

WebSequenceDiagram

Your assignment is to design and build a program for a transportation company that sends freight.

Admins will need to be able to record shipments that arrive at the various warehouses. It will be evaluated against the following requirements:

1. **The software shall read a file that is in JSON format containing various shipment information.**
2. **The software shall support 4 different types of shipping methods in the input file: air freight, rail freight, ship freight, and truck freight.**
3. **The software shall read and store the shipment ID and gross weight for each entry and associate it with the specified warehouse ID.**
4. **The software shall read and store the associated metadata for each shipment.**
5. **The software shall support the following commands for each warehouse: add incoming shipment, enable freight receipt, and end freight receipt.**
6. **The software shall only allow adding incoming shipments to a warehouse that has enabled freight receipt.**
7. **The software shall keep records for a warehouse that has ended freight receipt, but will not allow new incoming shipments.**
8. **The software shall be able to export all shipments from a warehouse into a single JSON file.**
9. **The software shall show the list of received shipments for each warehouse.**

```
Test->>FileIO: parseFile()
Test->>Shipment: createFreight(parsedfileData)
note right of Shipment: based on data, choose correct shipment method
Shipment->>Freight:
note right of Freight: shipment method could create instances(subclass(train,truck..etc)) of Freightclass
note right of Freight: ship() could be method to be overridden in subclass from interface IShippable
Shipment->>Warehouse: ship(warehouseID)
note right of Warehouse: 3 methods: addIncomingShipment()//ONLY ALLOW IF EnabledRec, enableRec(), endRec()

alt if(enabledReceipt)
    Shipment->>Warehouse: addIncoming()
else
    Shipment->>Warehouse: dont allow add incoming shipments
end

Warehouse->>Receipt: generateReceipt()
Receipt->>FileIO: writeJSONFile()
```

