**SUMMARY**

## USC ID/s: 3981517964

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| M+N | Time in MS (Basic) | Time in MS (Efficient) | Memory in KB (Basic) | Memory in KB (Efficient) |
| 16 |  | 0.008013964 |  | 18.698 |
| 64 |  | 0.008004665 |  | 121.793 |
| 128 |  | 0.023998499 |  | 440.867 |
| 256 |  | 0.111974001 |  | 1875.049 |
| 384 |  | 0.23154068 |  | 4328.153 |
| 512 |  | 0.436623812 |  | 8056.188 |
| 768 |  | 1.236315966 |  | 18968.413 |
| 1024 |  | 2.31778574 |  | 36169.929 |
| 1280 |  | 3.850003958 |  | 66584.383 |
| 1536 |  | 5.600314617 |  | 81590.515 |
| 2048 |  | 10.89141703 |  | 152173.082 |
| 2560 |  | 18.3025043 |  | 274493.977 |
| 3072 |  | 24.85692835 |  | 337379.419 |
| 3584 |  | 36.55667877 |  | 553564.649 |
| 3968 |  | 42.9178021 |  | 594787.839 |

## Datapoints

## Insights

### Graph1 – Memory vs Problem Size (M+N)

[Add Graph1 here]

#### Nature of the Graph (Logarithmic/ Linear/ Exponential)

Basic:

Efficient:

#### Explanation:

### Graph2 – Time vs Problem Size (M+N)

[Add Graph2 here]

#### Nature of the Graph (Logarithmic/ Linear/ Exponential)

Basic:

Efficient:

#### Explanation:

## Contribution

3981517964: Wrote and tested memory efficient algorithm, wrote and tested input string generator and output functions, collected and graphed data for the memory efficient algorithm data points.

(Please mention what each member did if you think everyone in the group does not have an equal contribution, otherwise, write “Equal Contribution”)

<USC ID/s>: <Equal Contribution>