Deliverable 1 Modified Scenarios

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Step 1

Following are sub-scenarios extracted from the problem scenario:
- Sub-scenario 1: MedRes and customer negotiate, and may agree to exchange medical equipment for certain price. *Commercial transaction* pattern models this scenario.
- Sub-scenario 2: MedRes places an order to MedEq and MedEq ships the equipment to customer. *Commercial transaction* pattern models this scenario.
- Sub-scenario 3: MedEq employs a shipper to ship the order (medical equipment) to the customer. *Outsourcing* pattern models this sub-scenario.
- Sub-scenario 4: MedEq buys replenishment stock from a contract manufacturer at a certain price. *Commercial transaction* pattern models this sub-scenario.
- Sub-scenario 5: The contract manufacturer employs a shipper to ship the order (medical equipment) to MedEq. *Outsourcing* pattern models this sub-scenario.
- Sub-scenario 6: Customer requests a support service and MedRes provides the support service for repairing equipment. *Standing service contract* pattern models this scenario.

Step 2

Following are the roles and the agents adopting those roles for each of the sub-scenarios:
- Sub-scenario 1:

Role	Agent
Company	MedRes
Customer	A customer of MedRes

- Sub-scenario 2:

Role	Agent
Company	MedRes
Customer	A customer of MedEq
EqComp	MedEq

- Sub-scenario 3:

Role	Agent
EqComp	MedEq
Customer	A customer of MedEq
Shipper 1	FedUp, UpFed

- Sub-scenario 4:

Role	Agent
EqComp	MedEq
Manufacturer	FlexMan, SoleMan

- Sub-scenario 5:

Role	Agent
EqComp	MedEq
Manufacturer	FlexMan, SoleMan
Shipper 2	A shipper that the manufacturer employs for shipping the order to MedEq

- Sub-scenario 6:

Role	Agent
Company	MedRes
Customer	A customer of MedRes

Step 3

Following are the business tasks executed by each role:
- Sub-scenario 1:

Role	Task
Company	goodsCust
Customer	payComp

- Sub-scenario 2:

Role	Task
Company	payEq
EqComp	goodsCust

- Sub-scenario 3:

Role	Task
EqComp	goodsCust, payShip1
Customer	
Shipper 1	goodsCust

- Sub-scenario 4:

Role	Task
EqComp	payMfg
Manufacturer	goodsComp

- Sub-scenario 5:

Role	Task
EqComp	
Manufacturer	goodsComp, payShip2
Shipper 2	goodsComp

- Sub-scenario 6:
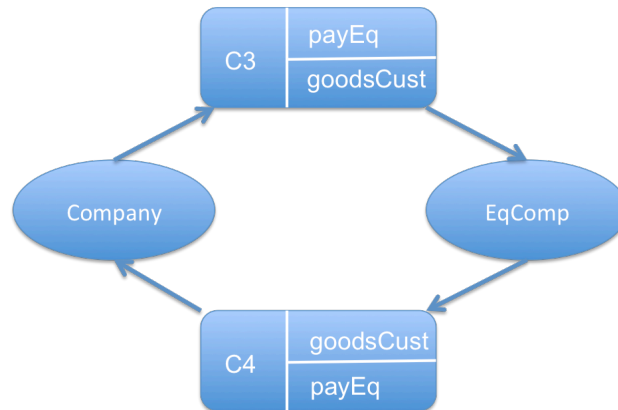
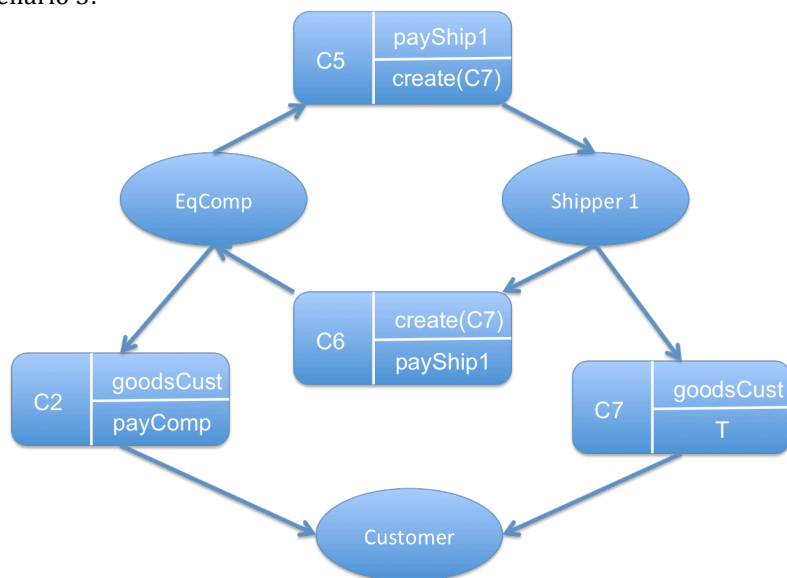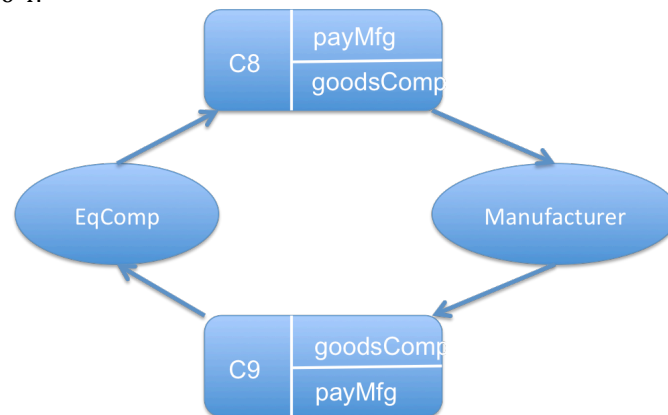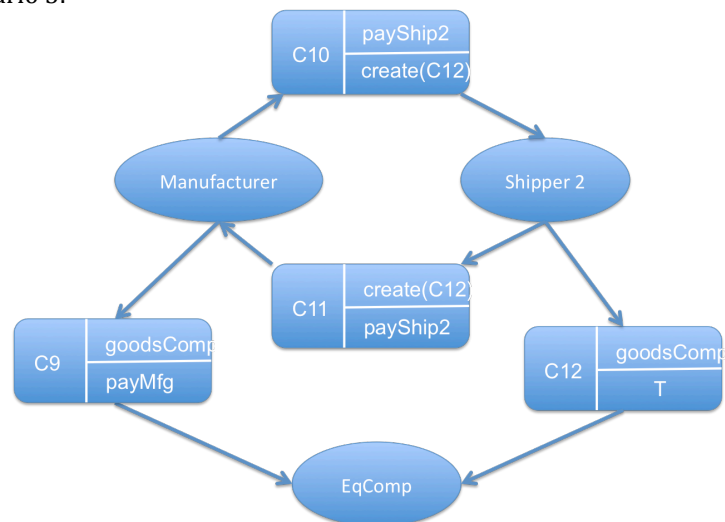| Role	Task
Company	service
Customer	payService

Step 4

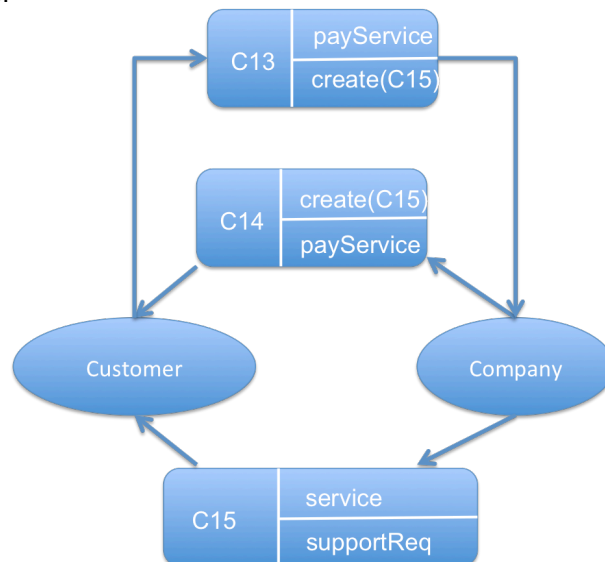- Sub-scenario 1:
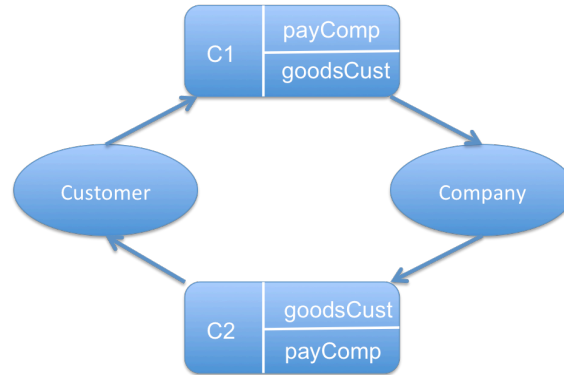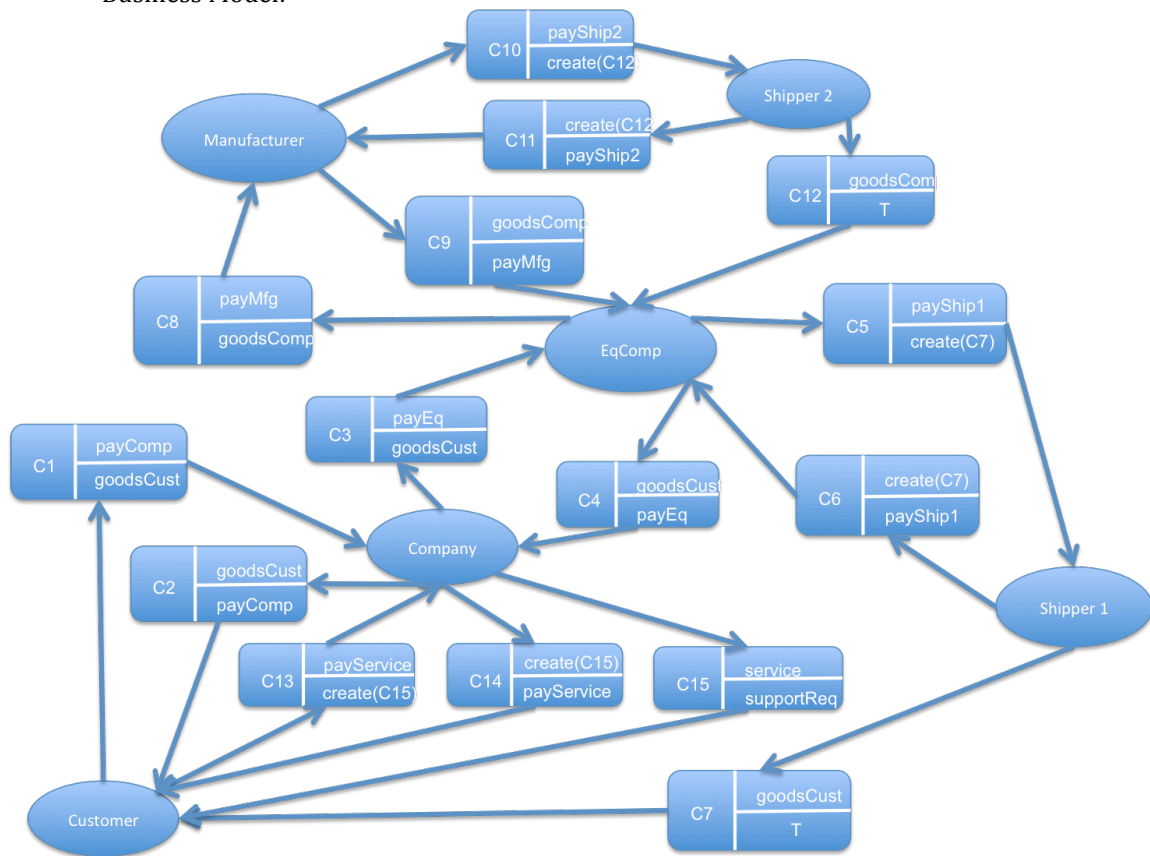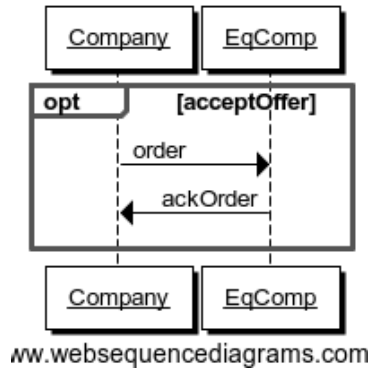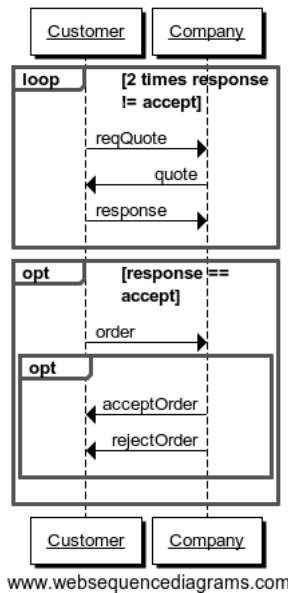

- Sub-scenario 2:

- Sub-scenario 3:

- Sub-scenario 4:

```
              ┌─────┬──────────┐
              │     │  payMfg  │
              │ C8  ├──────────┤
              │     │ goodsComp│
              └─────┴──────────┘
             ↗                    ↘
    ╔═══════════╗          ╔════════════════╗
    ║  EqComp   ║          ║  Manufacturer  ║
    ╚═══════════╝          ╚════════════════╝
             ↖                    ↙
              ┌─────┬──────────┐
              │     │ goodsComp│
              │ C9  ├──────────┤
              │     │  payMfg  │
              └─────┴──────────┘
```

- Sub-scenario 5:

```
                    ┌──────┬───────────┐
                    │      │ payShip2  │
                    │ C10  ├───────────┤
                    │      │ create(C12)│
                    └──────┴───────────┘
                  ↗                      ↘
        ╔══════════════╗          ╔═══════════╗
        ║ Manufacturer ║          ║ Shipper 2 ║
        ╚══════════════╝          ╚═══════════╝
         ↗          ↖     ┌──────┬───────────┐    ↘
                          │      │ create(C12)│
                          │ C11  ├───────────┤
                          │      │ payShip2  │
                          └──────┴───────────┘
  ┌──────┬───────────┐                      ┌──────┬───────────┐
  │      │ goodsComp │                      │      │ goodsComp │
  │ C9   ├───────────┤                      │ C12  ├───────────┤
  │      │  payMfg   │                      │      │    T      │
  └──────┴───────────┘                      └──────┴───────────┘
               ↘               ╔═══════════╗          ↙
                               ║  EqComp   ║
                               ╚═══════════╝
```

- Sub-scenario 6:

```
              ┌──────┬───────────┐
              │      │ payService│
              │ C13  ├───────────┤
              │      │ create(C15)│
              └──────┴───────────┘

              ┌──────┬───────────┐
              │      │ create(C15)│
              │ C14  ├───────────┤
              │      │ payService│
              └──────┴───────────┘
             ↙                    ↘
    ╔═══════════╗          ╔═══════════╗
    ║ Customer  ║          ║  Company  ║
    ╚═══════════╝          ╚═══════════╝
             ↖                    ↙
              ┌──────┬───────────┐
              │      │  service  │
              │ C15  ├───────────┤
              │      │ supportReq│
              └──────┴───────────┘
```

- Business Model:

Step 5

- Sequence diagram for sub-scenario 1,2,3:

(quote) – create(C1)
(acceptOrder) – create(C2)
(a) Customer negotiates with company and places an order
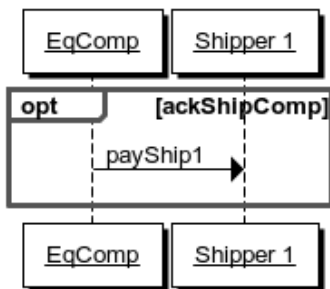
(order) -> create(C3)
(ackOrder) ->create(C4)

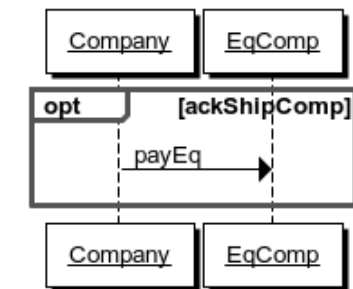**(b) Company places an order to EqComp**
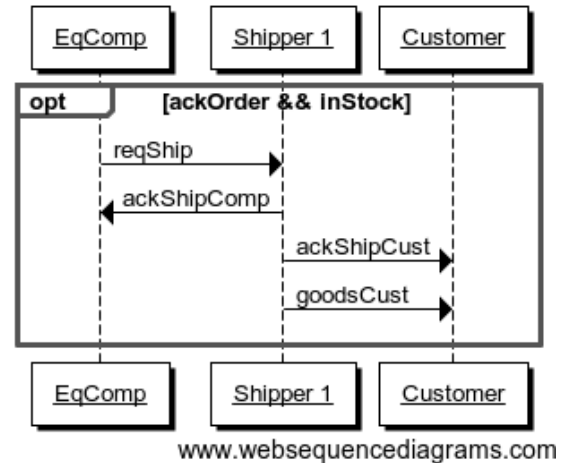
(reqShip) -> create(C5)
(ackShipComp) -> create(C6)
(ackShipCust) -> create(C7)

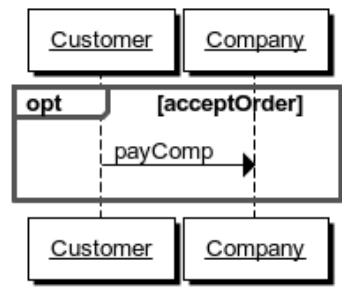**(c) EqComp requests a shipper to ship the goods (order) to the customer if the goods are in stock**

(d) Company pays EqComp for shipping equipment to Customer

(e) Company pays EqComp for shipping equipment to Customer
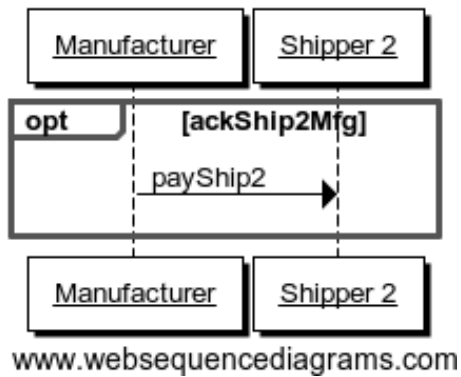
(f) Customer pays Company for goods(order)

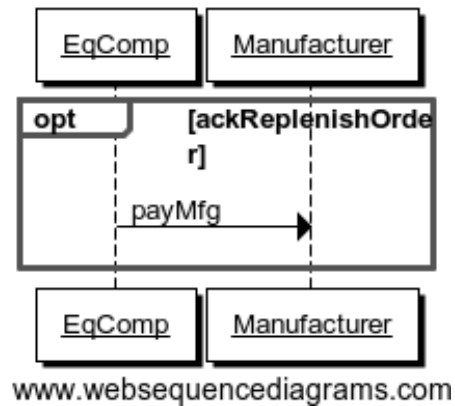- Sequence diagram for sub-scenario 4 and 5:
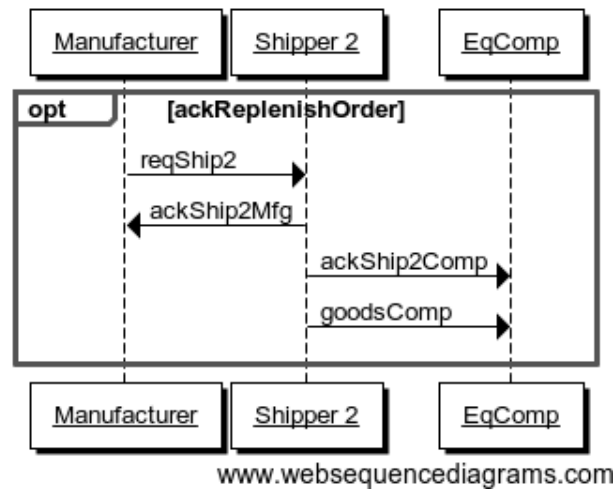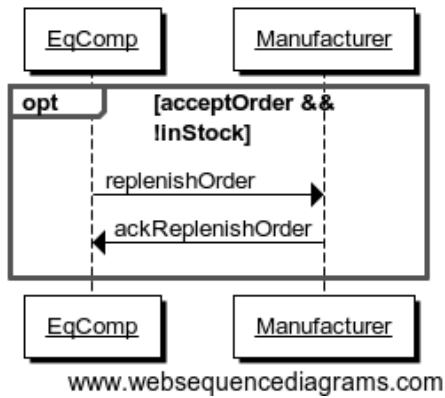
(replenishOrder) -> create(C8)
(ackReplenishOrder) -> create(C9)

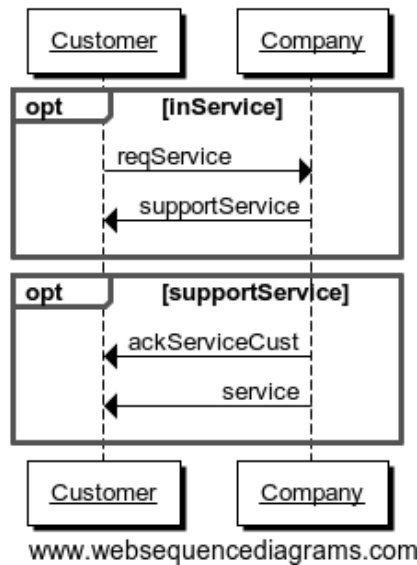**(a) EqComp places a replenishment order with a Manufacturer**

(reqShip2) -> create(C10)
(ackShipMfg) -> create(C11)
(ackShip2Comp) -> create (C12)

(b) Manufacturer requests Shipper 2 to ship replenishment order to EqComp

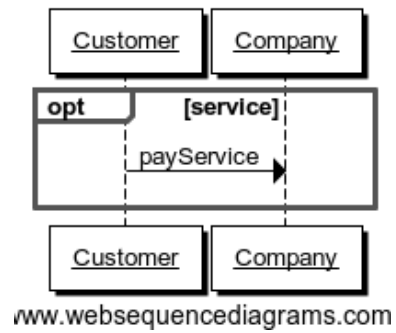**(b) Manufacturer pays Shipper 2 for shipping replenishment order to EqComp**

• Sequence diagram for sub-scenario 6:

(reqService) -> create(C13)
(ackServiceCust) -> create(C14)
(a) Customer requests repairing service from Company and Company provides service

(b) Customer pays Company for repairing service