

Exercise

1. A smart phone has an AddressBook. An AddressBook has an owner name (the person who owns the phone) and phone number (of the person who owns the phone). An AddressBook contains many Contacts. Contacts have a contact name, phone number, and description (e.g. for comments or other info). The AddressBook could possibly contain ContactGroup objects: A ContactGroup contains one or more Contacts (for example a ContactGroup for co-workers, a ContactGroup for family members). An AddressBook could have no ContactGroups (maybe the person doesn't have enough contacts to need groups). If the user removes a ContactGroup, that doesn't remove the Contacts in the AddressBook, however if the user deletes the AddressBook, all of the ContactGroup and Contacts are removed.
2. A Player plays for a specific Team, but they can only play for one Team. However, a Player might at some point be traded to another Team, or a Team could be disbanded, and that team's players could then be assigned to another Team. A Player has a first name, last name, position, and jersey number. A Team has a team name, number of wins and number of losses. A Team can play in many different Games. A Game has a date and time, a location, the 2 teams that played in the game, team 1's score, and team 2's score.
3. Write a program that keeps track of flights at an airport has a Flight class and an Airplane class. A Flight has a flight number, destination, and departure date/time. An Airplane has I.D. (sort of like a vehicle VIN that uniquely identifies one specific airplane), an airline name, airplane model (e.g. 747), and number of passengers. A Crew class that models a member of the flight crew has a first name, last name, and position (e.g. pilot, flight attendant). A Flight is assigned to a specific Airplane but it can be assigned to a different Airplane if something is wrong with the original Airplane. An Airplane can be responsible for many different Flights. A Crew is assigned to a specific Flight and could be assigned to other Flights if they return from a completed Flight.