Entity

User

UI

Service classes

DAO classes

UI

Service classes

DAO classes

Product
Entity

Product

packages

com
  adobe
    <<prjname>> like aem
      entity
        Customer.class
        Driver.class
        Car.class
        Payment.class
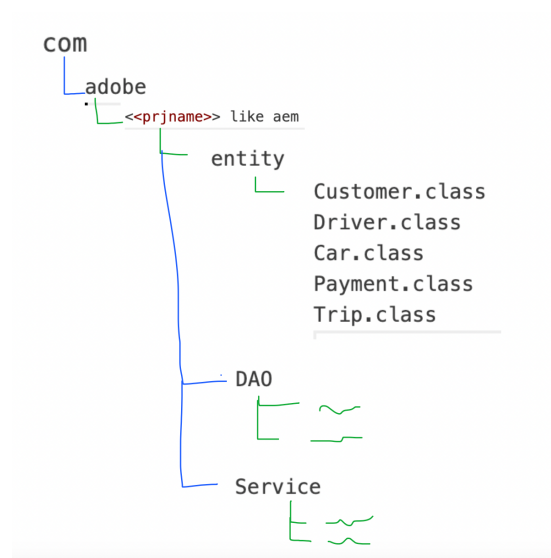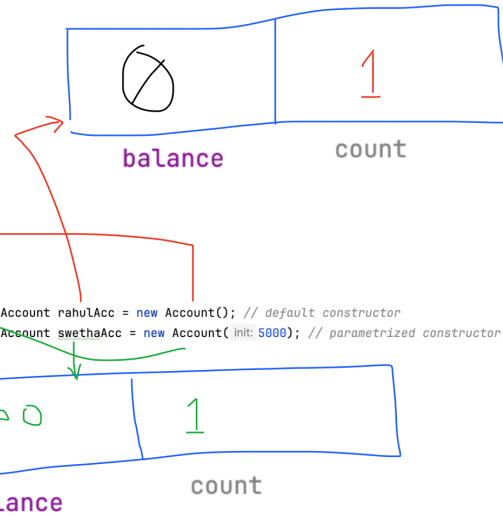   Trip.class
      DAO
      Service

```java
public class Account {
    private double balance; //state, instance
    private int count;
    // default constructor
    public  Account() {
        this.balance = 0.0;
        this.count++;
    }
    // parametrized constructor
    public  Account(double init) {
        this.balance = init;
        this.count++;
    }
}
```

balance   **count**

1

balance   **count**

5000   1

```
Account rahulAcc = new Account(); // default constructor
Account swethaAcc = new Account( init: 5000); // parametrized constructor
```
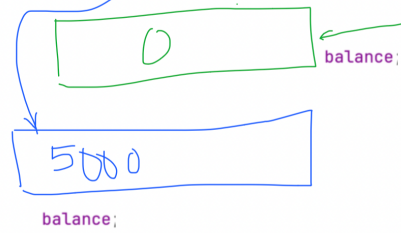
```java
public class Account {
    private double balance; //state, instance variable;
    private static int count; // state of class
    // default constructor
    public  Account() {
        this.balance = 0.0;
        count++;
    }
    // parametrized constructor
    public  Account(double init) {
        this.balance = init;
        count++;
    }
}
```

```
Account rahulAcc = new Account(); // default constructor
Account swethaAcc = new Account( init: 5000); // parametrized constructor
```

0   balance;

5000

balance;

Metaspace

count

1 2

Account

```
class Mobile {
    id
    name
    price
    camera
    connectivity
}

        getId()
        setId()
        setPrice()
        getPrice()
        getName()
        setName()
```

Finding duplicated code with CPD

```
class Tv {
    id
    name
    price
    screenType
    screenSize
    isSmart
}

        getId()
        setId()
        setPrice()
        getPrice()
        getName()
        setName()
```

```
class Object
```

IS A

```
class Product {
    id
    name
    price
}
```

Generalization

IS A

IS A

```
class Mobile {
    camera
    connectivity
}
```

```
class Tv {
    screenType
    screenSize
    isSmart
}
```

Specialization

TV

What's the cost of this Product?

Mobile

Is this product for Sale?

Is this object non breakable?