

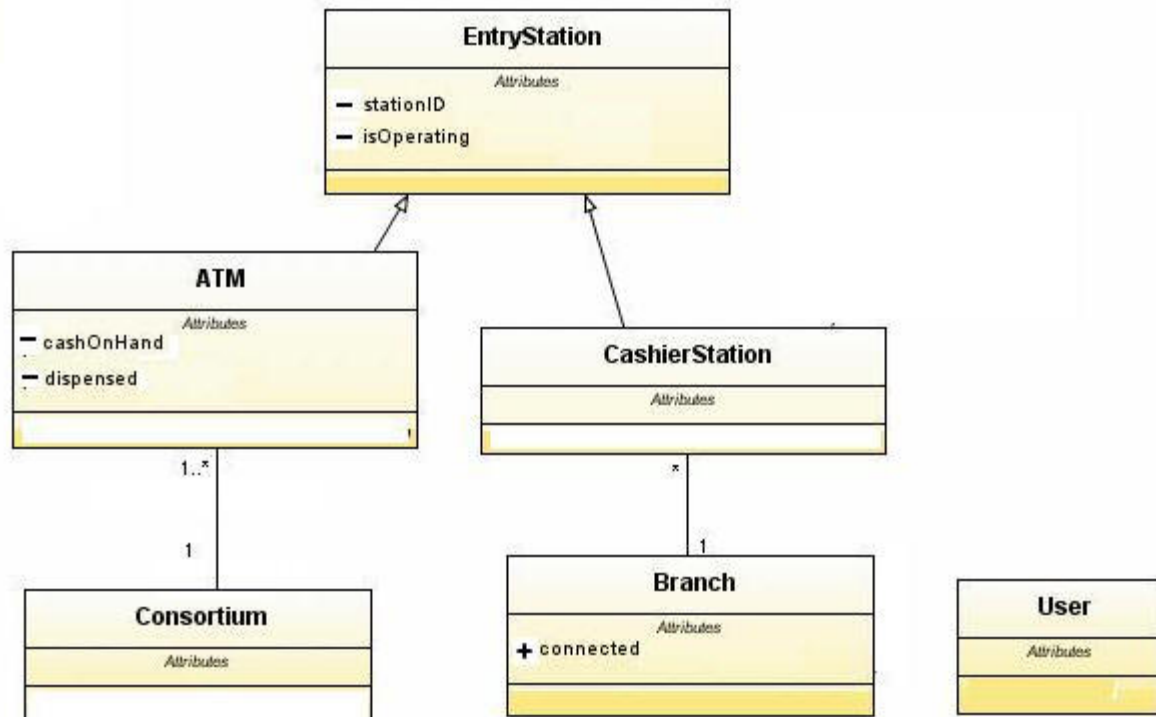
# H1: Mapping to Tables

## clarifications in red

Homeworks, unlike programming assignments, are to be submitted by individuals.

## Part 1

Consider the following class diagram:



**What is the (MDELite) database schema of this class diagram?**

**Hint:** Remember implicit role rule. If a role is absent, then its name becomes the name of the class to which it connects (e.g., CashierStation# or CashierStationId).

## Part 2

Consider the following class diagram:



1. What relational tables underlie this diagram?
2. **Is it possible for an A instance to be paired with a B instance and for that B instance to be paired with another A instance or no A instance at all?**

## Submission

Submit a PDF file that contains your answers and any necessary explanations for parts 1 and 2. Non-PDF submissions will be returned.

# Part 1

EntryStation

EntryStation#	stationId	isOperating

ATM

EntryStation#	stationId	isOperating	cashOnHand	dispensed	Consortium#

CashierStation

EntryStation#	stationId	isOperating	Branch#

Consortium

Consortium#

Branch

Branch#	connected

User

User#

**Note:** name Class#  
is equivalent to ClassId

# Part 2.1

- 2 possible answers:

A

A#	f	B#

or

A

A#	f

B

B#	h

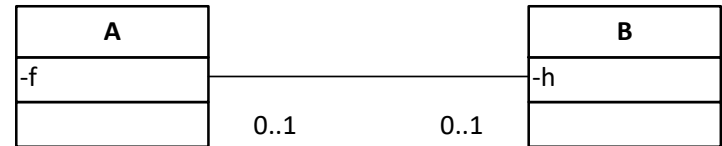
B

B#	h	A#

- Only represent ONE end of a connection, ever. Otherwise you are storing data redundantly.

# Part2.2

- Each ABPair connects optionally one A to optionally one B
- Each A participates in at most 1 ABPair; each B participates in at most 1 ABPair
- This means that if an A participates in an ABPair, it is paired to exactly one B and vice versa.
- It is not possible for an A to be paired with a B, and that B is paired with another A



equals

