F

Use case name –
הוצאת
הזמנה מספק עקב חוסר

Texual description –
open an order for a product from the ideal supplier
because there is a lack of that product

List of Actors –
* product counting system

Pre-conditions –
* That system includes a
supplier that the product can be ordered from.

* There is a lack of an item.

Post-conditions –

*An order for the missing
product was created

*An order was registered to
the supplier of the missing product

Main success scenario –
An order for the lacking
product has been added to the supplier orders for the ideal supplier,
moreover a request for shipment from this supplier was made so that
the transport manager can create the shipment.
In addition the order is persists in the data base.

Alternatives/Extension-

The operation is automatic thus in case of failure an appropriate answer
is send to the manager. There is no alternative flow.

```
        ┌─────────────┐
        │      F      │
        │ · · · · · · │
        │    start    │
        └─────────────┘
               │
               ▼
        ╱─────────────╲
       ╱ stock manager ╲
       ╲updates product╱
        ╲    stock    ╱
         ╲───────────╱
               │
               ▼
            ◇ absence? ◇
   false ◄──        ──► true
     │                    │
     │                    ▼
     │          ┌─────────────────┐
     │          │get best supplier│
     │          │ for the product │
     │          └─────────────────┘
     │                    │
     │                    ▼
     │              ◇ exists? ◇
     │    false ◄──        ──► true
     │      │                   │
     │      │                   ▼
     │      │             ◇ his       ◇
     │      │      false ◄ schedule   ► true
     │      │             ◇consistent?◇
     │      │      │                   │
     │      │      ▼                   │
     │      │  ┌─────────────┐         │
     │      │  │  add order  │         │
     │      │  └─────────────┘         │
     │      │      │                   │
     │      ▼      ▼                   │
     │  ┌─────────────┐                │
     └─►│      F      │◄───────────────┘
        │ · · · · · · │
        │     end     │
        └─────────────┘
```

```
                    ╭─────────────────╮
                    │ get best supplier│
                    │   for product    │
                    │- - - - - - - - - │
                    │     start        │
                    ╰────────┬─────────╯
                             │
                             ▼
                    ╱──────────────────╲
                   ╱  product name      ╲
                   ╲  product demand     ╱
                    ╲──────────────────╱
                             │
                             ▼
                    ┌──────────────────┐
                    │ get all supplier │
                    │ that can supply  │
                    │   this product   │
                    └────────┬─────────┘
                             │
         ┌───────────────────┤
         │                   ▼
         │            ◆──────────────◆
  false  │           ╱  checked all   ╲   true
   ┌─────┼──────────◆   suppliers?     ◆──────────┐
   │     │           ╲                ╱            │
   │     │            ◆──────────────◆             │
   │     │                                         ▼
   │     │                                ╭─────────────────╮
   ▼     │                                │ get best supplier│
 ┌──────────────┐                         │- - - - - - - - - │
 │ get next     │                         │      end         │
 │ supplier     │                         ╰─────────────────╯
 └──────┬───────┘
        │
        ▼
 ┌──────────────┐
 │ get days     │
 │ between his  │
 │ next 2       │
 │ shipments    │
 └──────┬───────┘
        │
        ▼
 ┌──────────────┐
 │ compute      │
 │ quantity to  │
 │ order        │
 │ (demand*days)│
 └──────┬───────┘
        │
        ▼
 ┌──────────────┐
 │ compute the  │
 │ price for    │
 │ that quantity│
 └──────┬───────┘
        │
        ▼
   ◆──────────────◆
  ╱  min price     ╲   true
 ◆  till this point? ◆──────────┐
  ╲                ╱            │
   ◆──────────────◆             ▼
  false                 ┌──────────────────┐
                        │ update minPrice  │
                        │ and minSupplier  │
                        └──────────────────┘
```