**Problem Six (9 minutes)**

6A. Driver’s name, address, and date of birth

This is structured data.

6B. The fact that the driver’s name is a 30-character field.

This is metadata describing a property of the data.

6C. A Photo Image of the Driver

This is unstructured data.

6D. An image of the driver’s fingerprint

This is unstructured data

6E. The make and serial number of the scanning device that was used to scan the fingerprint

This is meta data the describes the context of the data

6F. The resolution (in megapixels) of the camera that was used to photograph the driver

This is meta data that describes the context of the data

6G. The fact that the driver’s birth date must precede today’s date by at least 16 years

This is metadata describing a property of the data

**Problem Eight (6 minutes)**

8A. What is the relationship between Pet and Store

many-to-one

8B. What the relationship between customer ad Pet

one-to-many

8C. Do you think there should be a relationship between customer and store?

No, as the pet is what binds the customer to the store. One could say that many customers purchase from one store, but that isn’t a necessary piece of information.

**Problem Eighteen (15 Minutes)**

18. Consider Fig 1-14. Explain meaning of lines (order to invoice and invoice to payments) and what this says about Pine Valley Company and customer relationships.

Order to Invoice is a one-to-one due to one ordering having a single invoice. Invoice to Payment is one-to-many as one invoice might be paid off in a series of payments. This tells us that perhaps customers have stronger relationships with this company and can have some degree of credit with Pine Valley Company.

**Problem Nineteen (Thirty Minutes)**

19A. Textual description of diagrammatic representation shown in figure.

The customer shall have five fields: Customer ID as the primary key, and Customer Name, Customer Type, Customer Zip Code, and Customer Years as the other fields. A customer is able to play many orders which contain the order number as the primary key and order placement date, order fulfillment date, and the order number of shipments. The order shall contain many order lines complete with two primary keys, order number and product number, with order quantity as another field. An order is billed on an invoice with an invoice number as the primary key, and order number and invoice dates as added fields. These invoices are paid with multiple payments that contain the invoice number (primary key), payment date, and payment amount.

A Product, which can show up on multiple order lines has the Product ID field as its primary key (equal to an order line associated with it), as well as product description, product finish, product standard price, product cost, PR Prior Year Sales Goal, and PR Current Year Sales Goal. Many products can be a part of a product line which has a Product Line name as its primary key, and PL Prior Years Sales Goal and PL Current Years Sales Goal as added fields.

19B. What aspect of diagram was most difficult to describe for requirements document? Which parts are still ambiguous? What is the underlying reason for ambiguity?

I didn’t really find any part particularly ambiguous. The diagrams perfectly explains the model and if there is ambiguity, I’m clearly missing it.

**Problem Twenty-One (Five Minutes)**

21A. How is Sales to Date calculated?

The sales to date is calculated by taking the quantity of orders of a product (OrderQuantity) times the price of the product (Product Price).

21B. How would query have to change if Helen Jarvis wanted to see results for all product lines, not just the home office product line?

One would just have to remove the last line from the code (AND Product.ProductLineName = “Home Office”;) and add a semi-colon to the line before. That would remove the requirement of having to query when the product line is from the home office, and thus gain results from all product lines.