yw50000@DESKTOP-3DVKOCG:/mnt/d/GitHub/EN605.617/module8$ ./run.sh

Module8: Tests started

Clean the folder by calling make clearn:

rm -f assignment.o utility.o matrixmultiplication.o unitTest\_matrixmultiply.o linearsolve.o unitTest\_linearsolve.o assignment cublas\_example cufft\_example curand\_example cusolver\_example

Call make to build necessary executable:

nvcc -std=c++11 --device-c -DHA[=2] -DWA[=9] -DWB[=2] -DHA2[=3] -DWA2[=3] -DNRHS[=1] -I ./common -I ./cublas -I ./cusolver assignment.cu ./common/utility.cu ./cublas/matrixmultiplication.cu ./cublas/unitTest\_matrixmultiply.cu ./cusolver/linearsolve.cu ./cusolver/unitTest\_linearsolve.cu

nvcc assignment.o utility.o matrixmultiplication.o unitTest\_matrixmultiply.o linearsolve.o unitTest\_linearsolve.o -L /usr/local/cuda/lib64 -lcublas -lcudart -lcusolver -o assignment

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Test 1: Matrix multiplication: 2x9 x 9x2 ---> 2x2; Linear solve: 3x3 3x1

----------------------------------------------------------------------------------------------------------

Matrix multiplication took: 458.719 ms

Matrix A:

0.000000 2.000000 4.000000 6.000000 8.000000 10.000000 12.000000 14.000000 16.000000

1.000000 3.000000 5.000000 7.000000 9.000000 11.000000 13.000000 15.000000 17.000000

Matrix B:

0.000000 9.000000

1.000000 10.000000

2.000000 11.000000

3.000000 12.000000

4.000000 13.000000

5.000000 14.000000

6.000000 15.000000

7.000000 16.000000

8.000000 17.000000

Matrix A multipies Matrix B:

408.000000 1056.000000

444.000000 1173.000000

Matrix A:

1.000000 2.000000 3.000000

4.000000 5.000000 6.000000

2.000000 1.000000 1.000000

Matrix B:

6.000000

15.000000

4.000000

after gels: info\_gpu = 0

after gels: niter = 1

Linear Solver took: 450.287 ms

Solution X:

1.000000

1.000000

1.000000

Press ENTER to exit...

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Test 2: Matrix multiplication: 3x4 x 4x2 ---> 3x2; Linear solve: 4x4 4x1

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nvcc -std=c++11 --device-c -DHA[=3] -DWA[=4] -DWB[=2] -DHA2[=4] -DWA2[=4] -DNRHS[=1] -I ./common -I ./cublas -I ./cusolver assignment.cu ./common/utility.cu ./cublas/matrixmultiplication.cu ./cublas/unitTest\_matrixmultiply.cu ./cusolver/linearsolve.cu ./cusolver/unitTest\_linearsolve.cu

nvcc assignment.o utility.o matrixmultiplication.o unitTest\_matrixmultiply.o linearsolve.o unitTest\_linearsolve.o -L /usr/local/cuda/lib64 -lcublas -lcudart -lcusolver -o assignment

Matrix multiplication took: 408.736 ms

Matrix A:

0.000000 3.000000 6.000000 9.000000

1.000000 4.000000 7.000000 10.000000

2.000000 5.000000 8.000000 11.000000

Matrix B:

0.000000 4.000000

1.000000 5.000000

2.000000 6.000000

3.000000 7.000000

Matrix A multipies Matrix B:

42.000000 114.000000

48.000000 136.000000

54.000000 158.000000

Matrix A:

0.000000 4.000000 8.000000 12.000000

1.000000 5.000000 9.000000 13.000000

2.000000 6.000000 10.000000 14.000000

3.000000 7.000000 11.000000 15.000000

Matrix B:

0.000000

1.000000

2.000000

3.000000

after gels: info\_gpu = 0

after gels: niter = 1

Linear Solver took: 414.249 ms

Solution X:

-2.727006

4.877249

1.426521

-2.576764

Press ENTER to exit...