

Assignment #4

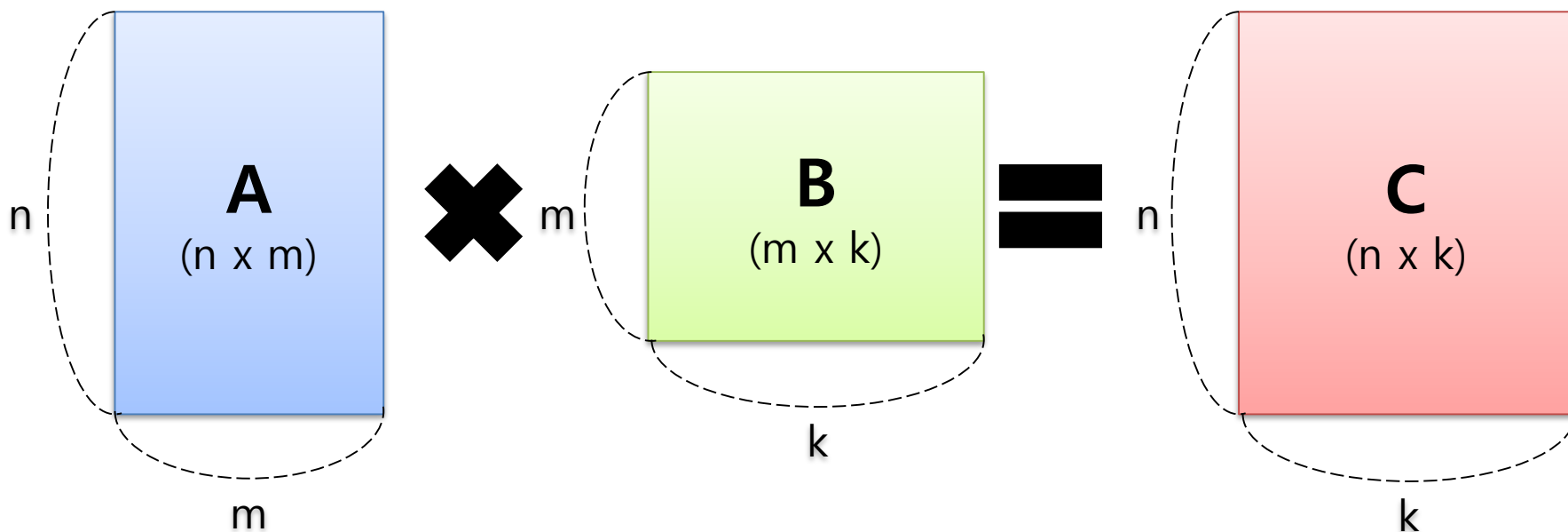


Purpose of Assignment

- **Purpose**

- Programming “Matrix Multiplication Program” on the GPU
 - Skeleton Code is given.
 - Skeleton Code is in the GPU Server.
Path: /home/share/Assignment4/
 - Requires Arbitrary Sized Matrices
 - Requires Matrix Tiling
 - Compile and Run on the GPU Server
 - Print Results to Text File

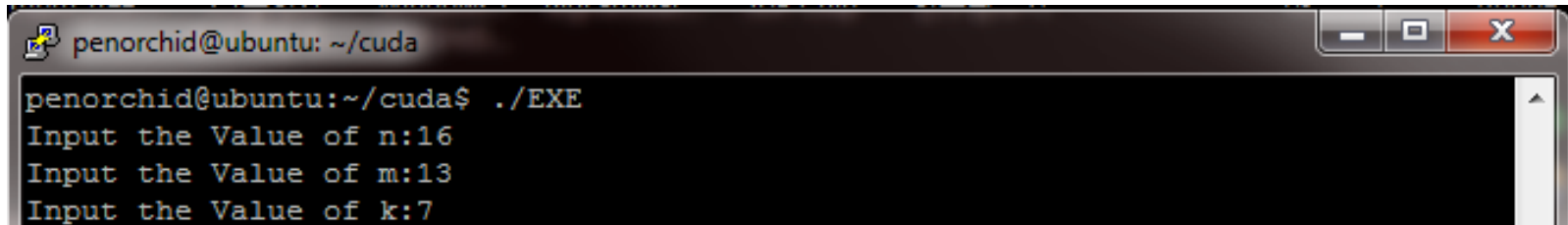
Arbitrary size Matrix Multiplication



- **Implement routine to define Matrix Size**
 - n , m and k
- **Input Elements of A and B are Random Variables**
 - Integers in a range $(-10, 10)$

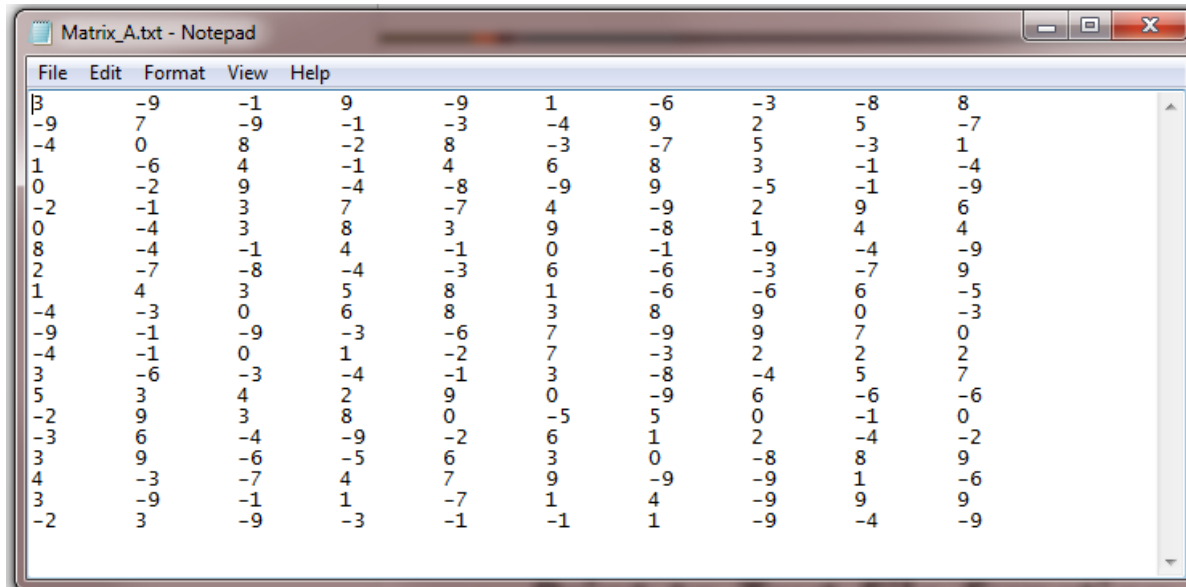
Parameters input

- Input Parameters with Console Commands
 - Matrix Size



```
penorchid@ubuntu: ~/cuda
penorchid@ubuntu:~/cuda$ ./EXE
Input the Value of n:16
Input the Value of m:13
Input the Value of k:7
```

Results Print



The screenshot shows a Notepad window with the title 'Matrix_A.txt - Notepad'. The menu bar includes 'File', 'Edit', 'Format', 'View', and 'Help'. The text area contains a 10x10 matrix of integers, with each row starting with a letter from 'B' to 'S' in the first column. The matrix values are as follows:

	B	C	D	E	F	G	H	I	J
B	-9	-1	9	-9	1	-6	-3	-8	8
C	-9	7	-9	-1	-3	-4	9	2	5
D	-4	0	8	-2	8	-3	-7	5	-3
E	1	-6	4	-1	4	6	8	3	-1
F	0	-2	9	-4	-8	-9	9	-5	-1
G	-2	-1	3	7	-7	4	-9	2	9
H	0	-4	3	8	3	9	-8	1	4
I	8	-4	-1	4	-1	0	-1	-9	-4
J	2	-7	-8	-4	-3	6	-6	-3	-7
K	1	4	3	5	8	1	-6	-6	6
L	-4	-3	0	6	8	3	8	9	0
M	-9	-1	-9	-3	-6	7	-9	9	7
N	-4	-1	0	1	-2	7	-3	2	2
O	3	-6	-3	-4	-1	3	-8	-4	5
P	5	3	4	2	9	0	-9	6	-6
Q	-2	9	3	8	0	-5	5	0	-1
R	-3	6	-4	-9	-2	6	1	2	-4
S	3	9	-6	-5	6	3	0	-8	8
T	4	-3	-7	4	7	9	-9	-9	1
U	3	-9	-1	1	-7	1	4	-9	9
V	-2	3	-9	-3	-1	-1	1	-9	-4

- Routine for File I/O is given.
- Write Matrices A,B and C.
 - 1 text file per Matrix

Submit the Assignment

- **Submit the zip file @ Blackboard**
 - File name must be "Assignment4_StudentID_Name.zip"
 - Ex. Assignment4_2015000000_박지혁.zip
 - Zip file must include
 - Src files
 - Result running Image file
 - Result printed text files
- Due date: Wednesday, 28 November, 23:59