ESOF 322: HW #1

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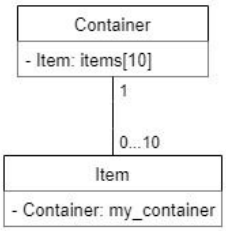

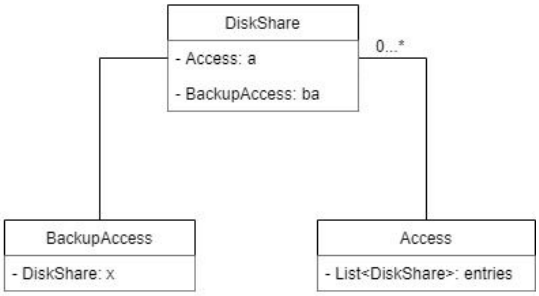

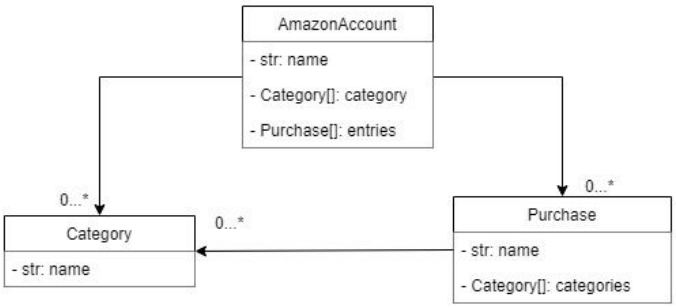

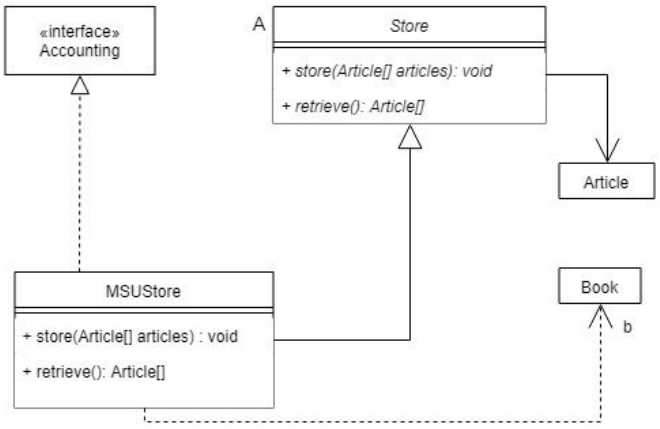

PART B

```
public class Company {
	public String name;
	public Address headquarters;
	public List<Truck> trucks;
	public List<Car> cars;
	public List<Motorbike> motorbikes;
	public List<Customer> customers;
	public List<Employee> employees;
	public VehicleRentalService service = new VehicleRentalService;
}

public class Address {
	public String street;
	public String postalCode;
	public String city;
	public List<Person> residents;
}

public class Truck extends Vehicle {
	public UnlimitedNatural weight;
}

public class Car extends Vehicle {
	public CarKind kind;
	public UnlimitedNatural noSeats;
}

public class Motorbike extends Vehicle {
	public MbKind kind;
	public UnlimitedNatural cylinderCap;
}

public abstract class Vehicle implements Rentable{
	public UnlimitedNatural power;
	public String manufacturer;
	public String regNo;

	public void rent(){  }
}

public interface Rentable {
	public void rent();
}
```

```
public class VehicleRentalService extends Service {
	public Vehicle vehicle;
	public void offerCar() {  }
	public void offerMotorbike() {  }
	public void offerTruck() {  }
}

public abstract class Service {
	public Customer customer;
}

public abstract class Person {
	public String name;
	public String email;
	public Address address;
}

public class Employee extends Person{
}

public class Customer extends Person{
	public BankAccount bankAccount = new BankAccount;
}

/* The UML diagram indicates multiple inheritance, not
supported by Java classes. Therefore Java alone would not be able to implement this design as written.
If the designer were adamant about Java and open to a modification, we could create two classes,
EmployeeSubcontractor and CustomerSubcontractor, but this would violate the current design as
written. We opted for the latter in this exercise.*/

public class EmployeeSubcontractor extends Employee {
}

public class CustomerSubcontractor extends Customer {
}

public class BankAccount {
	public UnlimitedNatural number;
	public String depositor;
	public String bank;
}
```