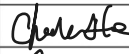
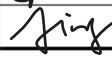
CZ2007

Lab Group : DSS2 **Team: 1**

INDIVIDUAL CONTRIBUTION FORM

Name	Individual Contribution to Submission 2 (Lab 3)	Percentage of Contribution	Signature
Kelly Wong Jie Yin	Generation of normalized database schema	14.3%	
Lin Jacky	Generation of normalized database schema	14.3%	
Uday Nihal Arya	Generation of normalized database schema	14.3%	
Samarth Agarwal	Generation of normalized database schema	14.3%	
Clement Liew	Generation of normalized database schema	14.3%	
Cao Qingtian	Generation of normalized database schema	14.3%	
Huang Jingfang	Generation of normalized database schema	14.3%	

CZ2007 Lab 3 Deliverables

Lab Group: DSS2 Team: 1

Content

1. COMPLAINTS-ON-SHOPS

Schema	**COMPLAINTS-ON-SHOPS (<u>CID</u>, SName)**
Keys	{CID}
Primary Key	{CID}
Functional Dependencies (FDs)	1. FDs: CID → SName
The relation is in BCNF.	

2. SHOPS

Schema	**SHOPS (<u>SName</u>)**
Keys	{SName}
Primary Key	{SName}
Functional Dependencies (FDs)	1. FD: SName → SName (Trivial)
The relation is in BCNF.	

3. PRODUCTS-IN-SHOPS

Schema	**PRODUCTS-IN-SHOPS (<u>PName</u>, <u>SPID</u>, SPrice, SQuatity, SName)**
Keys	{PName, SName}, {SPID}
Primary Key	{SPID}
Functional Dependencies (FDs)	1. PName, SName → SPID 2. SPID → PName, SName, SPrice, SQuantity
The relation is in 3NF. **Assumption:** SPID is unique for different combinations of product name(Pname) and shop name(Sname).	

4. PRICE-HISTORY

Schema	**PRICE-HISTORY (<u>SPID</u>, <u>Start-date</u>, <u>End-date</u>, Price)**

Keys	{SPID, Start-date, End-date}
Primary Key	{SPID, Start-date, End-date}
Functional Dependencies (FDs)	1. SPID, Start-Date, End-Date → Price
The relation is in BCNF.	

5. USERS

Schema	**USERS (<u>UID</u>, UName)**
Keys	{UID}
Primary Key	{UID}
Functional Dependencies (FDs)	1. UID → Uname
The relation is in BCNF.	

6. COMPLAINTS

Schema	**COMPLAINTS (<u>CID</u>, Text, Filed-date-time, Status, UID, EmployeeID)**
Keys	{CID}, {UID, Filed-date-time}
Primary Key	{CID}
Functional Dependencies (FDs)	1. CID → Text, Filed-date-time, Status, UID, EmployeeID 2. UID, Filed-date-time → CID, Text, Status, EmployeeID
This relation in BCNF. **Assumption:** We assume that one user can only file one complaint at any point of time. (i.e. Filed-date-time is to the precision of seconds and higher)	

7. EMPLOYEES

Schema	**EMPLOYEES (<u>EmployeeID</u>, Name, Salary**)
Keys	{EmployeeID}

Primary Key	{EmployeeID}
Functional Dependencies (FDs)	1. EmployeeID → Name, Salary
This relation is in BCNF.	

8. HANDLED

Schema	**HANDLED (<u>Employee ID</u>, <u>UID</u>, handled-date-time)**
Keys	{EmployeeID, UID}
Primary Key	{EmployeeID, UID}
Functional Dependencies (FDs)	1. EmployeeID, UID → handled-date-time
This relation is in BCNF.	

9. PRODUCTS

Schema	**PRODUCTS (<u>PName</u>, <u>Maker</u>, Category)**
Keys	{PName, Maker}
Primary Key	{PName, Maker}
Functional Dependencies (FDs)	1. PName, Maker → Category
The relation is in BCNF. **Assumption:** Product name (PName) can be the same for products that are under different categories, i.e. Apple can mean an electronic or it can mean a type of fruit.	

10. ORDERS

Schema	**ORDERS (<u>OID</u>, Date-time, Shipping-address, UID)**

Keys	{OID}, {Date-time, UID}
Primary Key	{OID}
Functional Dependencies (FDs)	1. OID → Date-time, Shipping-address, UID 2. Date-time, UID → OID
The relation is in 3NF.	

11. COMPLAINTS-ON-ORDERS

Schema	**COMPLAINTS-ON-ORDERS (<u>CID</u>, OID)**
Keys	{CID}
Primary Key	{CID}
Functional Dependencies (FDs)	1. CID → OID
The relation is in BCNF.	

12. PRODUCTS-IN-ORDERS

Schema	**PRODUCTS-IN-ORDERS (PName, OPID, OID, SPID, OPrice, OQuantity, Delivery-date, Status)**
Keys	{OPID}, {SPID, OID}
Primary Key	{OPID}
Functional Dependencies (FDs)	1. OPID → OPrice, OQuantity, Delivery-date, Status, PName, OID, SPID 2.SPID, OID → OPID
The relation is in 3NF. **Assumption:** 1. A unique SPID(Shop-Product ID) is obtained from SName and PName (both are unique). Two different products from the same shop will produce a different SPID. 2. The SPID, together with each unique OID(OrderID), will be used to generate an OPID(Order-Product ID). Therefore, when a user buys the same item (from the same shop), but in separate orders, a different OPID will be generated. 3. Each product in order may have a different delivery date and status.	

13. FEEDBACK

Schema	**FEEDBACK (UID, OPID, Rating, Comment, Date-time)**
Keys	{OPID}
Primary Key	{OPID}
Functional Dependencies (FDs)	1. UID, OPID → Rating, Comment, Date-time 2. OPID → UID
The relation is in 3NF.	

APPENDIX

ER Diagram from Lab1