

Essential Skills – Lesson 29 and 30

Today we will start to look at the concept of System Design. This is divided into 3 sections: Database design, Interface design and Report design. We will start today with database design. Look at the following videos on a database overview and ER Diagrams:

<https://www.youtube.com/watch?v=wR0ig0eQsZA>

<https://www.youtube.com/watch?v=QpdhBUYk7Kk>

Put your learning to work with the following exercises.

1. A company requires that they keep track of customer information for the preferred customer listing. Include the customer's name, the customer mailing address, phone and email, the date the customer joined, the total purchases for the year, and the date of the last purchase.
2. A company would like to keep track of payroll information for each employee within a company. Include the employee's name, the employee's complete mailing address, home phone, cell phone, email address, the employee start date, a field to indicate if the employee is EI eligible, the department where they work, the supervisor of that department, the department phone extension, the employee's SIN, and the employee's yearly salary.
3. A company requires that they keep track of inventory they sell. Include the product number, the product name, the product cost, the retail price, the quantity on hand, the reorder point, the maximum level, 4 fields to represent if the product will be stocked during Winter, Spring, Summer and Fall for seasonal products, the supplier, the supplier phone number, and the supplier contact name.
4. A video store requires information be stored on customers, movies, and rentals. They want to be able to contact customers who have rentals overdue and set up a bonus plan to give customers a free rental once 20 movies have been rented.

These exercises are more based on retail type transactions and will require 2 files for sales data. Think of how an invoice is structured – Google an invoice using Images.

5. A mail order company takes orders from customers by phone. Each order is verified that the products ordered exist and are in stock. A customer order form is generated with the customer information, the product information, and the order totals.
6. A department store would like to set up a lay-away service for their customers. An area of the store has been set up with shelving to place customer products. You are required to keep track of each lay-away order, and the payments that have been made against each order. As orders are paid and picked up, they will be removed from the system.
7. A small retail store wants to set up a system to keep track of customer sales and product information. All sales will be for cash, debit, or credit card. No sales on account will be processed. Receipts will be printed for the customers, and all sales information needs to be stored for future reference.

See you at 10.