Exercise 1

* Low Level Design
* Software Development Practices
* Hands-on Programming

There is 3 type User exist :

1. Employee
2. Affiliate
3. Customer

**public** **interface** UserType {

**double** getUserType(**double** amount,String productName);

}

**public** **class** Product {

String ProductName;

**public** String getProductName() {

**return** ProductName;

}

**public** **void** setProductName(String productName) {

ProductName = productName;

}

}

**public** **class** Customer **implements** UserType{

**private** String name ;

**private** Integer id;

**private** String resisterDate;

**private** Product product;

@Override

**public** **double** getUserType(**double** amount,String productName) {

**double** pay=amount;

**if**(!productName.equals("groceries")) {

**double** discout =amount%5;

pay=amount-discout;

**return** pay;

}

**return** pay;

}

**public** **class** Affiliate **implements** UserType {

**private** String name ;

**private** Integer id;

**private** String resisterDate;

**private** Product product;

@Override

**public** **double** getUserType(**double** amount,String productName) {

**double** pay=amount;

**if**(!productName.equals("groceries")){

**double** discout =amount%10;

pay=amount-discout;

**return** pay;

}

**return** pay;

}

**public** **class** Employee **implements** UserType{

**private** String name ;

**private** Integer id;

**private** String resisterDate;

@Override

**public** **double** getUserType(**double** amount,String productName) {

**double** pay=amount;

**if**(!productName.equals("groceries")) {

**double** discout =amount%10;

pay=amount-discout;

}

**return** pay;

}

**public** **class** DiscountProduct {

**static** Affiliate *aff*;

**public** **static** **double** createUser(String UserName, **double** amount, String productName) **throws** ParseException {

*aff* = **new** Affiliate();

*aff*.setName("sushil");

String strdate1 = "02-04-2019 11:35:42";

*aff*.setResisterDate(strdate1);

Product pro = **new** Product();

pro.setProductName("Electronics");

*aff*.setProduct(pro);

Customer cus = **new** Customer();

cus.setName("Rohit");

String strdate2 = "02-04-2019 11:35:42";

cus.setResisterDate(strdate2);

Employee emp = **new** Employee();

emp.setName("Mohit");

String strdate3 = "02-04-2019 11:35:42";

emp.setResisterDate(strdate2);

**double** paymentAfterDiscount = 0;

**if** (UserName.equals(*aff*.getName())) {

paymentAfterDiscount = *aff*.getUserType(amount, productName);

} **else** **if** (UserName.equals(cus.getName())) {

paymentAfterDiscount = cus.getUserType(amount, productName);

} **else** **if** (UserName.equals(emp.getName())) {

Date today = **new** Date();

SimpleDateFormat sdf = **new** SimpleDateFormat("dd-MM-yyyy HH:mm:ss");

Date d1 = sdf.parse(today.toString());

Date d2 = sdf.parse(emp.getResisterDate());

**long** difference\_In\_Time = d2.getTime() - d1.getTime();

**long** difference\_In\_Years = (difference\_In\_Time / (1000l \* 60 \* 60 \* 24 \* 365));

**if** (difference\_In\_Years > 2) {

paymentAfterDiscount = cus.getUserType(amount, productName);

}

} **else** {

**double** quotient = amount / 100;

paymentAfterDiscount = paymentAfterDiscount - (quotient \* 5);

}

**return** paymentAfterDiscount;

}

}