App

+ NAME: String
+ VERSION: String

+ App()
+ main(String[] args):void

Item (Abstract)

name: String

+ Item(String)
+ getName(): String

Container

- type: Container.Type

+ Container(String)
+ getType(): Container.Type

OilBarrel

+ OilBarrel(String)

<<enumeration>>
Type

STANDARD
HEATED
COOLED

Simulation

- containerShip: ContainerShip
- containerCranes: ArrayList<ContainerCrane>
- oilShip: OilShip
- oilPumps: ArrayList<OilPump>
- quay: Quay
- trucks: ArrayList<Truck>
- warehouse: Warehouse
- running: boolean
- playing: boolean

+ Simulation()
+ start(): void
+ stop(): void
+ play(): void
+ pause(): void
+ isRunning(): boolean
+ isPlaying(): boolean
+ getContainerShip(): ContainerShip
+ getContainerCranes(): ArrayList<ContainerCrane>
+ getOilShip(): OilShip
+ getOilPumps(): Arraylist<OilPump>
+ getQuay(): Quay
+ getTrucks(): ArrayList<Truck>
+ getWarehouse(): Warehouse

ItemHolder (Abstract)

name: String
maxCount: int
running: boolean = false
playing: boolean = false
items: ArrayList<Item>

+ ItemHolder(String, int)
+ getName(): String
+ getMaxCount(): int
+ start(): void
+ stop(): void
+ play(): void
+ pause(): void
+ isRunning(): boolean
+ isPlaying(): boolean
+ addItem(Item): boolean
+ removeItem(String): Item

Utils

+ rand(int, int): int
+ loadImage(String, int, int): ImageIcon
+ threadWait()

ContainerShip

+ ContainerShip(String)
+ start(): void

OilShip

+ OilShip(String)
+ start(): void

Quay

+ Quay(String)

Warehouse

+ Warehouse(String)

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                        ┌─────────────────────────────────────────────────┐
                        │              ItemMover (Abstract)               │
                        ├─────────────────────────────────────────────────┤
                        │ # name: String                                  │
                        │ # from: ItemHolder                              │
                        │ # to: ItemHolder                                │
                        │ # itemNamePrefix: String                        │
                        │ # thread: Thread                                │
                        │ # running: boolean = false                      │
                        │ # playing: boolean = false                      │
                        │ # item: Item                                    │
                        ├─────────────────────────────────────────────────┤
                        │ + ItemMover(String, ItemHolder, ItemHolder, String) │
                        │ + run(): void                                   │
                        │ + start(): void                                 │
                        │ + stop(): void                                  │
                        │ + play(): void                                  │
                        │ + pause(): void                                 │
                        │ + isRunning(): boolean                          │
                        │ + isPlaying(): boolean                          │
                        │ + isWaiting(): boolean                          │
                        │ + getItem(): Item                               │
                        └─────────────────────────────────────────────────┘
```

ContainerCrane

+ ContainerCrane(String, ItemHolder, ItemHolder)
+ handleItem(Item): void

OilPump

+ OilPump(String, ItemHolder, ItemHolder)
+ handleItem(Item): void

Truck (Abstract)

+ Truck(String, ItemHolder, ItemHolder, String)

ContainerTruck

+ ContainerTruck(String, ItemHolder, ItemHolder)
+ handleItem(Item): void

OilTruck

+ OilTruck(String, ItemHolder, ItemHolder)
+ handleItem(Item): void