Question 1:

\*

Team

Players

1

Game

1

4…\*

Coach

League

String name;

int record;

String position;

int number;

String name;

String address;

int experience;

int accreditation

int score

String location

6…12

Question 2:

\*

\*

Customer

boolean subscription;

buyMovie();

rentMovie();

Card

double credit;

Movie

boolean availability;

int price;

Question 3:

The code implementation of prog2.java is much better because 1) it uses private for its variables, which makes it’s classes more secure (encapsulation). This means that the two classes have low coupling, and variables can’t be accessed directly. This would also prevent confusion in naming conventions, as two variables with the same name could be used in both classes, it would become annoying to determine which is from where.

Question 4:

The thing which is bad with this implementation is that this one class has three methods for reading information from a source. This means that these three methods have high cohesion, even though they are all reading something, what they are reading may not be related to each other. A better way to write this, is to separate each module into its own class such that each class is performing a specific function. This way, the modules are easier to read, maintain and modify because they are separated from each other, this reduces complexity and allows independent operation of each of these types of methods.

class readDisk{

public String readFromDisk(String fileName) {

return "data of " + fileName;

}

}

class readWeb{

public String readFromWeb(String url) {

return "data of " + url;

}

}

class readNetwork{

public String readFromNetwork(String networkAddress) {

return "data of " + networkAddress;

}

}