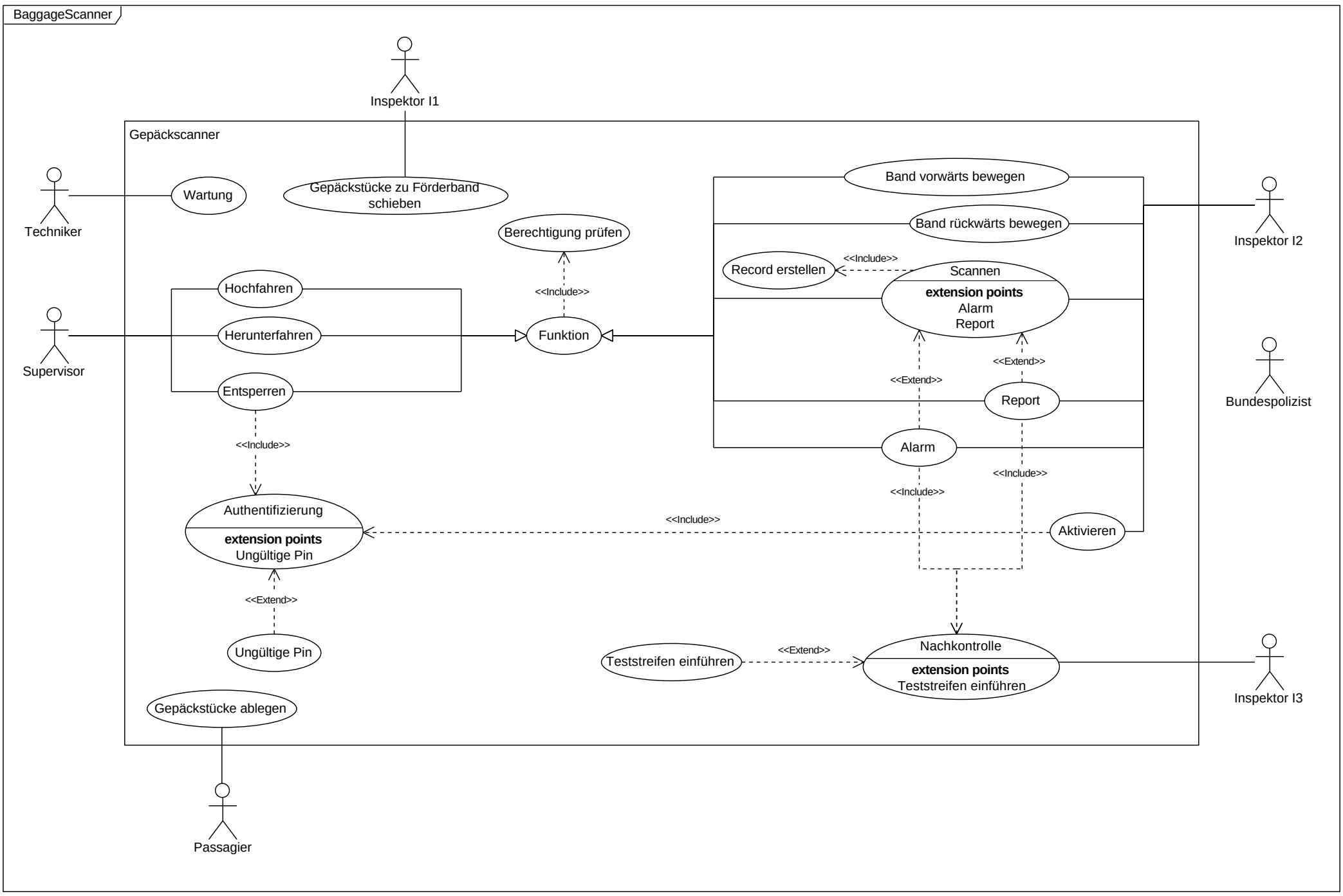
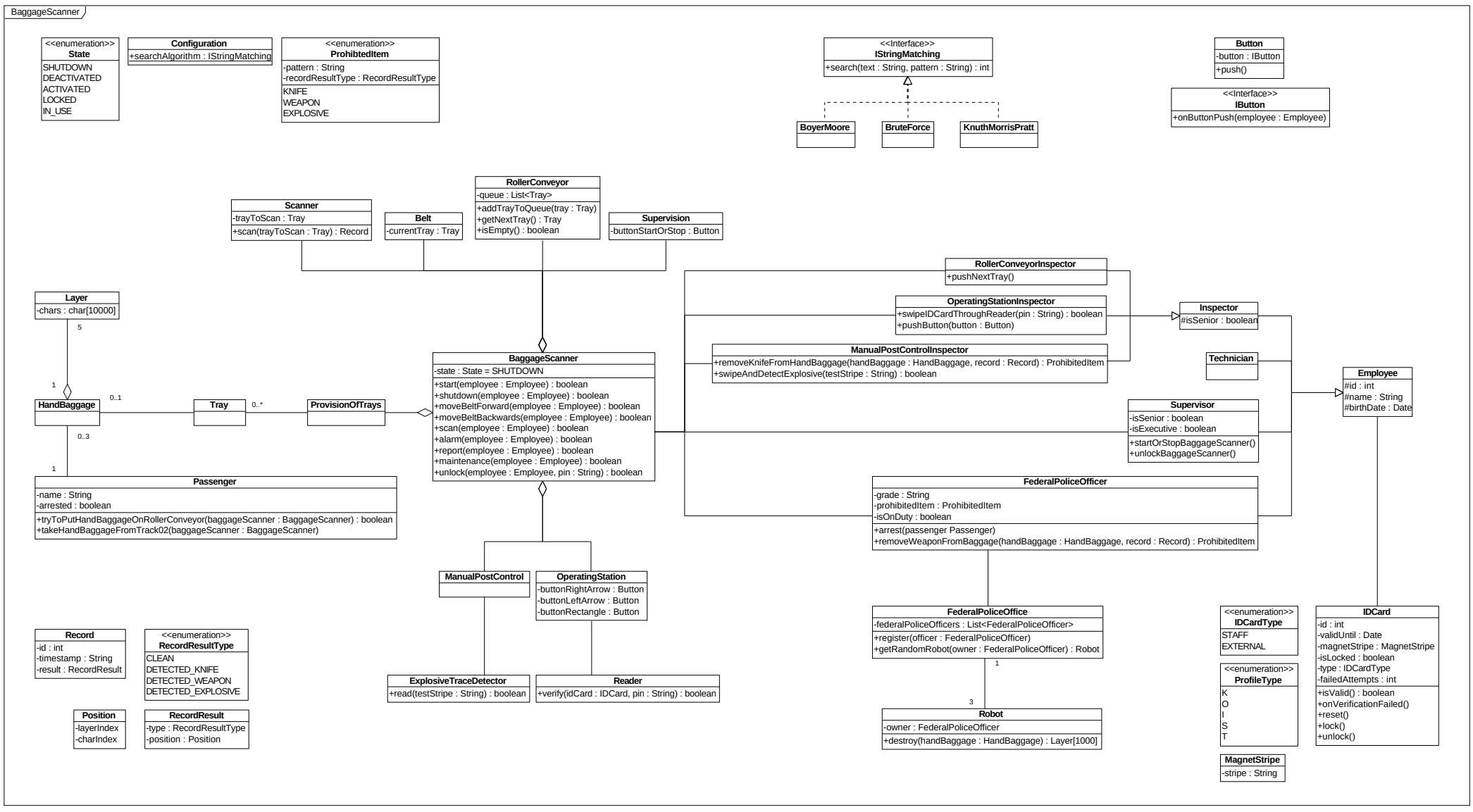
Visual Paradigm Professional(Duale Hochschule Baden-Württemberg Mosbach)

**Use-Case Diagram**
Student ID | 5703004




Class Diagram
Student ID | 1716504, 5703004
BaggageScanner
<<enumeration>>
State
SHUTDOWN
DEACTIVATED
ACTIVATED
LOCKED
IN_USE
Configuration
+searchAlgorithm : IStringMatching
<<enumeration>>
ProhibtedItem
-pattern : String
-recordResultType : RecordResultType
KNIFE
WEAPON
EXPLOSIVE
<<Interface>>
IStringMatching
+search(text : String, pattern : String) : int
BoyerMoore
BruteForce
KnuthMorrisPratt
Button
-button : IButton
+push()
<<Interface>>
IButton
+onButtonPush(employee : Employee)
Scanner
-trayToScan : Tray
+scan(trayToScan : Tray) : Record
Belt
-currentTray : Tray
RollerConveyor
-queue : List<Tray>
+addTrayToQueue(tray : Tray)
+getNextTray() : Tray
+isEmpty() : boolean
Supervision
-buttonStartOrStop : Button
RollerConveyorInspector
+pushNextTray()
OperatingStationInspector
+swipeIDCardThroughReader(pin : String) : boolean
+pushButton(button : Button)
Inspector
#isSenior : boolean
ManualPostControlInspector
+removeKnifeFromHandBaggage(handBaggage : HandBaggage, record : Record) : ProhibitedItem
+swipeAndDetectExplosive(testStripe : String) : boolean
Technician
Layer
-chars : char[10000]
5
1
HandBaggage
0..1
Tray
0..*
ProvisionOfTrays
BaggageScanner
-state : State = SHUTDOWN
+start(employee : Employee) : boolean
+shutdown(employee : Employee) : boolean
+moveBeltForward(employee : Employee) : boolean
+moveBeltBackwards(employee : Employee) : boolean
+scan(employee : Employee) : boolean
+alarm(employee : Employee) : boolean
+report(employee : Employee) : boolean
+maintenance(employee : Employee) : boolean
+unlock(employee : Employee, pin : String) : boolean
Employee
#id : int
#name : String
#birthDate : Date
Supervisor
-isSenior : boolean
-isExecutive : boolean
+startOrStopBaggageScanner()
+unlockBaggageScanner()
0..3
1
Passenger
-name : String
-arrested : boolean
+tryToPutHandBaggageOnRollerConveyor(baggageScanner : BaggageScanner) : boolean
+takeHandBaggageFromTrack02(baggageScanner : BaggageScanner)
FederalPoliceOfficer
-grade : String
-prohibitedItem : ProhibitedItem
-isOnDuty : boolean
+arrest(passenger Passenger)
+removeWeaponFromBaggage(handBaggage : HandBaggage, record : Record) : ProhibitedItem
ManualPostControl
OperatingStation
-buttonRightArrow : Button
-buttonLeftArrow : Button
-buttonRectangle : Button
FederalPoliceOffice
-federalPoliceOfficers : List<FederalPoliceOfficer>
+register(officer : FederalPoliceOfficer)
+getRandomRobot(owner : FederalPoliceOfficer) : Robot
<<enumeration>>
IDCardType
STAFF
EXTERNAL
IDCard
-id : int
-validUntil : Date
-magnetStripe : MagnetStripe
-isLocked : boolean
-type : IDCardType
-failedAttempts : int
+isValid() : boolean
+onVerificationFailed()
+reset()
+lock()
+unlock()
Record
-id : int
-timestamp : String
-result : RecordResult
<<enumeration>>
RecordResultType
CLEAN
DETECTED_KNIFE
DETECTED_WEAPON
DETECTED_EXPLOSIVE
ExplosiveTraceDetector
+read(testStripe : String) : boolean
Reader
+verify(idCard : IDCard, pin : String) : boolean
1
3
Robot
-owner : FederalPoliceOfficer
+destroy(handBaggage : HandBaggage) : Layer[1000]
<<enumeration>>
ProfileType
K
O
I
S
T
MagnetStripe
-stripe : String
Position
-layerIndex
-charIndex
RecordResult
-type : RecordResultType
-position : Position

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**Sequence Diagram**
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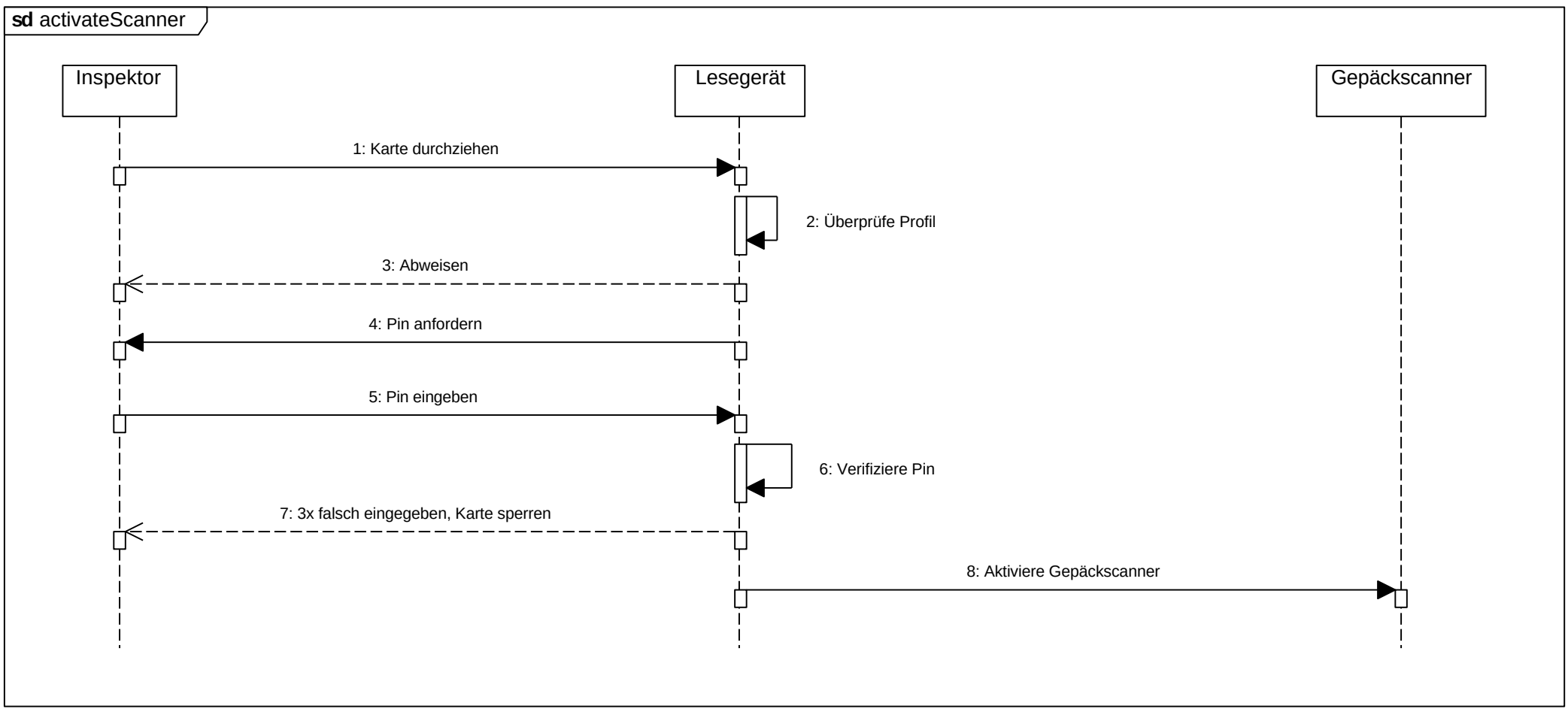

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**State Machine Diagram**
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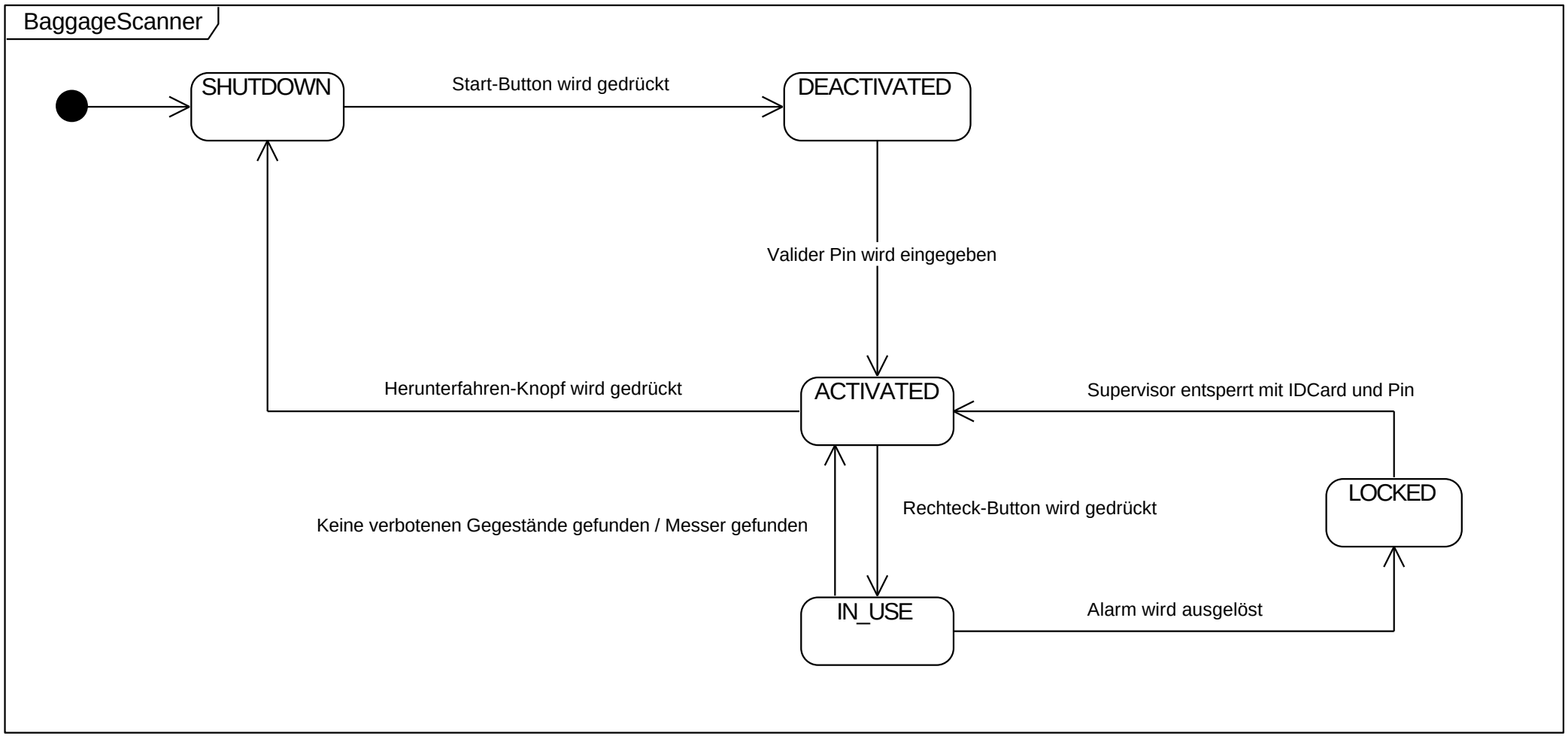

**Activity Diagram** (Duale Hochschule Baden-Württemberg Mosbach)
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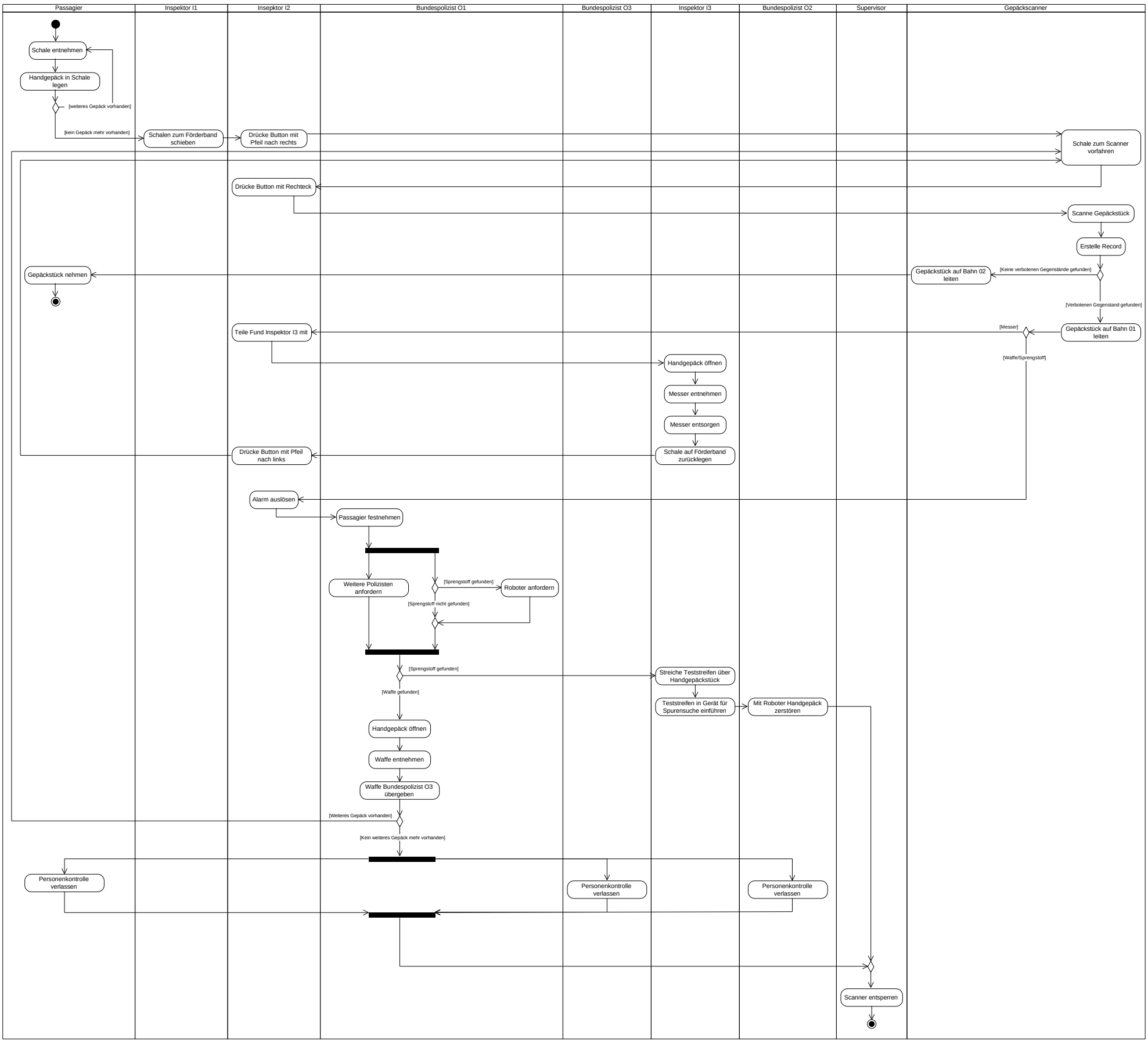
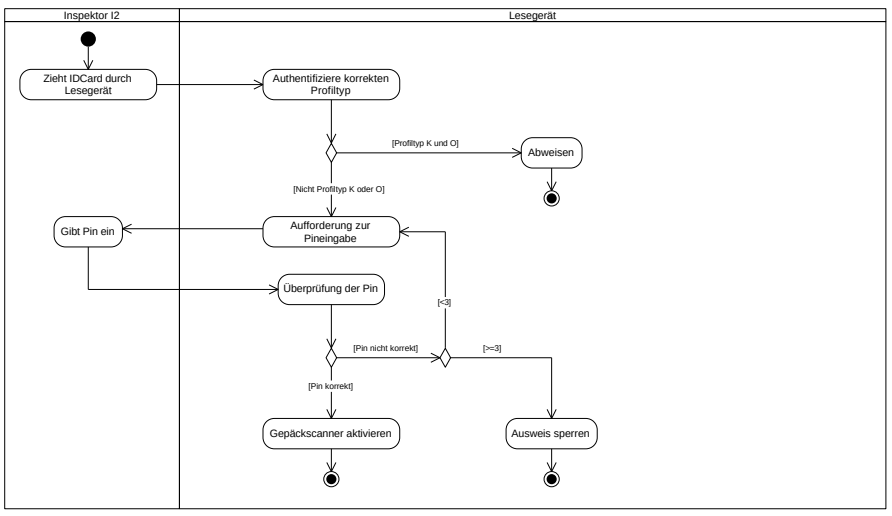
BaggageScanner

**ScanHandBaggageActivity**




**IDCardReaderActivity**



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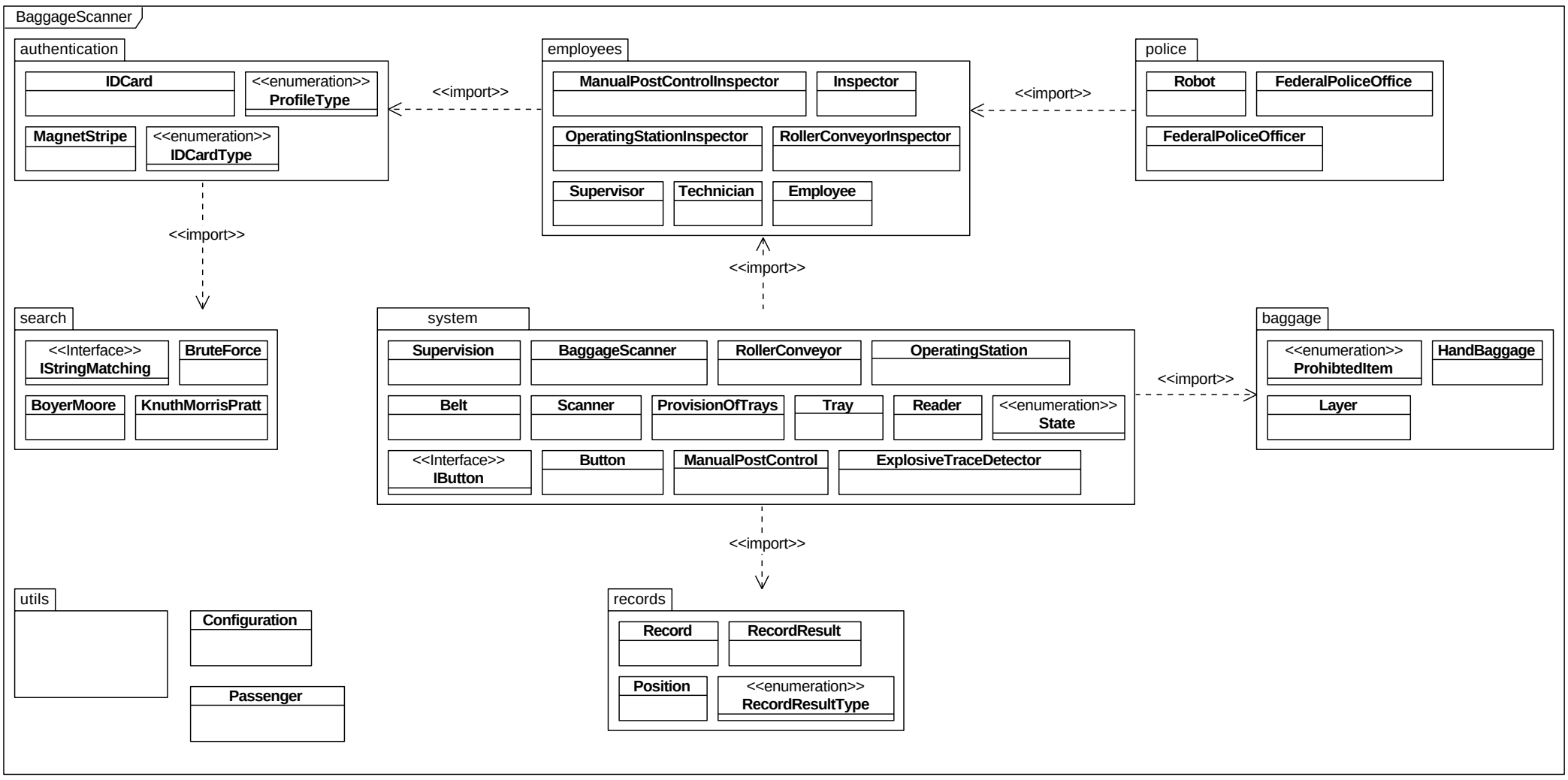
**Package Diagram**

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