

Assignment - 4

Date _____

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⇒ problem Definition :

write a program to create waterbill, electricitybill of different village panchayat using abstract factory.

⇒ class

RajkotWaterBill

RajkotElectricityBill

AhmedabadWaterBill

AhmedabadElectricityBill

WaterBill

ElectricityBill

RajkotBillFactory

AhmedabadFactory

AbstractBillingFactory

AbstractFactory

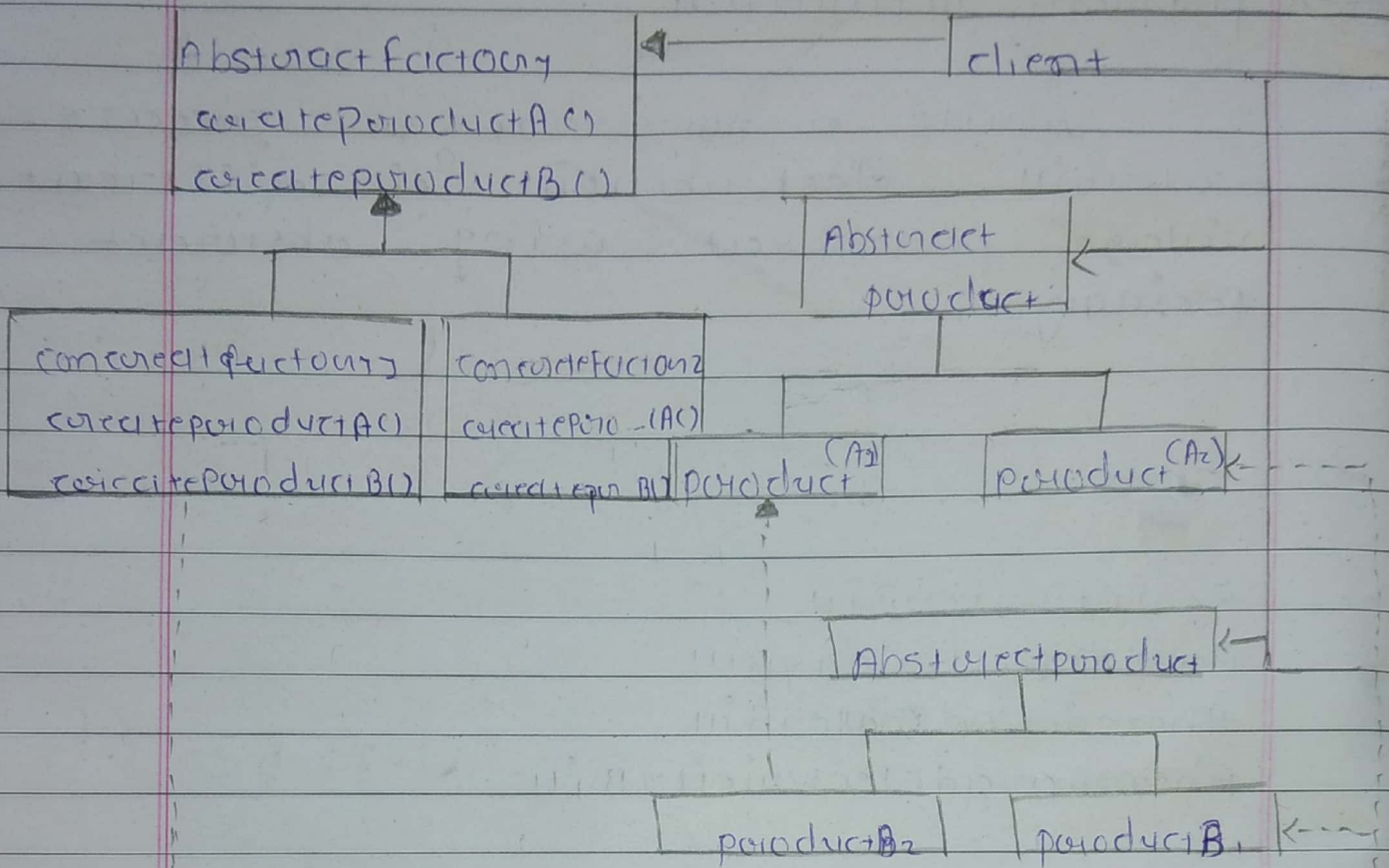
⇒ Abstract Methods

public double getBillAmount();

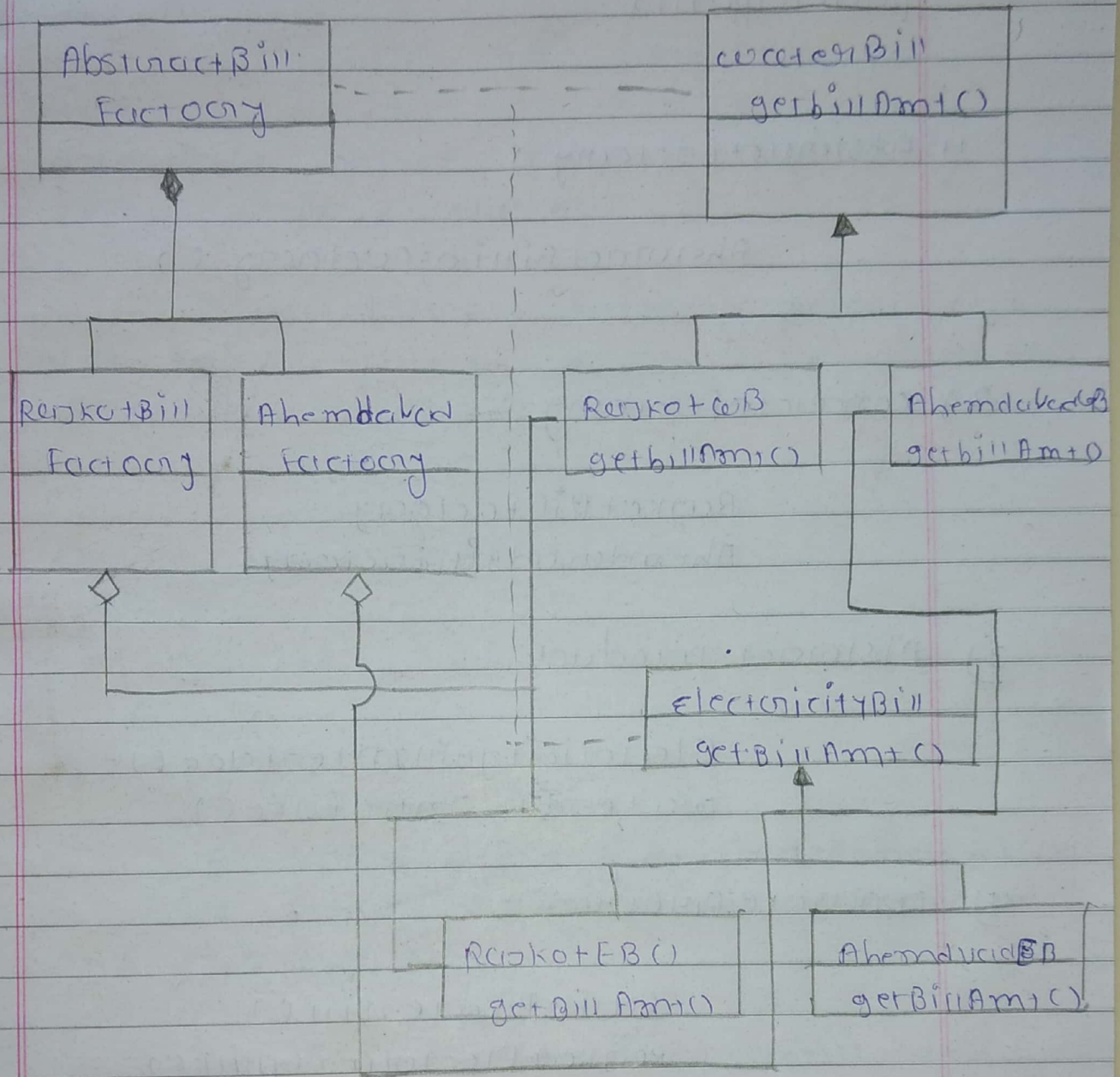
public void setBillAmount(double unit);

public String termConn();

⇒ structure diagram :



→ class diagram



=> participants :

1) Abstract Factory :

Abstract Billing Factory ()

2) concrete factory :

Rajkot Bill Factory

Ahmedabad Bill Factory

3) Abstract product :

Electricity Bill Interface ()

Water Bill Interface ()

4) concrete product :

Rajkot Water Bill ()

Rajkot Electricity Bill ()

Ahmedabad Water Bill ()

Ahmedabad Electricity Bill ()

5) client :-

main Bill ()

=> Intent :

provide an interface for creating families of related or dependent object without specifying their concrete classes.

The abstract factory provides a way to encapsulate a group of individual factories.

=> known as :

- kit

=> Applicability :

A system should be independent of how its products are created, composed, and represented.

A system should be configured with one of multiple families of products

=> Advantages of abstract factory

- It eases the exchanging of object families

- Abstract factory pattern isolates the client code from concrete class
- It promotes consistency among object

⇒ disadvantages of abstract factory

Extending abstract factories to produce new kinds of products isn't easy.