

## PDP Lab 3 Documentation

**First\_Matrix(1000, 1000) x Second\_Matrix(1000, 1000) = Result(1000, 1000)**

### 1 thread:

```
Row-Based with Threads Elapsed time: 1.29191133 seconds
Row-Based with ThreadPool Elapsed time: 1.18959771 seconds
Column-Based with Threads Elapsed time: 1.17529542 seconds
Column-Based with ThreadPool Elapsed time: 1.14937175 seconds
kth Element-Based with Threads Elapsed time: 1.23978129 seconds
kth Element-Based with ThreadPool Elapsed time: 1.17633017 seconds
```

### 2 threads:

```
Row-Based with Threads Elapsed time: 1.30603467 seconds
Row-Based with ThreadPool Elapsed time: 1.30124946 seconds
Column-Based with Threads Elapsed time: 1.26878258 seconds
Column-Based with ThreadPool Elapsed time: 1.32270383 seconds
kth Element-Based with Threads Elapsed time: 0.71800046 seconds
kth Element-Based with ThreadPool Elapsed time: 0.65254163 seconds
```

### 4 threads:

```
Row-Based with Threads Elapsed time: 1.47772863 seconds
Row-Based with ThreadPool Elapsed time: 1.21698029 seconds
Column-Based with Threads Elapsed time: 1.30659096 seconds
Column-Based with ThreadPool Elapsed time: 1.28889917 seconds
kth Element-Based with Threads Elapsed time: 0.33405679 seconds
kth Element-Based with ThreadPool Elapsed time: 0.34311996 seconds
```

### 8 threads:

```
Row-Based with Threads Elapsed time: 1.87067983 seconds
Row-Based with ThreadPool Elapsed time: 1.51158221 seconds
Column-Based with Threads Elapsed time: 1.62613413 seconds
Column-Based with ThreadPool Elapsed time: 1.70936975 seconds
kth Element-Based with Threads Elapsed time: 0.31708713 seconds
kth Element-Based with ThreadPool Elapsed time: 0.29392829 seconds
```

**First\_Matrix(555, 333) x Second\_Matrix(333, 777) = Result(555, 777)**

## 8 threads:

```
Row-Based with Threads Elapsed time: 0.25826571 seconds  
Row-Based with ThreadPool Elapsed time: 0.17004688 seconds  
Column-Based with Threads Elapsed time: 0.16878475 seconds  
Column-Based with ThreadPool Elapsed time: 0.16376729 seconds  
kth Element-Based with Threads Elapsed time: 0.04583983 seconds  
kth Element-Based with ThreadPool Elapsed time: 0.04315729 seconds
```

## 2 threads:

```
Row-Based with Threads Elapsed time: 0.12172658 seconds  
Row-Based with ThreadPool Elapsed time: 0.13664517 seconds  
Column-Based with Threads Elapsed time: 0.11562113 seconds  
Column-Based with ThreadPool Elapsed time: 0.11617688 seconds  
kth Element-Based with Threads Elapsed time: 0.06039725 seconds  
kth Element-Based with ThreadPool Elapsed time: 0.05692246 seconds
```