



PROBLEM STATEMENT

"Where Is My Shipment"

Problem Statement :

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The CarryFast Transport Company transports shipments $s[i]$ to different locations $d[i]$. Unfortunately they do not have a way to intimate their Shippers $Su[i]$ location of their shipments while on transit. Fortunately for them they have a sensor that emits the shipment information once every 5 minutes

Your task as the Senior Developer of CarryFast company is to

1. Develop an emitter that sends shipment information once every 5 mins
2. Develop a Notifier that consumes the shipment information from 1. compare it with the arrivals
at different destinations and
3. Send a mail to the subscriber when the shipment is 60 mins , 45mins, 30 mins, 15 mins , 0 mins
away from the next destination.
4. Note that each destination will have a list of expected shipments at timestamps provided as below.
5. Your Coding language needs to be java and do call out any frameworks you may want to use in your Readme file.
6. Assume that the shipment follows the route specified in the `next_destination` array in the same order specified
7. Assume that the shipment always moves with constant speed

Sample Data :

Shipment {s}

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```
{
  "id" : "s1234",
  "last_seen_location": "d0",
  "next_destinations" : ["d10","d15"],
  "last_seen_time" : "05/01/2018, 12:27:45"
}
```

Destinations {D}

=====

```
{
  "id": "d0",
  "arrivals":[
    {
      "TimeStamp" : "05/01/2018, 12:27:51",
      "expectedShipments" : ["s1234","s1235"]
    },
    {
      "TimeStamp" : "06/01/2018, 12:27:51",
      "expectedShipments" : ["s1236","s1237"]
    }
  ]
}
{
  "id": "d10",
  "arrivals":[
    {
      "TimeStamp" : "07/01/2018, 12:27:51",
      "expectedShipments" : ["s1234","s1235"]
    },
    {
      "TimeStamp" : "08/01/2018, 12:27:51",
      "expectedShipments" : ["s1236","s1237"]
    }
  ]
}
{
  "id": "d15",
  "arrivals":[
    {
      "TimeStamp" : "08/01/2018, 12:27:51",
      "expectedShipments" : ["s1234","s1235"]
    },
    {
      "TimeStamp" : "09/01/2018, 12:27:51",
      "expectedShipments" : ["s1236","s1237"]
    }
  ]
}
Shipper {Su}
=====
```

```
{
```

```
"id" : "Su3456",  
"shipments" : ["s1234","s1235"],  
"last_checked_time" : "05/01/2018, 12:27:27",  
"email": "xyz@abc.com"  
}
```