Design classes for a discount system which can be used in places that provides services and sells any products. The system should offer 3 types of memberships: Premium, Gold and Silver. Premium, gold and silver members receive a discount of 20%, 15%, and 10%, respectively, for all services provided. Customers without membership receive no discount. All members receives a flat 10% discount on products purchased (this might change in future).

Class customer {

Private:

Id;

Name;

Membership;

Date of birth;

Address;

Mobile number;

Email id;

Public:

Show\_all();

Search\_name();

Search\_email();

Search\_membership();

Search\_phone\_number();

}

Class product {

Private:

Id;

Name;

Model number;

Type;

Date of manufacturing;

Price;

Public:

Show\_all();

Search\_name();

Search\_model\_number();

}

Class service {

Private:

Id;

Product id;

Service type;

Date;

Duration;

Price;

Public:

Show\_all();

Search\_name();

Search\_service\_type();

}

Class discount {

Private:

Product premium;

Product gold;

Product silver;

Service premium;

Service gold;

Service silver;

}

Class product bill {

Private:

Id;

Product id;

Customer id;

Date of purchase;

Quantity;

Price;

Discount id;

Discount price;

Total amount;

Public:

Calculate\_discount();

Calculate\_bill();

}

Class service bill {

Private:

Id;

Product id;

Customer id;

Service id;

Date of service;

Delivery date;

Quantity;

Price;

Discount id;

Discount price;

Total amount;

Public:

Calculate\_discount();

Calculate\_bill();

}