# Syntel Warehouse Integration Management (SWIM)

## Problem statement

Create warehouse management software system to manage warehouse operations. This minimal viable product should include solution for:

1. Receiving Advanced Shipping Notice (ASN) details from vendors
2. Receive products on arrival
3. Outbound

## Requirement Details

Currently we don’t have any applications to manage warehouse operations. The current process is completely manual. Due to this primitive process, product delivery to customer is quite painstaking. But, with acceptance of the S.W.I.M system, this will and can be the key to generate growth & success for the business.

1. Receiving Advance Shipping Notice (ASN) details from vendors
   1. Before vendor ships the products to warehouse they will send ASN. ASN contains all the product details part of the shipment to warehouse.
   2. Vendor will send ASN details in the form JSON. (please refer to appendix A for JSON structure)
   3. Each ASN # will have multiple products (serial number)
   4. Persist the ASN details and serial details in table with status as In-Transit.
2. Receive products on arrival
   1. Once shipment arrives to facility, it will get assign to dock door.
   2. Then unloading products starts.
   3. System should allow to enter valid dock door.
   4. After dock door, system should allow to enter valid ASN #.
   5. System should display all the serial # in the ASN.
   6. User should be able to select particular or all serial # to mark Received.
   7. Once all serial # marked Received then ASN status should be Received.
3. Outbound
   1. Display all Received status ASN.
   2. Clicking particular ASN should display all the serial #.
   3. User should be able to mark as Loaded for particular or all serial numbers.
   4. Once all serial # marked as loaded then ASN status should be Delivered.

## Non-functional Requirements

1. User should have ability to configure dock door.
2. Each service round call should not take more than 300ms
3. Availability of system should be 3 9’s (99.9)
4. Project execution with Agile XP
5. Microservice architecture
6. Application should support Desktop and Mobile version.

## Milestones

1. Come up with a high-level architecture diagram and data model.
2. Come up with execution (iteration) planning & story back log.
3. Come up with screen wireframe.
4. Demo progress on each iteration end.

## Proposed Technical stack

1. UI – ReactJS (<https://reactjs.org/docs/hello-world.html> )
2. Server side – Spring boot (<https://spring.io/guides/gs/spring-boot/> )
3. Build Tool - Maven or Gradle
4. DB – Any of team choice (you can use MySql Or spring boot embedded database like H2)
5. Containerized application with Kubernetes ( <https://qwiklabs.com/quests/29> ) - Use Google Cloud (They give $300 free when you signup with your gmail id).
6. CI-CD with Jenkins

## Deliverables

1. Working code in github
2. Application url or IP
3. If possible Application Monitoring Dashboard.

## Appendix A

Advance Shipping Notice “ASN” format from vendor:

{

"asn": "123456789",

"vendorId": "VENDOR-1",

"expectedArrivalDate": "10/10/2018",

"expectedArrivalTime": "10:10",

"serials”: [

{"serial": 123456781},

{"serial": 123456782},

{"serial": 123456783},

{"serial": 123456784},

{"serial": 123456785},

{"serial": 123456786}

]

}