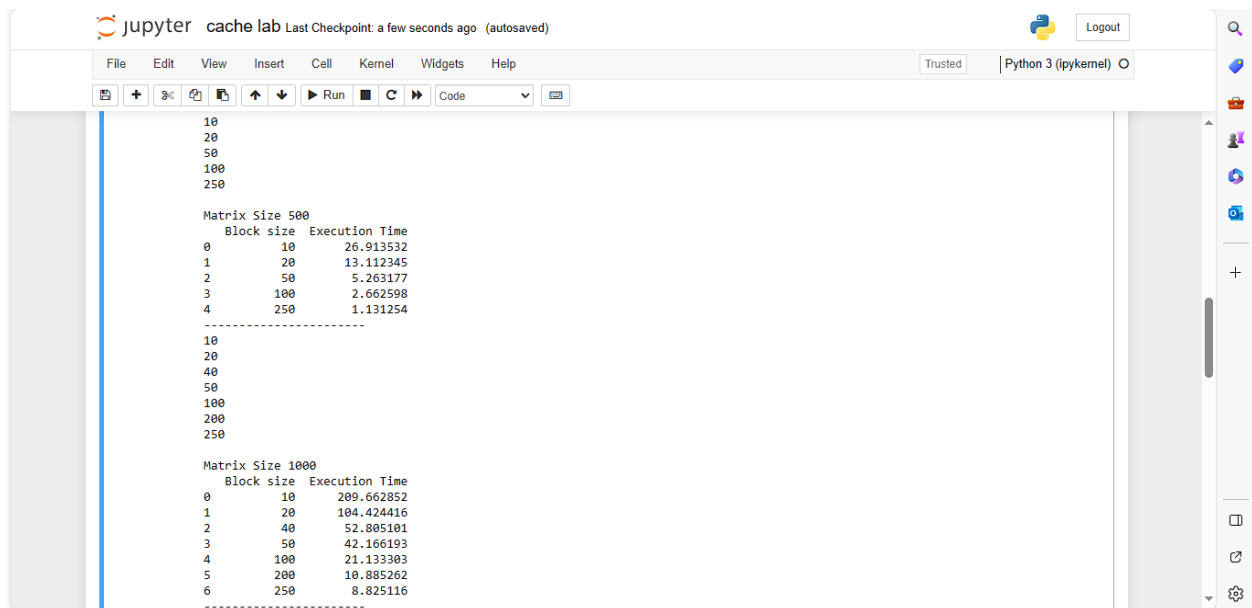


# Cache

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In this code we see the impact of cache using matrix size and block size in multiplication of the matrices , Because of the cache we decreased the write misses corresponding to block size because we benefit from locality and utilize cache space ,we can see all of this in this plot



The image shows a JupyterLab interface with a code editor displaying the following output:

```
10
20
50
100
250

Matrix Size 500
  Block size Execution Time
0         10      26.913532
1         20      13.112345
2         50       5.263177
3        100       2.662598
4        250       1.131254
-----
10
20
40
50
100
200
250

Matrix Size 1000
  Block size Execution Time
0         10     209.662852
1         20    104.424416
2         40     52.805101
3         50     42.166193
4        100     21.133303
5        200     10.885262
6        250      8.825116
-----
```

The output demonstrates that as the matrix size increases, the execution time decreases significantly for larger block sizes, illustrating the impact of cache locality and utilization.

