DBMS Project
Group 1.13 Supermarket Database

Minimal FD set:

Fmin={

Itemcode -> {MRP,sellout_period,stock,sectionID}

{productname,quantity,units,flavour} -> itemcode

{productname,size, age_group, colour, gender} -> itemcode

{productname,units,quantity,fragrance/aroma,gender} -> itemcode

productname -> {bestbefore,type,return_policy,brandname,gst}

licenseno -> {supplier_name, address_pin, address_city, address_street, contactno}

{licenseno,itemcode,date} -> {qty,cost_price}

invno -> {bill_date, bill_time, bill_amount, payment_mode, cashier_ssn, customer_id}

{invno,itemcode} -> {qty(purchased), discount_applied, purchaseprice}

sectionID -> section_name

{complaincode} -> {invno,itemcode,complainer_name, contactno, status(complaint),
description, serviced_by, action_taken }

memberid -> {contactno,email,name(member)}

ssn -> {name(employee), contactno, address_pin, address_city,
addres_street, gender, dob, salary, dno}

contactno(employee) ->{ssn}

{ssn, shift_name} -> {is_present, date}

shift_name -> {in_time, out_time}

dno -> {dname, mgrssn},

mgrssn -> {dno}

{discountcode,itemcode} -> {qty,percentage(discount)},

discountcode -> {description, valid_till,valid_from}

}

Table employee:

Fprojected = {
ssn -> {name(employee), contactno, address_pin, address_city, addres_street, gender, dob, salary, dno}
contactno(employee) ->{ssn}

}

key= ssn (or) contactno

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table department:

Fprojected = {
dno -> {dname, mgrssn},
mgrssn -> {dno},
}
key= dno (or) mgrssn
dno is chosen

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table shift_assigns:

Fprojected = {}
key= {ssn,shift_name}

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table Attendance:

Fprojected = {ssn, shift_name} -> {is_present, date}

key= {ssn,shift_name}

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table Shift:

Fprojected = shift_name -> {in_time, out_time}

key= shift_name

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table members:
Fprojected = memberid -> {contactno,email,name(member)}

Key=memberid

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table Bill:
Fprojected = invno -> {bill_date, bill_time, bill_amount, payment_mode, cashier_ssn, customer_id}

Key=invno

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table bill_details:

Fprojected = {invno,itemcode} -> {qty(purchased), discount_applied, purchaseprice}

Key= {invno, itemcode}

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table items:

Fprojected = Itemcode -> {MRP,sellout_period,stock,sectionID}

Key= itemcode

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table storage_area:

Fprojected = sectionID -> section_name

Key= sectionID

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table supplier:
Fprojected = licenseno ->{supplier_name, address_pin,address_city, address_street, contactno}

Key=licenseno

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table supply_record:

Fprojected = {licenseno,itemcode,date} -> {qty,cost_price}

Key= {licenseno,itemcode,date}

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table packed_food description:

Fprojected = {
{productname, units, quantity, flavour} -> itemcode},
}
Key= productname, units, quantity, flavour

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table clothes description:

Fprojected = {
{productname,size, age_group, colour, gender}->itemcode},
}
Key= productname, size, age_group, colour, gender

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table personalcare description:

Fprojected = {
{productname, units, quantity,fragrance/aroma,gender} -> itemcode,
}
Key= productname, units, quantity, fragrance/aroma,gender

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table personalcare:

Fprojected = {
productname -> bestbefore
}
Key= productname

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table packedfood:

Fprojected = {
Productname -> bestbefore
}
Key= productname

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table clothes:

Fprojected = {
Productname -> type
}
Key= productname

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table Product:

Fprojected = {
productname -> {return_policy, brandname, gst}
productname ->{brandname}

}
Key= productname

X from every X -> Y in Fprojected is super-key.Therefore BCNF

Table discount_products:
Fprojected = {discountcode,itemcode} -> {qty,percentage(discount)},
Key= discountcode,itemcode

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table Discount:
Fprojected = code -> {description, valid_till,valid_from}
Key= code

X from every X -> Y in Fprojected is super-key.
Therefore BCNF

Table complain:
Fprojected = {
{invno,itemcode,comlplain_date} -> {complainer_name, contactno,
status(complaint),description, serviced_by, actions_taken
}
Key= invno,itemcode,comlplain_date

X from every X -> Y in Fprojected is super-key.
Therefore BCNF