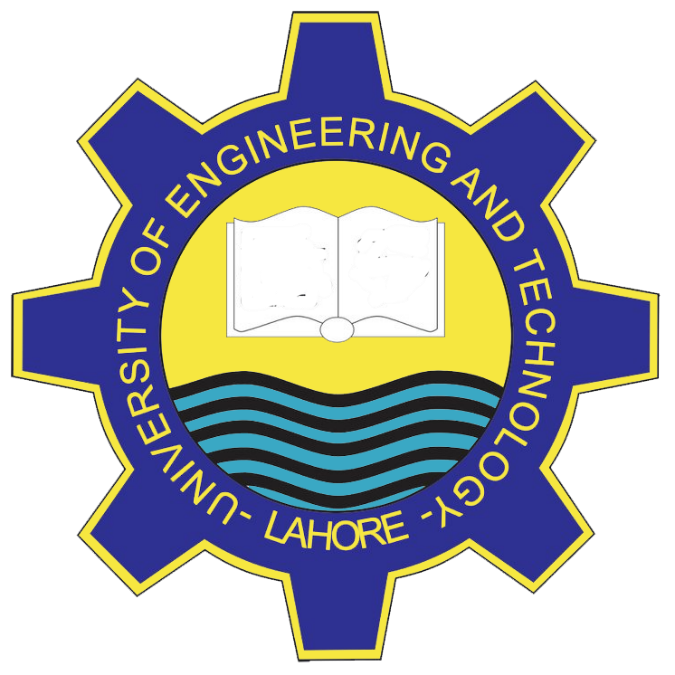
****

Analysis of Algorithms

|  |  |
| --- | --- |
| Submitted to | Sir Samyan Wahla |
| Submitted by | M. Ahmad Saeed |
| Roll No. | 2018-CS-1 |
| Date of Submission | 22/02/2020 |

Department of Computer Science (CS)

UNIVERSITY OF ENGINEERING & TECHNOLOGY LAHORE

# **Comparison of Maximum Sub-Array**

## **Task3**

|  |  |  |
| --- | --- | --- |
| Value of n | Brute Force (seconds) | Recursive (seconds) |
| 1000 | 0.002029 | 0.000255 |
| 5000 | 0.030959 | 0.000998 |
| 10000 | 0.120717 | 0.001994 |
| 20000 | 0.519609 | 0.002992 |
| 30000 | 1.035276 | 0.003243 |
| 40000 | 1.825116 | 0.004987 |
| 50000 | 2.867374 | 0.005952 |
| 60000 | 4.339388 | 0.006990 |
| 100000 | 12.50350 | 0.013928 |
| 500000 | 293.9826 | 0.053814 |
| 1000000 | 699.3412 | 0.098771 |

## **Task5**

|  |  |  |  |
| --- | --- | --- | --- |
| Value of n | Brute Force (seconds) | Recursive (seconds) | Hybrid Recursive(seconds) |
| 1000 | 0.002029 | 0.000255 | 0.000996 |
| 5000 | 0.030959 | 0.000998 | 0.000996 |
| 10000 | 0.120717 | 0.001994 | 0.000998 |
| 20000 | 0.519609 | 0.002992 | 0.001876 |
| 30000 | 1.035276 | 0.003243 | 0.002992 |
| 40000 | 1.825116 | 0.004987 | 0.004021 |
| 50000 | 2.867374 | 0.005952 | 0.004365 |
| 60000 | 4.339388 | 0.006990 | 0.006389 |
| 100000 | 12.50350 | 0.013928 | 0.007022 |
| 500000 | 293.9826 | 0.053814 | 0.041858 |
| 1000000 | 699.3412 | 0.098771 | 0.083775 |