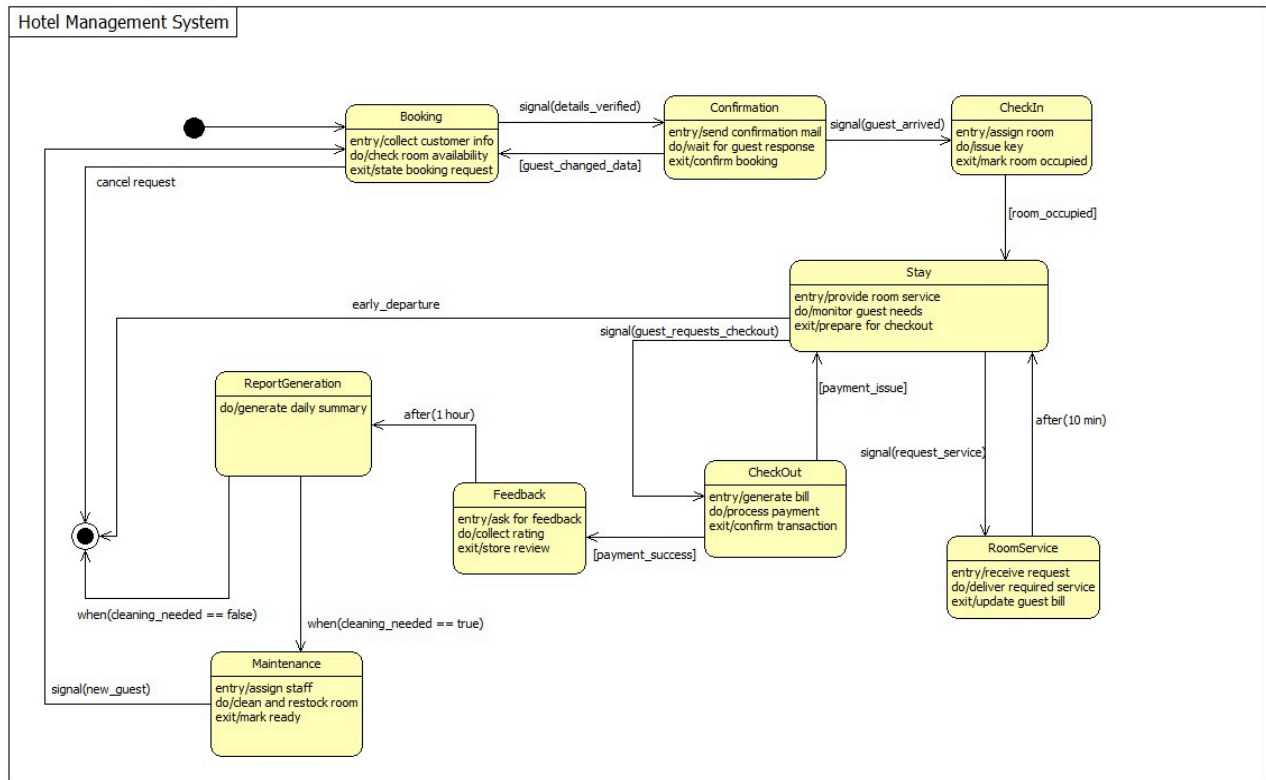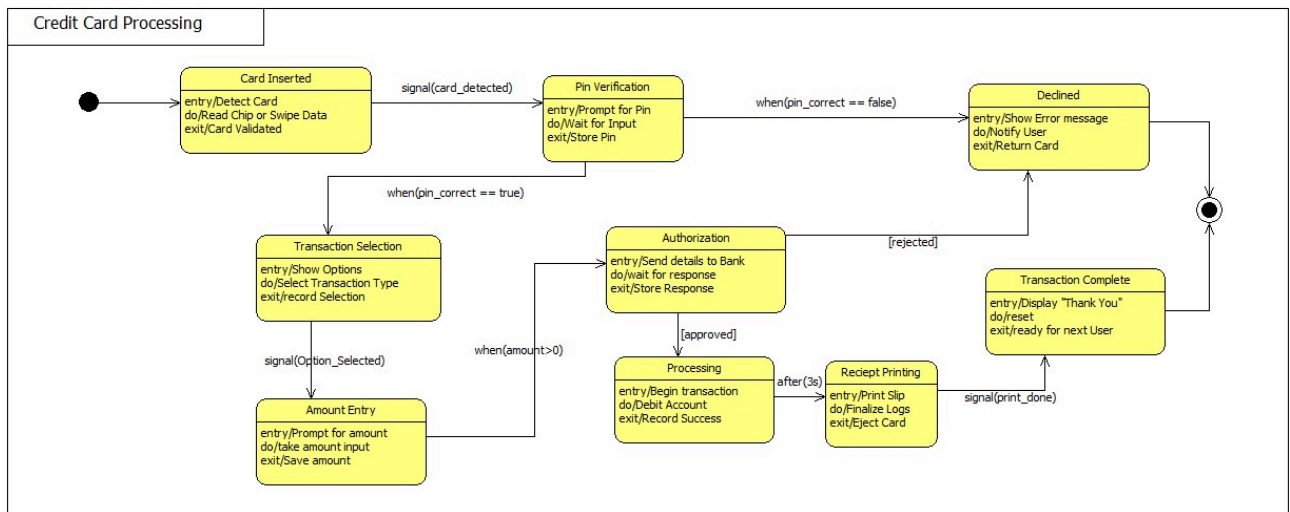# OBJECT ORIENTED MODELLING LAB-03

Simple State Diagrams
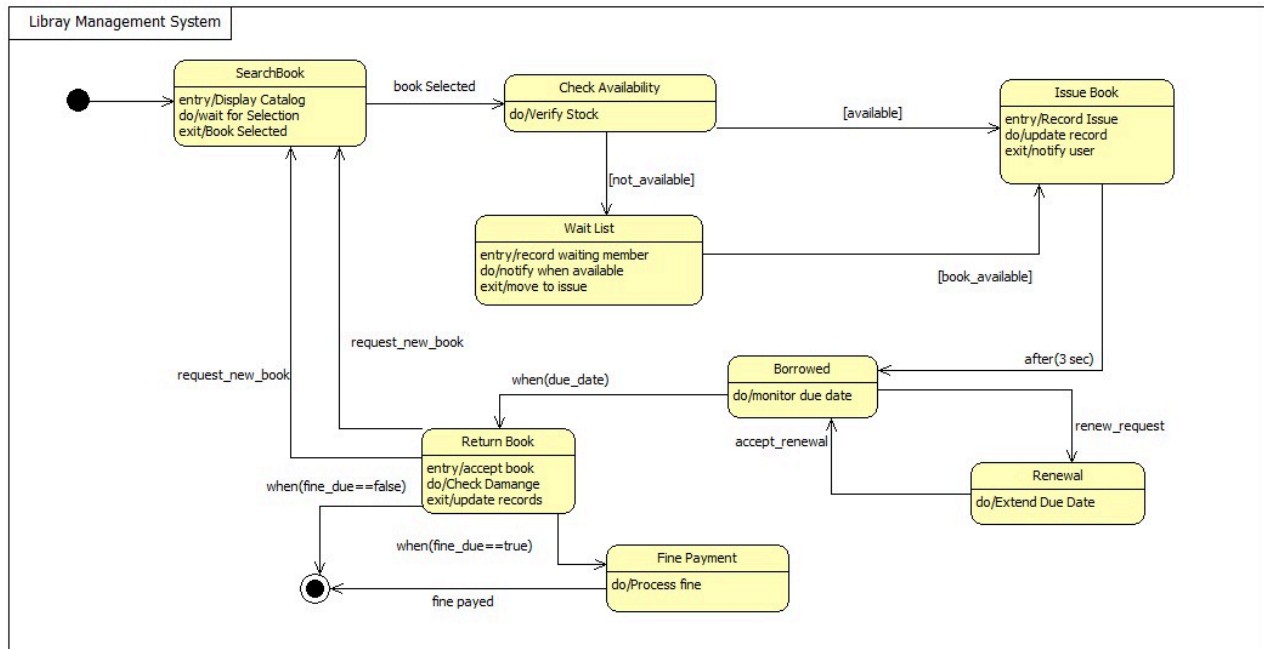
Hotel Management System :

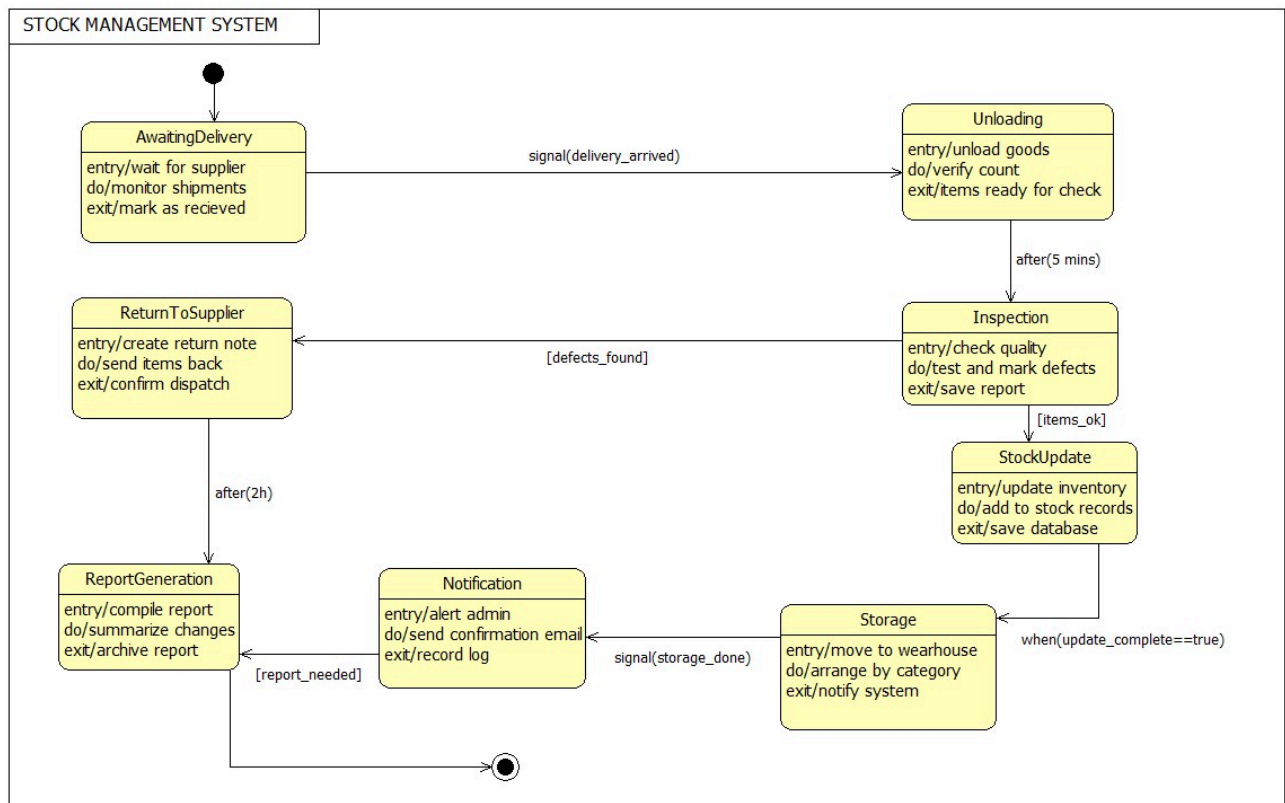## Credit Card Processing System :

Library Management System :
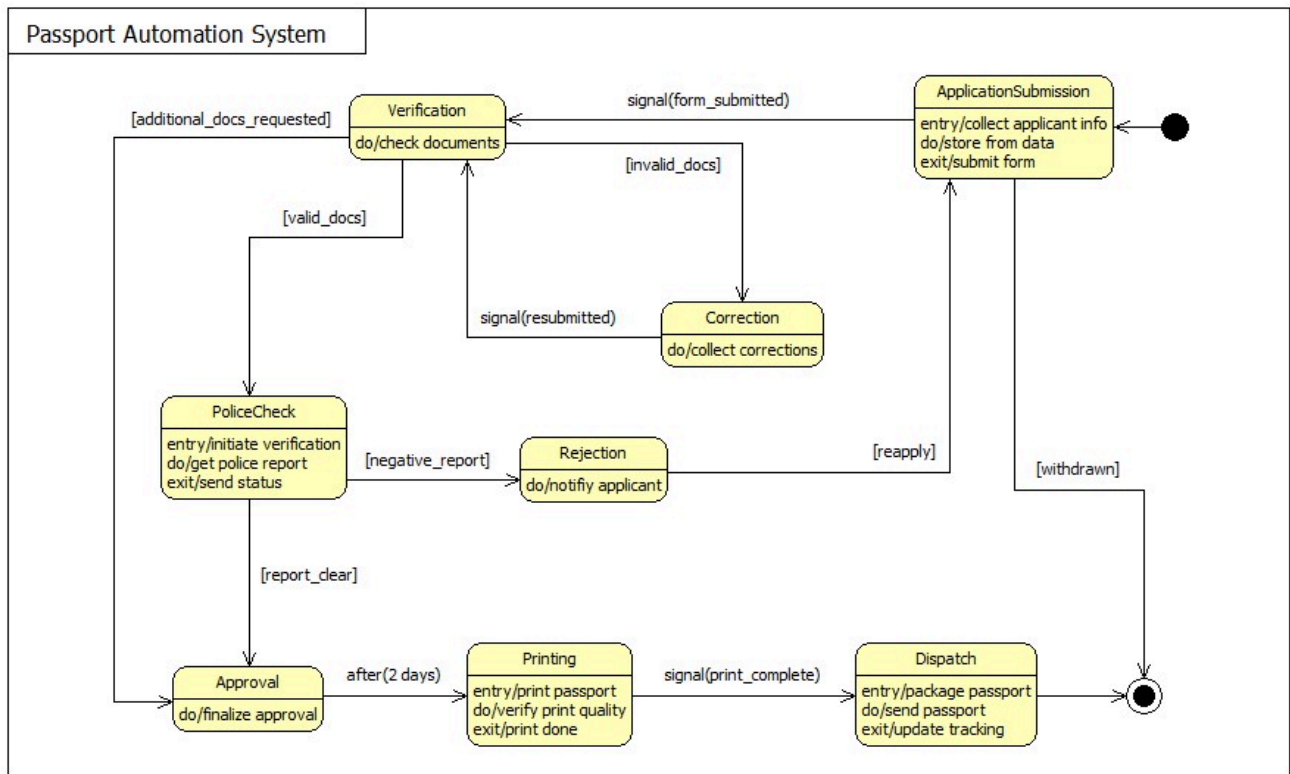

Library Management System

- Initial → SearchBook
- **SearchBook**: entry/Display Catalog, do/wait for Selection, exit/Book Selected
- SearchBook → Check Availability [book Selected]
- **Check Availability**: do/Verify Stock
- Check Availability → Issue Book [available]
- Check Availability → Wait List [not_available]
- **Issue Book**: entry/Record Issue, do/update record, exit/notify user
- **Wait List**: entry/record waiting member, do/notify when available, exit/move to issue
- Wait List → Issue Book [book_available]
- Issue Book → Borrowed [after(3 sec)]
- **Borrowed**: do/monitor due date
- Borrowed → Return Book [when(due_date)]
- Borrowed → Renewal [renew_request]
- **Renewal**: do/Extend Due Date
- Renewal → Borrowed [accept_renewal]
- **Return Book**: entry/accept book, do/Check Damange, exit/update records
- Return Book → SearchBook [request_new_book]
- Return Book → Final [when(fine_due==false)]
- Return Book → Fine Payment [when(fine_due==true)]
- **Fine Payment**: do/Process fine
- Fine Payment → Final [fine payed]

Stock Maintenance System :

STOCK MANAGEMENT SYSTEM

- Initial → AwaitingDelivery
- **AwaitingDelivery**: entry/wait for supplier, do/monitor shipments, exit/mark as recieved
- AwaitingDelivery → Unloading [signal(delivery_arrived)]
- **Unloading**: entry/unload goods, do/verify count, exit/items ready for check
- Unloading → Inspection [after(5 mins)]
- **Inspection**: entry/check quality, do/test and mark defects, exit/save report
- Inspection → ReturnToSupplier [defects_found]
- Inspection → StockUpdate [items_ok]
- **ReturnToSupplier**: entry/create return note, do/send items back, exit/confirm dispatch
- ReturnToSupplier → ReportGeneration [after(2h)]
- **StockUpdate**: entry/update inventory, do/add to stock records, exit/save database
- StockUpdate → Storage [when(update_complete==true)]
- **Storage**: entry/move to wearhouse, do/arrange by category, exit/notify system
- Storage → Notification [signal(storage_done)]
- **Notification**: entry/alert admin, do/send confirmation email, exit/record log
- Notification → ReportGeneration [report_needed]
- **ReportGeneration**: entry/compile report, do/summarize changes, exit/archive report
- ReportGeneration → Final

Passport Automation System :

Name : S Nafees
USN : 1BM23CS279
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