Decision Variables

**Orderamaount(i,j):** Order quantity for product i in week j.

**InventorySupp(i,j):**Stock amount at the supplier for product i in week j

**InventoryWarei,j):**Stock amount at the warehouse for product i in week j

ShipmentWare(i,j): send amount from supplier for product i in week j

**y(i,j,k):** if j. week for i. product is sold at k. price: 1

**z(i,j):** if j week is ordered for product I

**Coefficients:**

**Bagdemands(I,j):**demand of product I for j week

**mininventory(I,j):** quantity to be kept in minimum product in warehouse

**maxsuppinventor(I,j):** quantity to be kept in maximum product in supplier

**maxsWareinve(j):** quantity to be kept in maximum product in warehouse

**Costs(i,k):** cost per item for k limit quantity for product i

**Orderamountsqty(k):** k limit quantity

Min=

s.t.

bagdemands(i,0) ≤ Shipmentware(i,0)

bagdemands(i,j) ≤ Shipmentware(i,j)+ InvetoryWare(i,j-1)

Orderamount(i,j) ≥ Moq\*z(i,j)

Orderamount(i,j) ≤ Bigm\*z(i,j)

Orderamount(i,j)- Shipmentware(i,j)= InventorySupp(i,j):

InventorySupp(i,j) ≤ maxsuppinventor(I,j)

Shipmentware(i,0)- bagdemands(i,0) = InvetoryWare(i,0)

Shipmentware(i,j)- bagdemands(i,0) + InvetoryWare(i,j-1) = InvetoryWare(i,0)

InvetoryWare(i,j) ≥ mininventory(I,j)

≤ maxsWareinve(j)