000) - 1.000000
Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.690853 (1.000000) - 1.000000
Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.233283 (0.000000) - 0.000000
Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.367974 (0.000000) - 0.000000
Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.850926 (1.000000) - 1.000000

Accuracy: 1

real    0m7.288s
user    0m2.908s
sys     0m3.004s
wes-237b@ubuntu:~/lab/lab5$ wor
```

1) AND Gate

Accuracy: 1

Time command result

```
encv4` -L/usr/local/cuda/lib64 -lcudart
4.1.1
wes-237b@ubuntu:~/lab/lab5$ time ./lab5
Cost : 0.009249
Total number of epochs : 4999
Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.002448 (0.000000) - 0.000000
Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.098895 (0.000000) - 0.000000
Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.096042 (0.000000) - 0.000000
Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.865939 (1.000000) - 1.000000
Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.002448 (0.000000) - 0.000000
Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.098895 (0.000000) - 0.000000
Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.096042 (0.000000) - 0.000000
Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.865939 (1.000000) - 1.000000
Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.002448 (0.000000) - 0.000000
Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.098895 (0.000000) - 0.000000
Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.096042 (0.000000) - 0.000000
Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.865939 (1.000000) - 1.000000
Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.002448 (0.000000) - 0.000000
Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.098895 (0.000000) - 0.000000
Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.096042 (0.000000) - 0.000000
Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.865939 (1.000000) - 1.000000

Accuracy: 1

real    0m7.413s
user    0m3.116s
sys     0m2.912s
wes-237b@ubuntu:~/lab/lab5$
```