The Sports Retail Store Database

1. Overview

This document describes a database that a Sports Retail Store (SRS) could use to record customers' orders. Most assignments in this course will be based on this database, so please study it carefully.

2. The Sports Retail Store Management System

You are a small consulting company specializing in database development. You have just been awarded a contract to develop a database application system for a small retail store called Sports Retail Store (SRS).

The Sports Retail Store serves the entire surrounding community selling bats, gloves, rackets, clubs, protective gear, outdoor supplies and other sports-related items. The SRS has two types of customers: regular customers and customers with a membership card.

Members and regular customers are able to purchase any item from the inventory list, but members receive a discount on the list price depending on the membership card. When a customer places an order, the database records the item(s) for that order.

SRS has sales representatives who help members and regular customers place their order.

Business Rules:

- Customers can be either a regular or a member.
- Customers can purchase items from the inventory list.
- Members receive discounts based on their membership.
- Customers' purchases are stored as orders in the database.
- Sales representatives work with customers.
- Each item must be on an inventory list.
- Each inventory list may include one or more items.
- Each customer may place one or more orders.
- Each order must be placed by a customer.
- Each order must include one or more items.
- Each item may be part of one or more orders.

Assume that the Sports Retail Store designs a database with the following tables:

1. **ITEM:** The ITEM table contains a list of the items that can be sold. To identify each item, there is an item name, item_number, description, category, color, size, and item_id.
2. **CUSTOMER:** The CUSTOMER table is a list of customers. For each customer, we store a customer number (unique), customer name (last name, first name), customer phone number, customer email, and current_balance, and card number.
3. **INV_LIST:** The INV_LIST table contains a list of items. Each item belongs to a list, and a list ID identifies each list. For each list of items, we store a list ID (unique, cost, and a number of unites).

4. **ORDERS:** The ORDERS table contains information about the orders of all customers. A customer can place several orders. For each order, we store the order ID (unique), customer number, number of units, and date of order.
5. **ORDERD_ITEMS:** The ORDERD_ITEMS table contains the details of each order. A customer may order many different items (and several units of each item) in the same order. No item is ordered twice in the same order. Instead, the quantity of each item ordered is listed along with the selling price of each item.
6. **MEMBERSHIP***:* The membership table contains a list of the membership types. The membership ID identifies each type. For each membership, we store an ID (unique), membership name, and discount.
7. **CUST_ADDRESS***:* The CUST_ADDRESS table maintains the details of the address of each customer.
8. **DEPARTMENTS:** The store keeps record of department_id, depart_name, and manager_id in the DEPARTMENTS table.
9. **JOBS**: For jobs, the database keeps the job ID, job title, minimum salary, and maximum salary.
10. **EMPLOYEES**: The store keeps the employee ID, first name, last name, email, phone, hire date, job ID, salary, commission, manager ID, department ID, and bonus of its employees.

SCHEMA

INV_LIST (id, cost, units)

ITEM (item_number, name, description, category, color, Size, price ,ilt_id)

MEMBERSHIP (id, name, discount)

CUSTOMER (customer_number, email, first_name, last_name, phone_number, current_balance, member_id, card_number)

CUST_ADDRESS (id, address_line_1, address_line_2, city, zip_code, cust_number)

ORDERS (id, order_date , number_of_unit, cust_number)

ORDERED_ITEMS (quantity_ordered, quantity_shipped, item_number, order_id)

DEPARTMENTS (department_id , department_name , manager_id)

JOBS (job_id , job_title, min_salary, max_salary)

EMPLOYEES (employee_id, first_name, last_name , email , phone, hire_date, job_id ,salary, commission , manager_id , department_id , bonus)

3. Tables for the Sports Retail Store Database

Table Name	INV_LIST		
Key Type	**Column Name**	**Data Type**	**Size**
pk	id	VARCHAR	11
	cost	DECIMAL	9, 2
	unit	INT	4

Table Name	ITEM		
Key Type	**Column Name**	**Data Type**	**Size**
pk	item_number	VARCHAR	10
	name	VARCHAR	20
	description	VARCHAR	50
	category	VARCHAR	25
	color	VARCHAR	15
	size	CHAR	2
	price	DECI<AL	9, 2
fk (INV_LIST)	ilt_id	VARCHAR	11

Table Name	PRICE_HISTORY		
Key Type	**Column Name**	**Data Type**	**Size**
pk	start_date	DATE	
pk	price	DECIMAL	7,2
	end_date	DATE	
fk(Item)	item_number	VARCHAR	10

Table Name	MEMBERSHIP		
Key Type	**Column Name**	**Data Type**	**Size**
pk	id	VARCHAR	4
	name	VARCHAR	20
	discount	INT	2

Table Name	CUSTOMER		
Key Type	**Column Name**	**Data Type**	**Size**
pk	customer_number	VARCHAR	6
uk	email	VARCHAR	50
	first_name	VARCHAR	20
	last_name	VARCHAR	30
	phone_number	VARCHAR	11
	current_balance	DECIMAL	6, 2
fk (MEMBERSHIP)	member_id	VARCHAR	4
uk	card_number	VARCHAR	6

Table Name	CUST_ADDRESS		
Key Type	**Column Name**	**Data Type**	**Size**
pk	id	VARCHAR	8
	address_line_1	VARCHAR	30
	address_line_2	VARCHAR	30
	city	VARCHAR	15
	zip_code	VARCHAR	7
fk(customer)	cust_customer	VARCHAR	6

Table Name	ORDERS		
Key Type	**Column Name**	**Data Type**	**Size**
pk	id	VARCHAR	9
	order_date	DATE	
	number_of_unites	INT	2
	cust_number	VARCHAR	6

Table Name	ORDERED_ITEMS		
Key Type	**Column Name**	**Data Type**	**Size**
	quantity_ordered	INT	3
	quantity_shipped	INT	3
pk fk (item)	item_number	VARCHAR	10
pk fk (orders)	order_id	VARCHAR	9

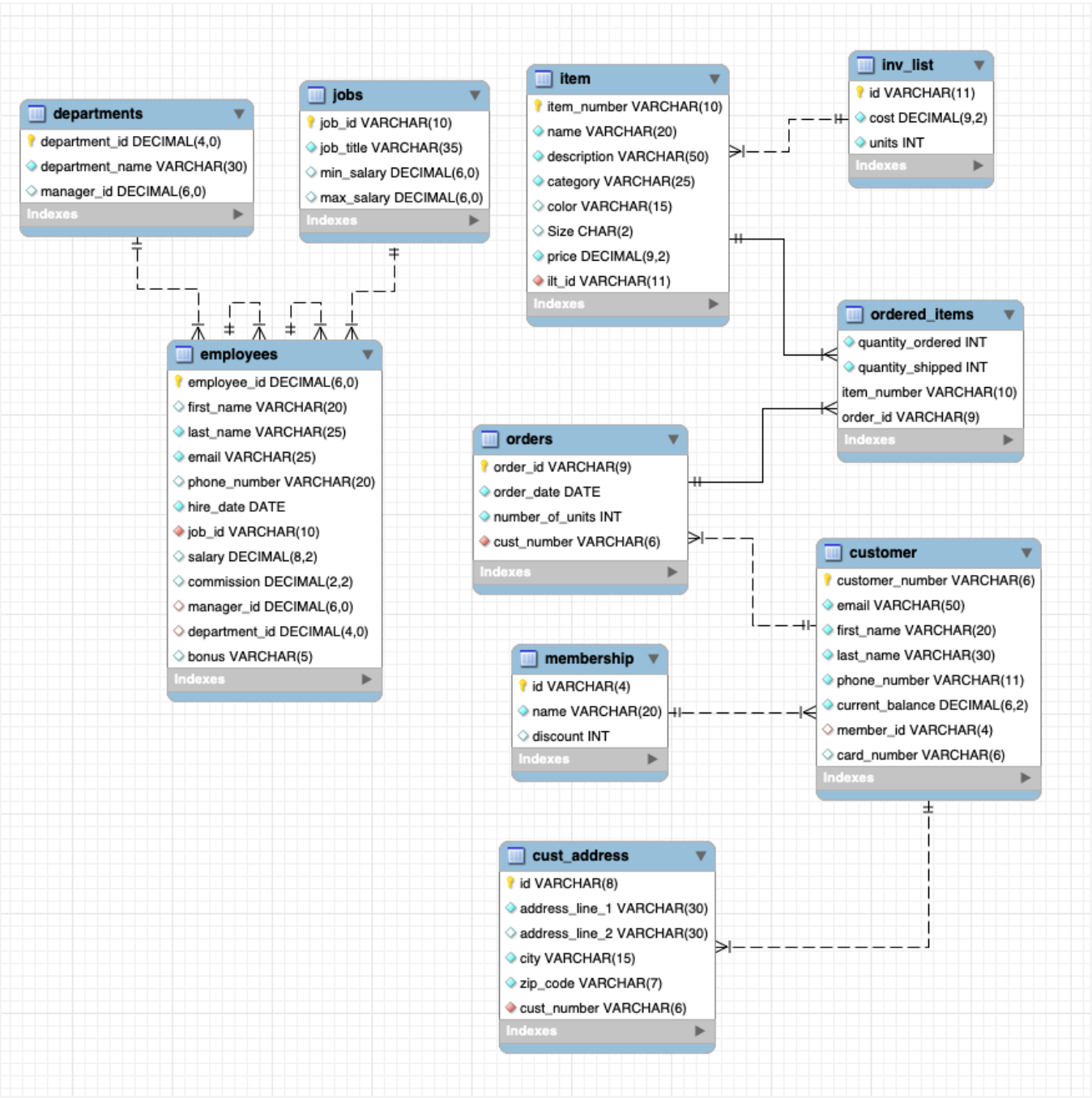
Table Name	DEPARTMENTS		
Key Type	**Column Name**	**Data Type**	**Size**
pk	department_id	DECIMAL	4,0
	department_name	VARCHAR	30
	manager_id	DECIMAL	6,0

Table Name	JOBS		
Key Type	**Column Name**	**Data Type**	**Size**
pk	job_id	VARCHAR	10
	job_title	VARCHAR	35
	min_salary	DECIMAL	6,0
	max_salary	DECIMAL	6,0

Table Name	EMPLOYEES		
Key Type	**Column Name**	**Data Type**	**Size**
pk	employee_id	DECIMAL	6,0
	first_name	VARCHAR	20
	last_name	VARCHAR	25
uk	email	VARCHAR	25
	phone_decimal	VARCHAR	20
	hire_date	DATE	
fk (JOBS)	job_id	VARCHAR	10
	salary	DECIMAL	8,2
	commission	DECIMAL	2,2
fk (EMPLOYEES)	manager_id		6,0
fk(DEPARTMENTS)	department_id	DECIMAL	4,0
	bonus	VARCHAR	5

4. The E-R diagram

The next E-R diagram shows the relations between all of the tables.



E-R Schema Diagram for The Sports Retail Store Database