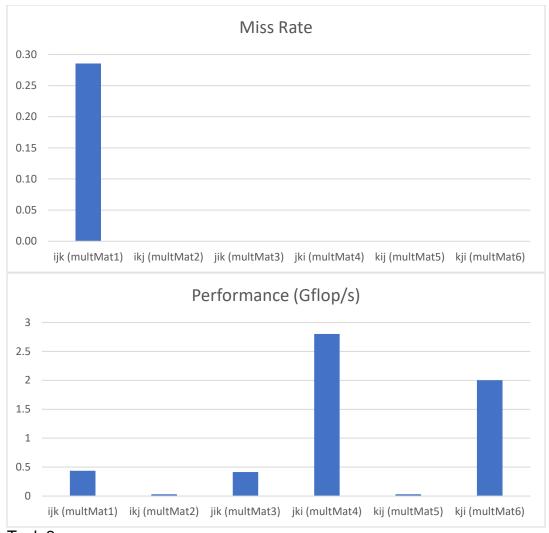
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## Lab for ITSC 3181 and 3181L, Introduction to Computer Architecture, Spring 2020 Lab #13 and #14: Memory and Cache Access, Stride Access and Loop Ordering with Matrix Multiplication

## Grade:

		Т	ask 1 and 2 (75%						
	ikj (multMat2)	jik (multMat3)	jki (multMat4)	kij (multMat5)	kji (multMat6)	Question 1	Question 2	Question 3	Total
Percentage	15%	15%	15%	15%	15%	8%	8% 9%		
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tore for (		H		H	Ctot	H	CIOI	H	Croi	H	1	CIOI	Н	Ctot	Н	0	64	o		All 64 accesses are hit
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tore for (	C[0]	H	C[in]	H	C[2in]	H	C[7in]	H	C[8in]	H		C[62in]	H	C[63in]	H	in	64	0	- (	All 64 accesses are hit
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i (multMat2 : (multMat3 i (multMat4	0.0	25		2.80	1 1															



Task 2:

- 1. Which ordering(s) perform best for these 1000-by-1000 matrices? Why? jki performs the best because it has the highest Gflop/s at 2.801 and kji is close in secons with 2.002 Gflop/s
- Which ordering(s) perform the worst? Why?
  ikj and kij both perform the worst because they have the lowest Gflop/s at 0.031
  - 3. How does the way we stride through the matrices with respect to the innermost loop affect performance?

When the innermost loop is i it increments by 1 each time so it goes linearly. When it is j it is incremented by n which means that it jumps around a lot in the matrix. When it is k it does not change anything.