Class Diagram

I have created 3 classes (VideoShop, Dvd and Customer) to help simulate the task of renting dvd's.

The VideoShop class has the following properties:
name of type string, dvds which is a list and cash of type Float(chosen over integer due to the need for decimal point). These types were selected as it was the most obvious type for each variable. I added various methods which will allow the shop to perform tasks such as check the quantity of dvd's in stock, add new dvd's to the current stock, find specific titles, adjust the cash parameter after a sale and rent a dvd to the customer.

The DVD class has the following properties: name of type string, rating of type integer, quantity of type integer and cost of type float(used as it will be a monetary value).

The Customer class has the following parameters: name of type string, age of type integer, money of type float and currently_rented which will be a list of dvd's. The customer will be able to check what is currently rented, remove or add a dvd to the rented list as well as pay for a dvd to rent.

The lines between classes show the relationship between the classes and that they will be linked.

Object Diagram

From the object diagram you can see a snapshot of the design. We have an instance of the DvdShop object called "Dvd's r us" which is currently holding the "Rocky" dvd in stock. They have a cash balance of 100.00 and have sold no dvd's so far.

The Customer(John Jones) is 35 and has a balance of 30.00 and has not rented ant dvd's yet

The Dvd object(Rocky) shows the title name, the cost, rating and how many are currently in stock