**hashTable.py**

|  |  |  |  |
| --- | --- | --- | --- |
| **Method** | **Line number** | **Space complexity** | **Time complexity** |
| \_\_init\_\_ | 8 | O(1) | O(1) |
| \_my\_hash | 19 | O(1) | O(1) |
| add | 25 | O(1) | O(1) |
| search | 36 | O(N) | O(n) |
| **Total** |  | **1N +3 = O(N)** | **1N +3 = O(N)** |

**package.py**

|  |  |  |  |
| --- | --- | --- | --- |
| **Method** | **Line number** | **Space complexity** | **Time complexity** |
| \_\_init\_\_ | 6 | O(1) | O(1) |
| **Total** |  | **O(1)** | **O(1)** |

**readPackages.py**

|  |  |  |  |
| --- | --- | --- | --- |
| **Method** | **Line number** | **Space complexity** | **Time complexity** |
| None | 9 | O(N) | O(N) |
| None | 19 | O(N) | O(N) |
| get\_hash\_table | 36 | O(1) | O(1) |
| **Total** |  | **2N + 1 = O(N)** | **2N + 1 = O(N)** |

**loadTruck.py**

|  |  |  |  |
| --- | --- | --- | --- |
| **Method** | **Line number** | **Space complexity** | **Time complexity** |
| load\_trucks | 17 | O(1) | O(1) |
| get\_address\_vertices | 40 | O(N) | O(N) |
| get\_vertices\_truck1 | 58 | O(N) | O(N) |
| get\_vertices\_truck2 | 74 | O(N) | O(N) |
| get\_vertices\_truck3 | 87 | O(N) | O(N) |
| get\_truck\_one\_packages | 100 | O(1) | O(1) |
| get\_truck\_two\_packages | 106 | O(1) | O(1) |
| get\_truck\_three\_packages | 112 | O(1) | O(1) |
| get\_all\_packages | 118 | O(1) | O(1) |
| **Total** |  | **4N+5 = O(N)** | **4N+5 = O(N)** |

**distances.py**

|  |  |  |  |
| --- | --- | --- | --- |
| **Method** | **Line number** | **Space complexity** | **Time complexity** |
| None | 9 | O(N) | O(N) |
| find\_short\_path | 18 | O(N^2) | O(N^2) |
| get\_shortPath | 69 | O(1) | O(1) |
| **Total** |  | **N^2+N+1 = O(N^2)** | **N^2+N+1 = O(N^2)** |

**timer.py**

|  |  |  |  |
| --- | --- | --- | --- |
| **Method** | **Line number** | **Space complexity** | **Time complexity** |
| time\_per\_mile | 9 | O(1) | O(1) |
| set\_time | 26 | O(N^2) | O(N^2) |
| **Total** |  | **N^2+1 = O(N^2)** | **N^2+1 = O(N^2)** |

**main.py**

|  |  |  |  |
| --- | --- | --- | --- |
| **Method** | **Line number** | **Space complexity** | **Time complexity** |
| truck\_out\_for\_delivery | 16 | O(N^2) | O(N^2) |
| None | 37 | O(1) | O(1) |
| None | 65 | O(N) | O(N) |
| None | 85 | O(N) | O(N) |
| None | 100 | O(N) | O(N) |
| None | 105 | O(1) | O(1) |
| **Total** |  | **N^2+3N+2= O(N^2)** | **N^2+3N+2= O(N^2)** |

**lookup.py**

|  |  |  |  |
| --- | --- | --- | --- |
| **Method** | **Line number** | **Space complexity** | **Time complexity** |
| lookUp\_id | 10 | O(N) | O(N) |
| lookUp\_time | 29 | O(N) | O(N) |
| next\_action | 73 | O(1) | O(1) |
| **Total** |  | **2N+1 = O(N)** | **2N+1 = O(N)** |

**Total**

|  |  |  |
| --- | --- | --- |
| **Section** | **Space complexity** | **Time complexity** |
| hashTable.py | O(N) | O(N) |
| packages.py | O(1) | O(1) |
| readPackages.py | O(N) | O(N) |
| loadTruck.py | O(N) | O(N) |
| distances.py | O(N^2) | O(N^2) |
| timer.py | O(N^2) | O(N^2) |
| main.py | O(N^2) | O(N^2) |
| lookUp.py | O(N) | O(N) |
| **Total** | **3N^2+4N+1= O(N^2)** | **3N^2+4N+1= O(N^2)** |