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Draw the classes diagram in star UML for the applications listed below - class diagram should include attributes, operations, show multiplicity, association class, association, bags, sequence, aggregation composition

3. Library Management System

4. Stock Maintenance System

5. ~~Passport~~ automation system.

Figure 1: Observation Book

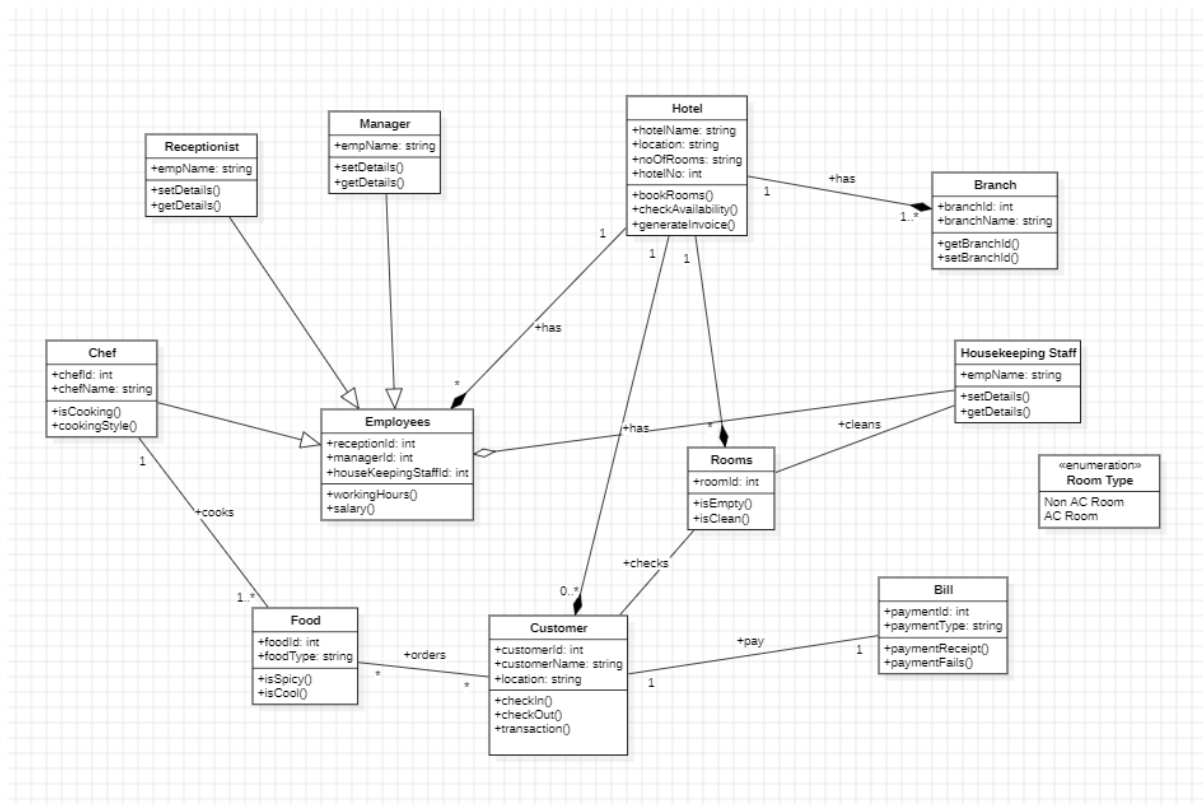


Figure 2: Hotel Management System

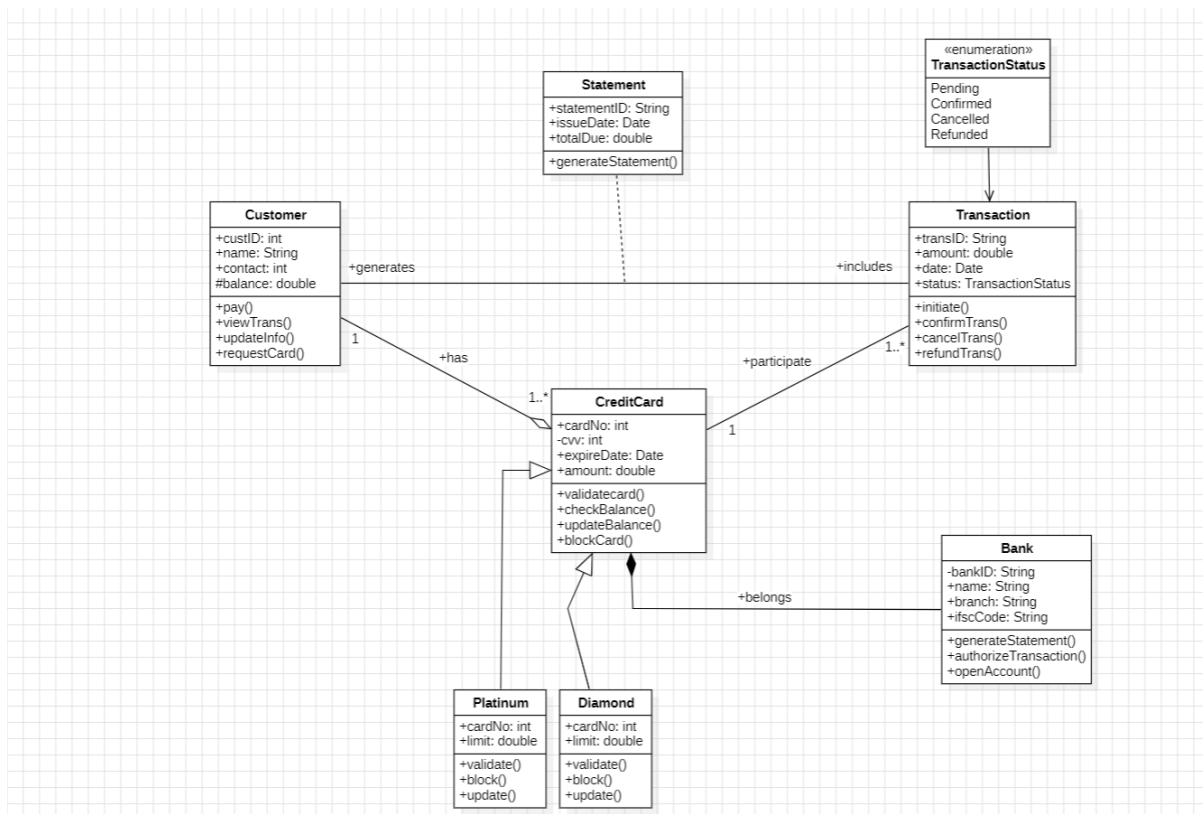


Figure 3: Credit Card Processing

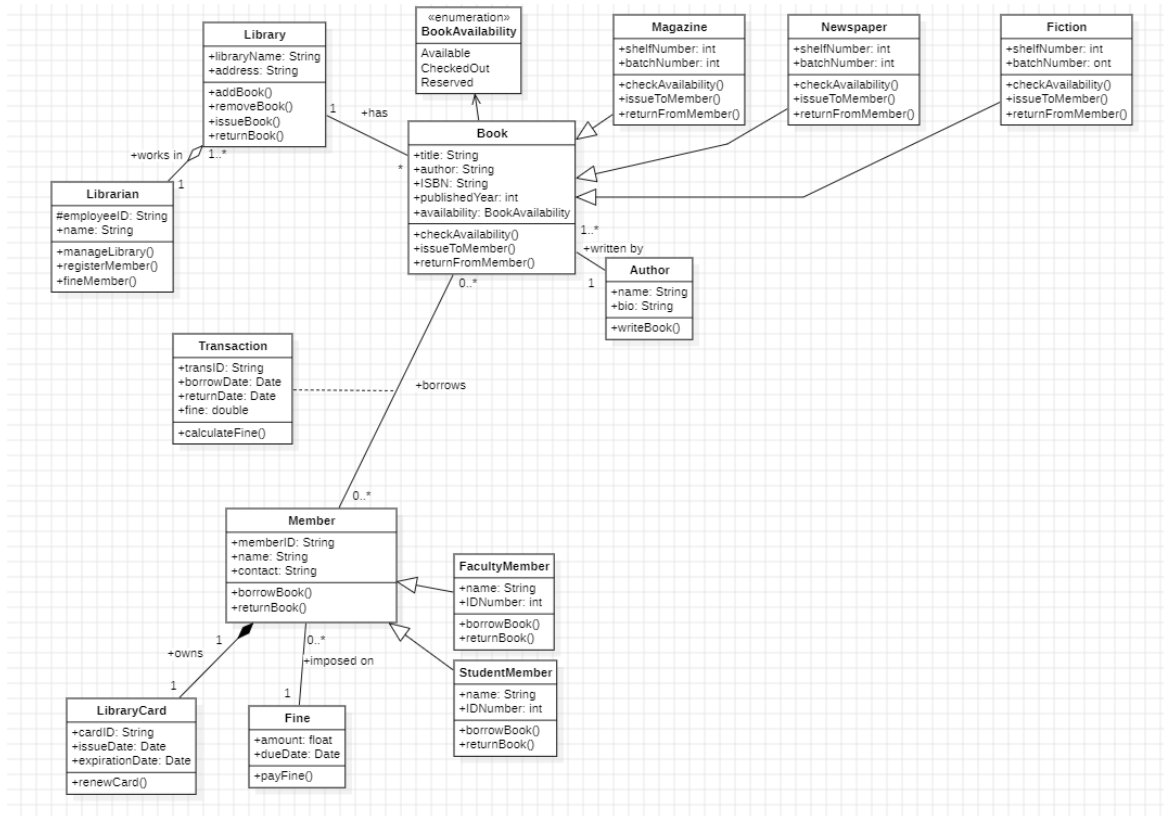


Figure 4: Library Management System

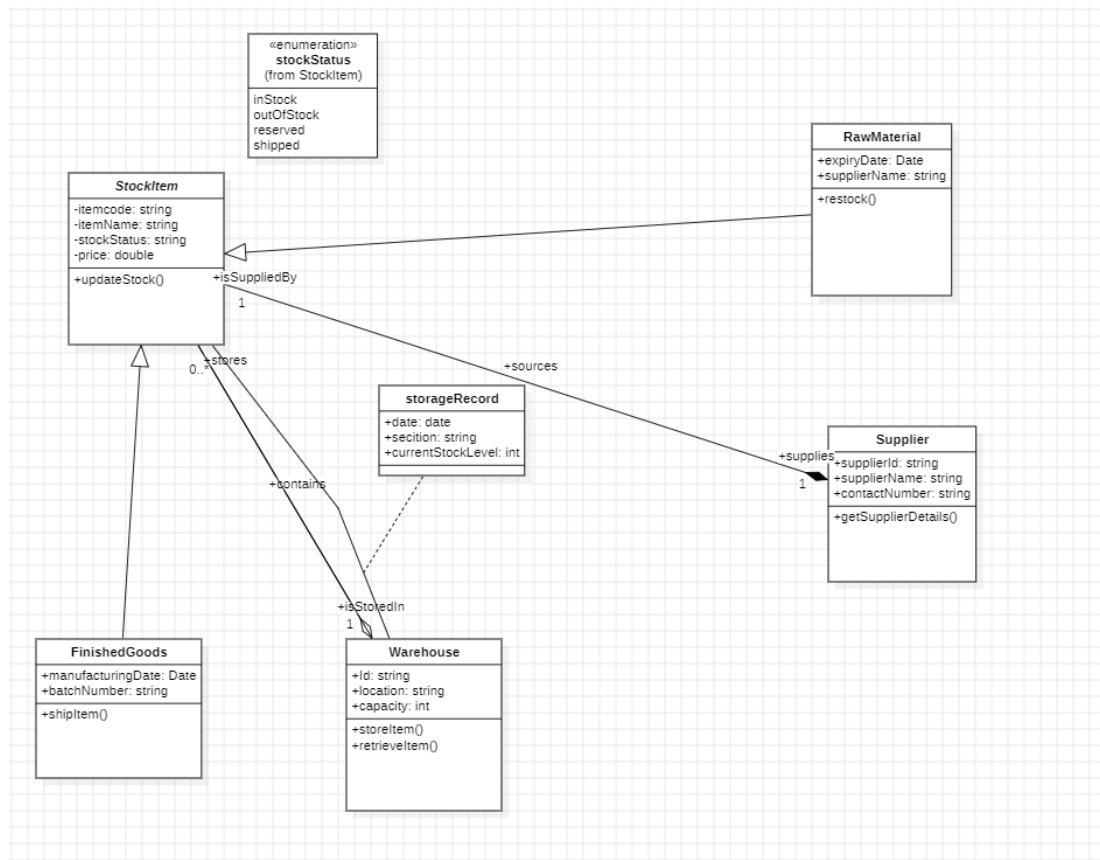


Figure 5: Stock Maintenance System

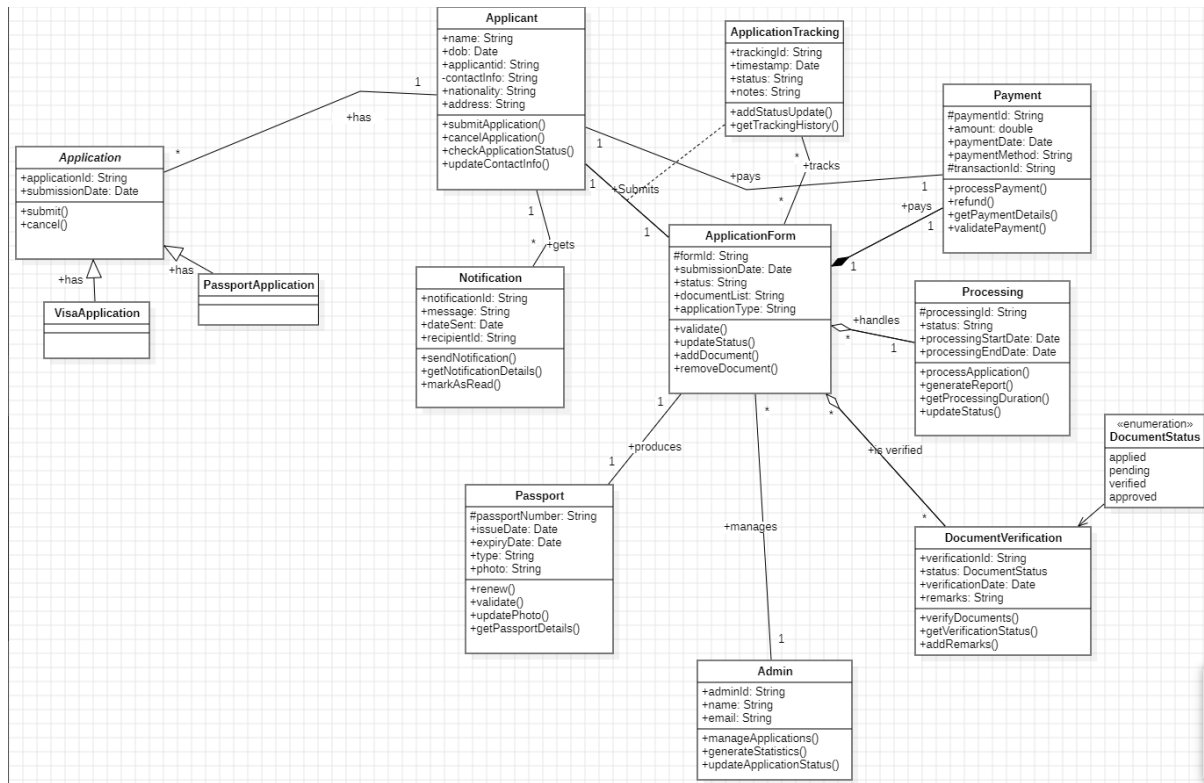


Figure 6: Passport Automation System

1> Hotel Management System

managed by

Hotel

+name: string
+location: string
+rating: integer
+reserve()
+cancel()
+display()

+contains

Room

+number: integer
+location: string
+status: string
+price: float
+book()
+cancel()
+allot-housekeeping()
+status

Booking

+date: Date
+roomno: integer
+duration: integer
+cust_id: string
+book()
+confirm()
+cancel()
+status()

Staff

+id: string
+name: string
+login()
+check_date()

Customer

+id: string
+name: string
+start_date: Date
+end_date: Date
+room_no: integer
+book_room()
+cancel_room()
+extend_stay()
+pay()

Housekeeping

+room_no: integer
+check_status()
+assign()

Managers

+post: string
+handlebooking()

+cleans

2) Library Management System

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Fiction
+ shelfNumber: int
+ batchNumber: int
+ checkAvailability()
+ issueToMember()
+ returnFromMember()

Newspaper
+ shelfNumber: int
+ batchNumber: int
+ checkAvailability()
+ issueToMember()
+ returnFromMember()

Magazine
+ shelfNumber: int
+ batchNumber: int
+ checkAvailability()
+ issueToMember()
+ returnFromMember()

Book
+ title: String
+ author: String
+ isbn: String
+ publishedYear: int
+ availability: BookAvailability
+ checkAvailability()
+ issueToMember()
+ returnFromMember()

Author
+ name: String
+ bio: String
+ writeBook()

Faculty Member
+ name: String
+ IDNumber: int
+ borrowBook()
+ returnBook()

Student Member
+ name: String
+ IDNumber: int
+ borrowBook()
+ returnBook()

<<enumeration>>
BookAvailability
Available
CheckedOut
Reserved

Transaction
+ transID: String
+ borrowDate: Date
+ returnDate: Date
+ fine: Double
+ calculateFine()

Member
+ memberID: String
+ name: String
+ contact: String
+ borrowBook()
+ returnBook()

Fine
+ amount: float
+ dueDate: Date
+ payFine()

LibraryCard
+ cardID: String
+ issueDate: Date
+ expirationDate: Date
+ renewCard()

Library
+ libraryName: String
+ address: String
+ addBook()
+ removeBook()
+ issueBook()
+ returnBook()

Librarian
+ employeeID: String
+ name: String
+ manageLibrary()
+ registerLibrary()
+ fineMember()

1

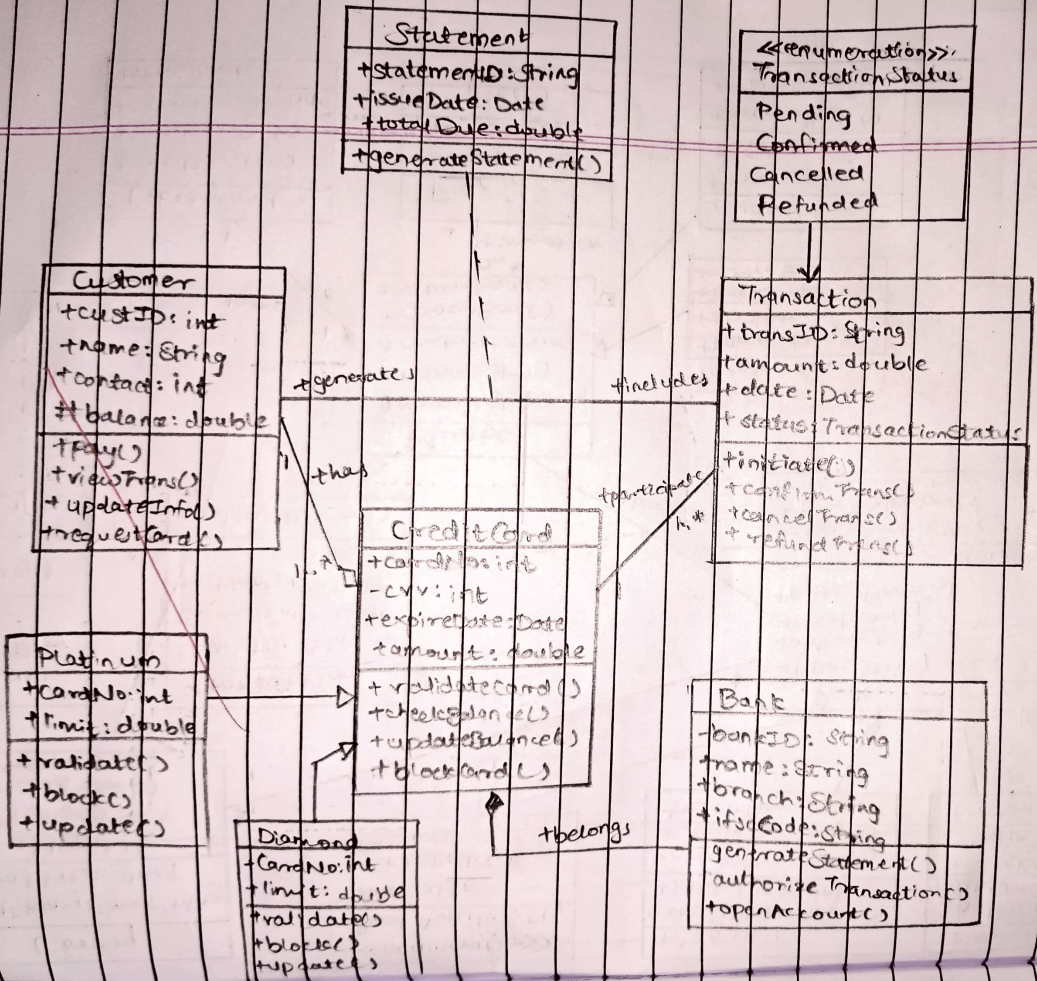
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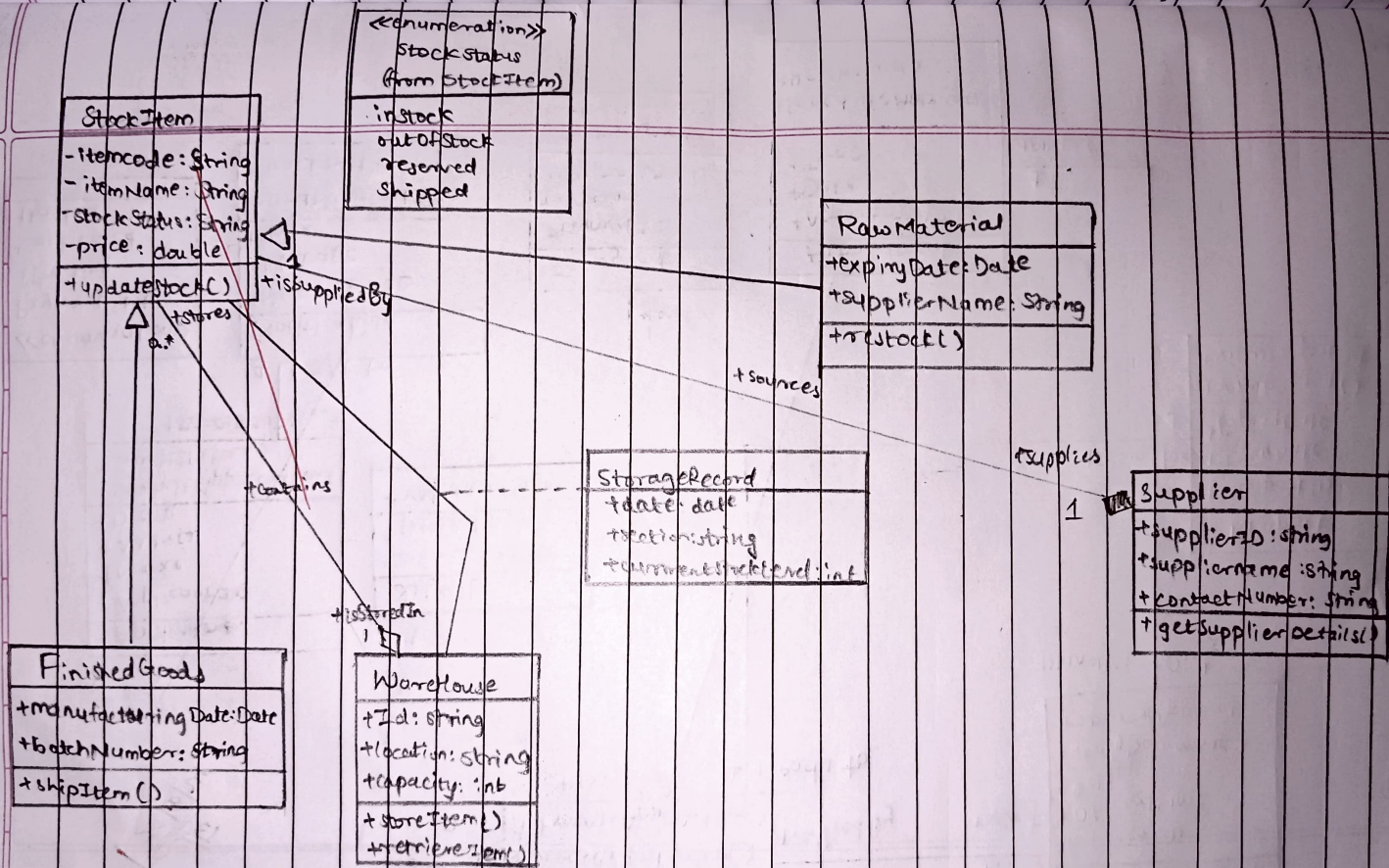
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5) Passport Automation System

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