**Lab Report – Week 8**

CS2023 Data Structures and Algorithms

Dept. of Computer Science and Engineering, University of Moratuwa

|  |  |
| --- | --- |
| Name: Tharindu Perera | Index Number: 210472J |

|  |
| --- |
|  |
| **Exersise**  GitHub Link : [Tharindu6516/UoM-DSA-S2-Labs: Lab tika (github.com)](https://github.com/Tharindu6516/UoM-DSA-S2-Labs)  Terminal Output | |
| MAX Heap    GitHub Link  [Tharindu6516/UoM-DSA-S2-Labs: Lab tika (github.com)](https://github.com/Tharindu6516/UoM-DSA-S2-Labs)  Discussion on Time Complexity of Heap Sort Algorithm  Two main operations of Heap Sort is Build heap and Heapify. Build heap function is in of order O(n). Heapify functions is O(log n) and is recursed n-1 times which makes the it O(n log n). Hence the Time complexity of the Sorting algorithm is O(n log n). | |