

# Report

## (170010036)

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Here is time taken by cuda code:

```
Time taken for size 10 is 0.077564
Time taken for size 100 is 0.062676
Time taken for size 500 is 0.081740
Time taken for size 1000 is 0.152009
Time taken for size 2000 is 0.532639
Time taken for size 3000 is 1.317099
Time taken for size 4000 is 2.314612
Time taken for size 5000 is 4.260349
Time taken for size 6000 is 6.579969
Time taken for size 7000 is 10.613965
Time taken for size 8000 is 14.249206
Time taken for size 9000 is 20.777839
Time taken for size 10000 is 26.570641
```

**Note:** I have run all the code on GPU provided by google colab.

I have also submitted the colab file which if run in sequentially after uploading the cuda code file gives the above results.

**Observation:** We can see that as the size of matrices increases the time taken in increases which is desired. Also time taken if compared to previous assignments also decreased and difference is higher for higher N values.