FA13-CSCI2055-01: DATABASE-SYSTEMS THEORY

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Database Design: An on-line comic book store

**Introduction:**

This database is for the on-line comic book store to service the purchase and manage the business. We know there are countless comic books around the world; consumers need to spend too many times to find the books which they want to buy. They often cannot get the effective return services. Many book stores cannot get the feedback on time and they suffer with the poor efficiency. So, this database can solve the problems.

**Goals of the database:**

Enable fast shopping guide

Customer can search the comic books by using the search engine in a few second. They pay the money for the products. Credit cards are enabling.

Enable fast receive

The integration of shipment capabilities will help to reduce the delivery period. Customers will receive their products in 24 hours.

Enable high effective return services.

The customer service will receive the feedback which is written by customers on time. They will contact the customers after the orders are received. Assiduous after-sales service is one reason why the database is important.

Enable high-quality management.

When there are less than 20 books left, the system will remind automatically. The manager can contact the authors. So, new comic books will be advertised on time from the database.

**Entities**

Consumers: they will register their accounts with name, gender, address, Credit Cards number, and password. Then, they can search the books which they want to buy from the database.

Product: the comic books are registered by the name, author, country, and rating and publication date. Consumers can find their targets easily.

Employee: they will help the Consumers finish the purchases, receive the feedback messages, mail the products, and receive the returns. The database records with their name, gender, and work experience.

Distributor: the distributor will receive the purchase orders from employee. They will provide the sufficient and high-quality comic books to the book store.

**Transactions:**

Buy Order: this is the core of the database system. It links the products with consumers, employees, and distributors. The store will receive the money automatically from the credit cards and engage automatic consignments. It also can track the shipment status and receive the feedback from consumers.

Shipment: After receive the money; the employees will mail the books to the consumers.

Return: If the consumers are dissatisfied, they will return the books. The employees will receive the return orders and track the shipment status.

Purchase Order: The employees will order new books from publishing companies.

**Direct users:**

Consumers: they will search the books from the database.

Administrator: people who is responsible for database management and technical support.

**Indirect users:**

Book store employees: use the database for services.

Book store manager: use the database for get the feedback messages.

**Output:**

Consumer information: it includes consumers’ gender, birthday, address, phone, and credit cards.

Feedback: when the consumers are purchasing, their information and orders will be seen by the employees. Therefore, the feedbacks will help them to finish the return.

Total price: when the consumers confirm the purchase, the system will automatic calculate the cost.

Rating: when children are searching the comic books, the mature contents can be blocked automatically.

Returning report: database will record the satisfactions or dissatisfactions from the consumers.

Shipment status: enable mail tracking. Consumers will check their mails on website.

Publishing companies report: database will give list of supplier and their information.

Shortages report: distributors will deliver the products more accurate by grabbing the information from the store manager.

**CONSUMER:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Consumer\_ID | Consumer\_name | Birth# | Gender | Phone# | Creditcard# |

**BUY\_ORDER:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| BuyOrder\_ID | Consumer\_ID | Employee\_ID | Product\_ID | UnitPrice | Quantity | Totalprice | Buydate |

**PRODUCT:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Product\_ID | Product\_name | Author | PublicationData | Rating | Distributor\_ID |

**PURCHASE\_ORDER:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PurchaseOrder\_ID | Product\_ID | Employee\_ID | UnitPrice | Quantity | TotalPrice | PurchaseOrderDate |

**EMPLOYEE:**

|  |  |  |  |
| --- | --- | --- | --- |
| Employee\_ID | Gender | Birth# | Phone# |

**SHIPMENT:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| BuyOrder\_ID | Shipment\_ID | ShipmentStatus | Quantity | ShipmentCo.Ltd |

**RETURN:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| BuyOrder\_ID | Consumer\_ID | Employee\_ID | ReturnDate | Reason | Returnshipmentstatus | Shipment Y/N |

**DISTRIBUTOR:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Distributor\_ID | Distributor\_name | Phone# | Fax# | Address |