**Lab 7**

***Heap table:***

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **[0]** | 5 | 28 | 54 | 22 | 28 | 9 | 5 | 5 | 9 | 5 |
| **[1]** | 22 | 63 | 76 | 63 | 54 | 28 | 28 | 22 | 5 |  |
| **[2]** | 9 | 81 | 48 | 48 | 48 | 48 | 9 | 9 |  |  |
| **[3]** | 76 | 76 | 63 | 54 | 22 | 22 | 22 |  |  |  |
| **[4]** | 63 | 5 | 5 | 5 | 5 | 5 |  |  |  |  |
| **[5]** | 81 | 9 | 9 | 9 | 9 |  |  |  |  |  |
| **[6]** | 48 | 48 | 28 | 28 |  |  |  |  |  |  |
| **[7]** | 92 | 22 | 22 |  |  |  |  |  |  |  |
| **[8]** | 54 | 54 |  |  |  |  |  |  |  |  |
| **[9]** | 28 |  |  |  |  |  |  |  |  |  |

***Sort table***

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Cycle 1 | Cycle 2 | Cycle 3 | Cycle 4 | Cycle 5 | Cycle 6 | Cycle 7 | Cycle 8 | Cycle 9 | Cycle 10 |
| **[0]** | 5 | 28 | 54 | 22 | 28 | 9 | 5 | 5 | 9 | 5 |
| **[1]** | 22 | 63 | 76 | 63 | 54 | 28 | 28 | 22 | 5 | 9 |
| **[2]** | 9 | 81 | 48 | 48 | 48 | 48 | 9 | 9 | 22 | 22 |
| **[3]** | 76 | 76 | 63 | 54 | 22 | 22 | 22 | 28 | 28 | 28 |
| **[4]** | 63 | 5 | 5 | 5 | 5 | 5 | 48 | 48 | 48 | 48 |
| **[5]** | 81 | 9 | 9 | 9 | 9 | 54 | 54 | 54 | 54 | 54 |
| **[6]** | 48 | 48 | 28 | 28 | 63 | 63 | 63 | 63 | 63 | 63 |
| **[7]** | 92 | 22 | 22 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| **[8]** | 54 | 54 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 |
| **[9]** | 28 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |

The green highlighted boxes depict the elements that would be considered for sorting in the sorting cycle.

For example, the elements from [0] to [8] are green in color. This means that these elements would be considered while drawing heap tree and sorting.