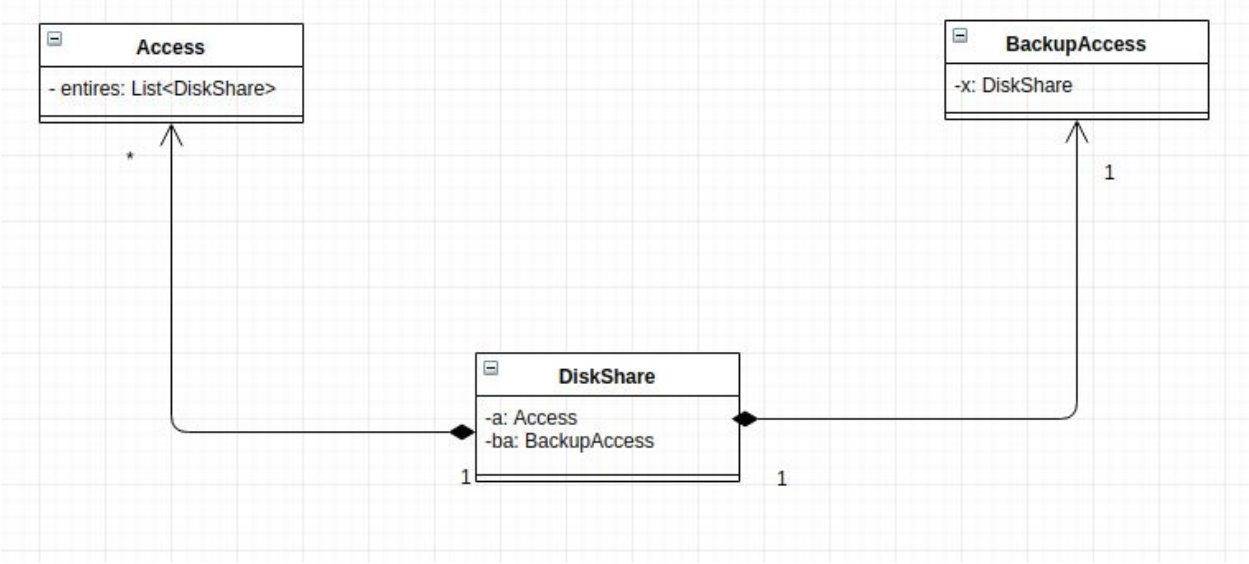
ESOF 322 HW 1 Hunter Line, Logan Gilder

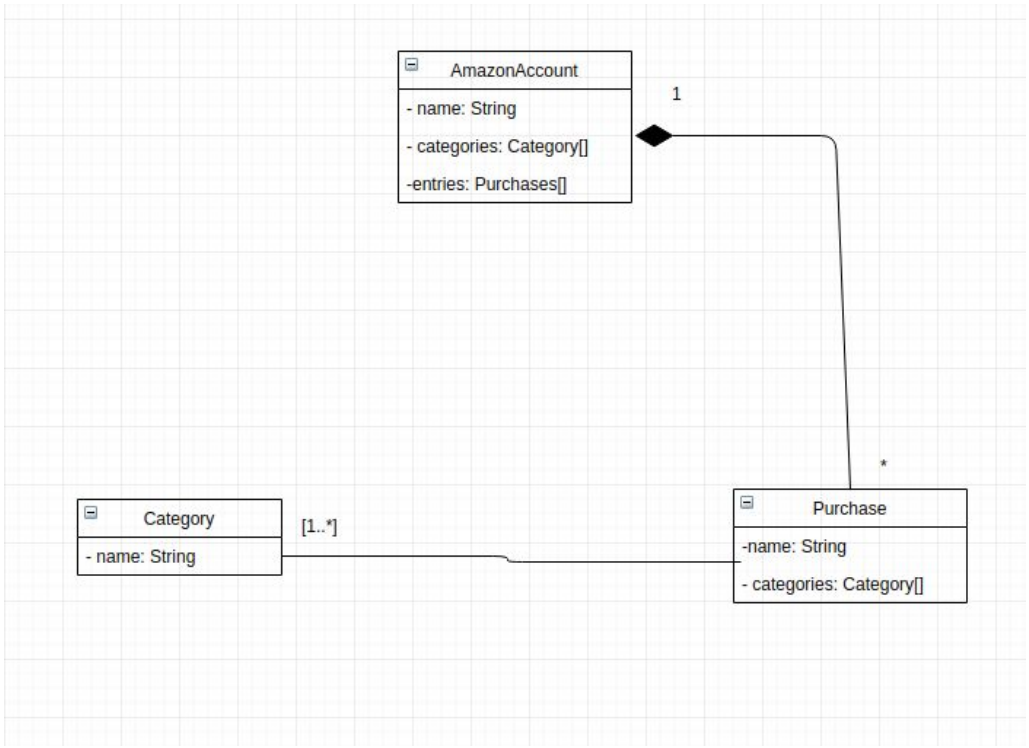
Part A)

1)

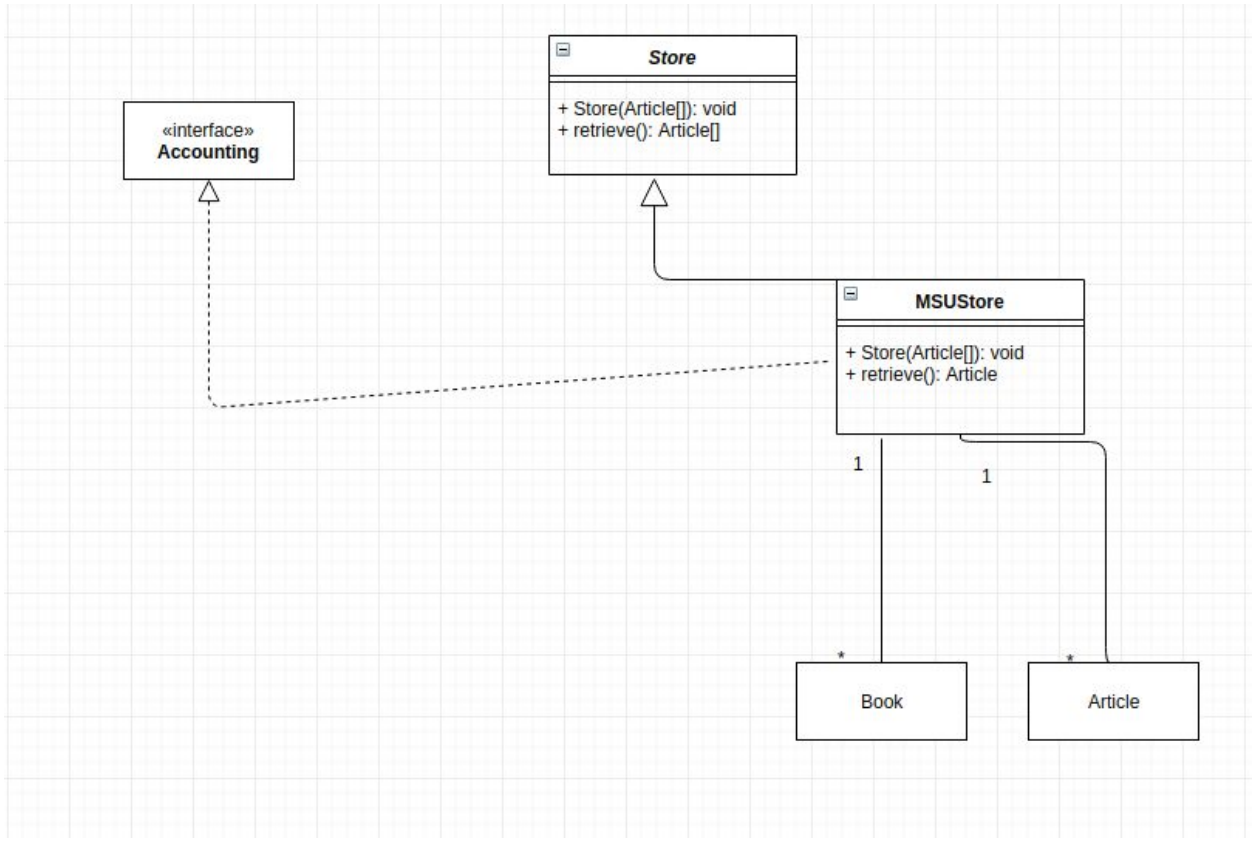
2)



3)


AmazonAccount
- name: String
- categories: Category[]
-entries: Purchases[]
1
*
Category
- name: String
[1..*]
Purchase
-name: String
- categories: Category[]

4)


«interface»
Accounting
Store
+ Store(Article[]): void
+ retrieve(): Article[]
MSUStore
+ Store(Article[]): void
+ retrieve(): Article
1
1
*
*
Book
Article

Part B) Pseudo Code

```
Public Interface Rentable {
        Public Void rent()
// Every class and subclass under this interface gets the rent() method
}

Public Abstract Class Vehicle implements Rentable {
}

Public Class Truck extends Vehicle {
        Public UnlimitedNatural weight;
        Public UnlimitedNatural power;
        Public String manufacturer;
        Public String regNo;
}

Public Class Car extends Vehicle {
        Public Carkind kind;
        Public UnlimitedNatural noSeats;
        Public UnlimitedNatural power;
        Public String manufacturer;
        Public String regNo;
}

Public Class Motorbike extends Vehicle {
        Public Mbkind kind;
        Public UnlimitedNatural cylinderCap
        Public UnlimitedNatural power;
        Public String manufacturer;
        Public String regNo;
}

Public Class Company{
        Public Truck truck;
        Public Car car;
        Public Motorbike Motorbike;
        Public Service service = new Service();
        Public Customer customer;
        Public Employee employee
        Public String name;
        Public Address address;
}
```

```
Public Abstract Class Service {
        Public Customer customer;
// Every class and subclass under this abstract class gets customer
}

Public Class VehicalRentalService extends Service {
        Public Vehicle vehicle;
        Public void offerCar() {...}
        Public void offerMotorbike(){...}
        Public void offerTruck(){...}
}

Public Abstract Class Person {
        Public String name;
        Public String email;
        Public Address address;
// Every class and subclass under this abstract class gets name and email
}

Public Class Address {
        Public String street;
        Public String postalCode;
        Public String city;
}

Public Class Employee extends Person { }

Public Class Customer extends Person {
        Public BankAccount bankAccount = new BankAccount();
}

Public Class BankAccount  {
        Public UnlimitedNatural number;
        Public String depositor;
        Public String bank;
}

Public Class Subcontractor extends Employee, Customer {
// One thing to note is that not every OOP language has classes that can inherit from MULTIPLE
classes
}
```