

IE531 Programming Assignment #3
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Sample Output:

```
[Tianqis-MacBook-Pro:Debug wtq$ ./hw3 1000 10
The number of rows/columns in the square matrix is: 10
The exponent is: 1000
Repeated Squaring Result:
It took 0.000371 seconds to complete
Direct Multiplication Result:
It took 0.001307 seconds to complete
```

Figure 1: Sample output

Plot:



Figure 2: A comparison of the computation-time (obtained experimentally) for brute-force exponentiation and the method of repeated squares of a random 10×10 matrix as a function of the exponent.