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| Cairo University  Faculty of Engineering  Computer Engineering Department  Spring 2022 | Logo  Description automatically generated |

**Data Structures and Algorithms Project Phase 1 Report**

**Members’ Info:**

|  |  |  |
| --- | --- | --- |
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**Project Data Structures:**

|  |  |  |
| --- | --- | --- |
| List Name | Chosen DS | Justification |
| Event | **Queue** | **Peek an Event = O (1)**  **Dequeue an Event = O (1)**  **Enqueue an Event = O (1)** |
| Waiting Cargo CN | **Linked List** | **Add a Normal Cargo = O(N)** |
| Waiting Cargo CS | **Queue** | **Dequeue a Special Cargo = O (1)**  **Enqueue a Special Cargo = O (1)** |
| Waiting Cargo CV | **Priority Queue** | **Enqueue a VIP Cargo = O(N)** |
| Trucks | **Queue** | **Enqueue a Truck = O (1)** |
| Moving Cargo | **Queue** | **Enqueue a Moving Cargo = O (1)**  **Dequeue a Moving Cargo = O (1)** |
| Delivered Cargo | **Queue** | **Enqueue a Delivered Cargo = O (1)**  **Dequeue a Delivered Cargo = O (1)** |