**Data Structure Introduction assignments**

Mandatory

1. Refer the code below and estimate the time complexity.

a.

A screenshot of a computer code

Description automatically generated

1. **Total Time Complexity:**

* The outer loop runs **n times**.
* For each iteration of the outer loop, the inner loop runs **log n times**.

Therefore, the total time complexity of the entire code segment is:

O(n)×O(log n)=O(n log n)

1. **Total Time Complexity:**

* The first loop takes **O(n)** time.
* The second loop takes **O(m)** time.
* Since the loops are sequential (one after the other), we can sum their time complexities.

Therefore, the total time complexity of this code is:

O(n)+O(m)=O(n +m)