**Assignment 01**

Group T\_B\_T

Member list:

|  |  |  |
| --- | --- | --- |
| name | Student ID | Main Focus |
| Nguyễn Mạnh Tiến | HE130912 | Main coder |
| Lê Bật Bảo | HE140354 | Reporter,supportive coder |
| Đinh Bá Khánh Trung | HE140257 | UI and analyzing coder, tester |

|  |  |
| --- | --- |
| Function | Complexity |
| 1. Load data from file 2. Input & add to end 3. Display data 4. Save data to file 5. Search by code 6. Delete by code 7. Sort by code 8. Input & add to beginning 9. Add after position k 10. Delete position k | O(n)  O(1)  O(n)  O(n)  O(n)  O(n)  O()  O(1)  O(n)  O(n) |

Compare to Array:

Insert: O(n)

Search: O(n)

Delete: O(n)

Solutions:

- Single linked list

- In function 1 we use createNewFile() method of the File class to create a new file if it doesn’t exist and RandomAccessFile to read data from .txt file.

Implementation:

- NetBeansIDE 8.0.2

- Link to GitHub: <https://github.com/lebbtheoriginal/Income-Tax-calculator>