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Case Study: Outland Adventures Case Study

Professor: Chandra Bobba

Assignment 9.1:

A diagram of a company

Description automatically generated

3NF ERD:

1. **Customers**: CustomerID (Primary Key), Name, Address, Phone, Email
2. **Trips**: TripID (Primary Key), LocationID (Foreign Key), Date, GuideID (Foreign Key)
3. **Guides**: GuideID (Primary Key), Name, Expertise
4. **Equipment**: EquipmentID (Primary Key), Name, Type, PurchaseDate, Status
5. **Sales**: SaleID (Primary Key), CustomerID (Foreign Key), EquipmentID (Foreign Key), SaleDate
6. **Rentals**: RentalID (Primary Key), CustomerID (Foreign Key), EquipmentID (Foreign Key), RentalDate, ReturnDate
7. **Employees**: EmployeeID (Primary Key), Name, Role, Department
8. **Supplies**: SupplyID (Primary Key), TripID (Foreign Key), EquipmentID (Foreign Key), Quantity
9. **Bookings**: BookingID (Primary Key), CustomerID (Foreign Key), TripID (Foreign Key)
10. **Locations**: LocationID (Primary Key), Name, Description, BookingTrend

**Business rules:**

**Equipment:**

Equipment can be sold and rented.

All of the equipment will have specific ID’s, names, date of purchase tags, and status indicators.

The status indicators will allow customers and employees to see what equipment is available.

To keep equipment up to date every 4 years the equipment will be inspected.

**Customers:**

Customers can book more than 1 trip

Each customer will have a CustomerID along with name, address, phone number, and email address.

**Trips:**

Every trip will have a unique trip ID

They will also consist of location, date, and Guide ID.

Trips can be booked by more than one customer.

**Guides:**

The guides will have Guide ID’s.

The required info for guides will be name and expertise.

The guides have a responsibility to plan and organize trips for customers.

**Sales:**

Sales have unique sale IDs.

Sales will track equipment sold to customers.

The records for sales will include the customers ID, equipment ID, and sale date.

They will be responsible for analyzing and seeing if enough equipment is being bought.

**Rentals:**

The rental department will be responsible for tracking equipment rented to customers.

Rentals will have unique rental IDs

The records will have the customers ID, equipment ID, rental date, and return date.

**Employees:**

Every employee will have their own employee ID.

Each employee will include name, role, and department.

The employees are responsible for multiple things like supplies, store cleanup, and marketing.

**Supply management:**

They will track the records for supplies needed for trips.

Every supply record will consist of a unique supply ID.

These records will include trip ID, equipment ID, and the quantity of supplies.

**Location:**

This department will determine specific locations that have a declining trend in bookings.

The records will have booking trends to show which locations have decreasing bookings.