Notes before we start

* Documents inventory entity will be a database
* The print class will be implemented as a singleton pattern
* Staff list is also a database

Brief class descriptions

User

The abstract super class of which the other users extend from

Holds: user ID, user password, user name, login object

Functions: login, logout

Login

A class User uses for logging in

Holds: none

Functions: validate

Manager

A subclass of User for managers

Holds: no more than the superclass

Functions: check inventory

SystemAdmin

A subclass of User for the system admin

Holds: no more than the superclass

Functions: add staff info, remove staff info, update staff info

Author

A subclass of User for authors

Holds: list of contributed documents, a publish object

Functions: submit documents to be published

Operator

A subclass of User for operators

Holds: no more than the superclass

Functions: add document, remove document, update document

OrdinaryBuyer

A subclass of User for non-registered buyers

Holds: a list of transactions

Functions: search documents, order documents, pay documents, register

RegisteredBuyer

A subclass of OrdinaryBuyer for registered buyers

Holds: no more than the superclass

Functions: access promotion list, unsubscribe

TransactionHistory

A class which holds information on a buyer’s past transactions

Holds: list of receipts

Functions: calculate total sum of payments, find total amount of purchases

Receipt

A class which records a purchase details

Holds: price, date, list of items

Functions: none

Staff

A class which represents a staff member’s info

Holds info: name, staff ID, and position

Functions: none

Document

A class which represents a document’s info

Holds: name, author, document ID, publication date, document type

Functions: none

UserDatabaseController

A class which controls the reads from a user database

Holds: database name, database connection

Functions: read from database

StaffInfoDatabaseController

A class which controls the reads and writes to a staff info database

Holds: database name, database connection

Functions: add to database, remove from database, update database

DocumentDatabaseController

A class which controls the reads and writes to a document database

Holds: database name, database connection

Functions: add to database, remove from database, update database, get list of documents