Term Project

Implement any online selling system.

Application Requirements

1. At least 5 entity sets. **NOTE: ESs in a IS-A relationship are counted as ONE ES.**
2. There is AT LEAST one IS-A relationship in the E-R diagram.
3. DBMS server for the project: CIS PostgreSQL

Minimum functionality requirement:
1. **Mange products, orders, and customers.**
2. **Mange returns including partial returns.**

Deliverables

A (30 points). **E-R diagram (with detailed explanation of assumptions and database constraints)**

B (15 points). **Relational Schema,** in 3NF. The actual SQL create table commands are required. Include primary key and referential integrity constraints.

C (15 points). **Sample Data** Populate database with sample data. Insert at least 10 tuples per relation. Make sure that all queries below have non-empty answer.

D (15 points). **Create Views** Create (write English description and SQL syntax) at least 6 views that a user of the database would find useful. Do NOT include views that involve one single relation only.

E (10 points). **Indexes** Create 3 indexes to support some of the queries (each view corresponds to a query) of Deliverable D. For each index, briefly explain (one sentence) how it will support a query (or queries).

F (10 points). **Constraints** Create at least 3 non key, non-foreign-key constraints on the database.

G (15 points). **Triggers** Create at least 2 Triggers on the database. Should you need to implement triggers to enforce constraints, you should choose to implement such trigger functions that cannot be readily replaced by existing constraint mechanisms supported by DBMS (e.g., domain constraints, not null, unique, check).