Object Oriented Modeling and Design 4th Assignment

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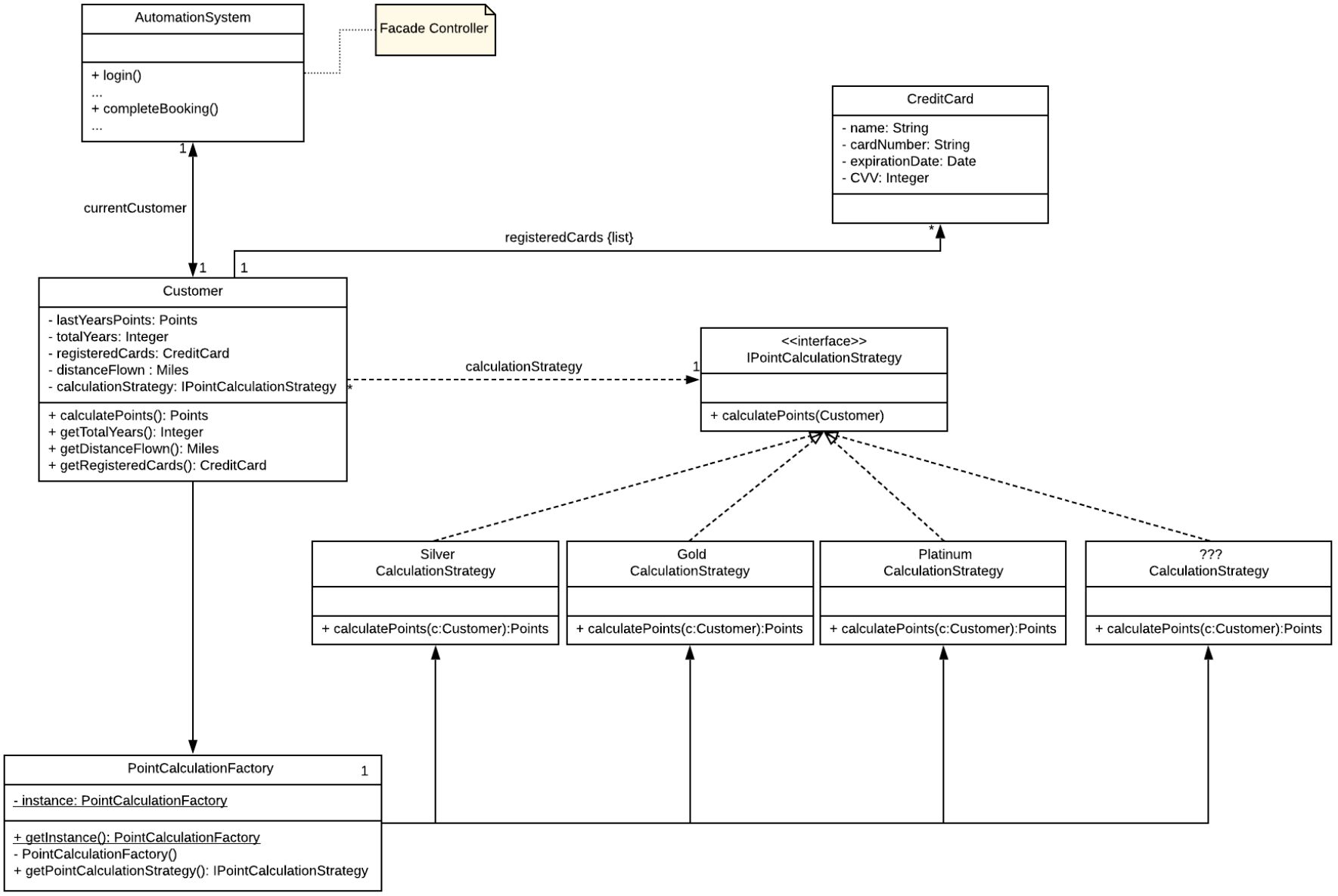
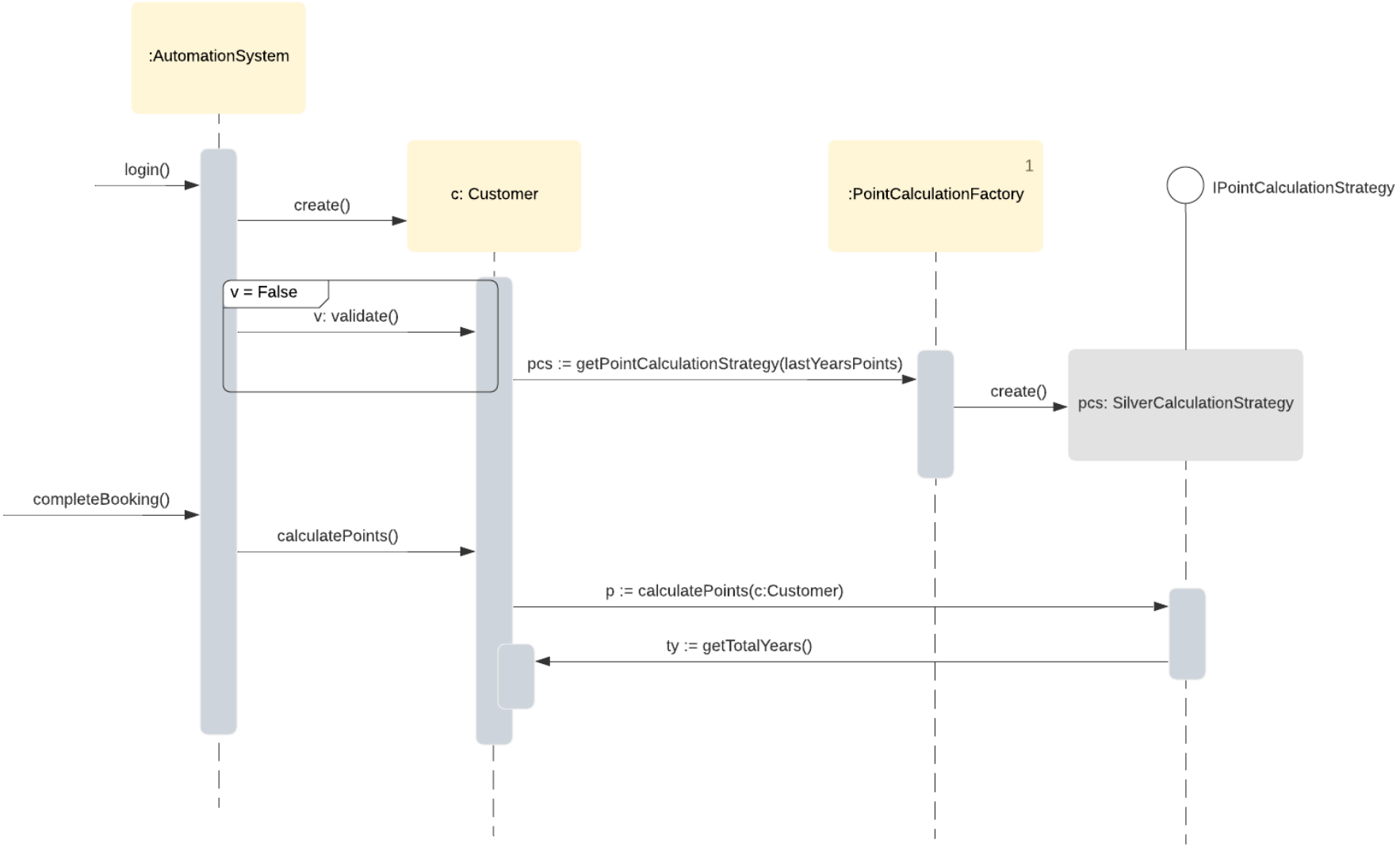
1. Class Diagram



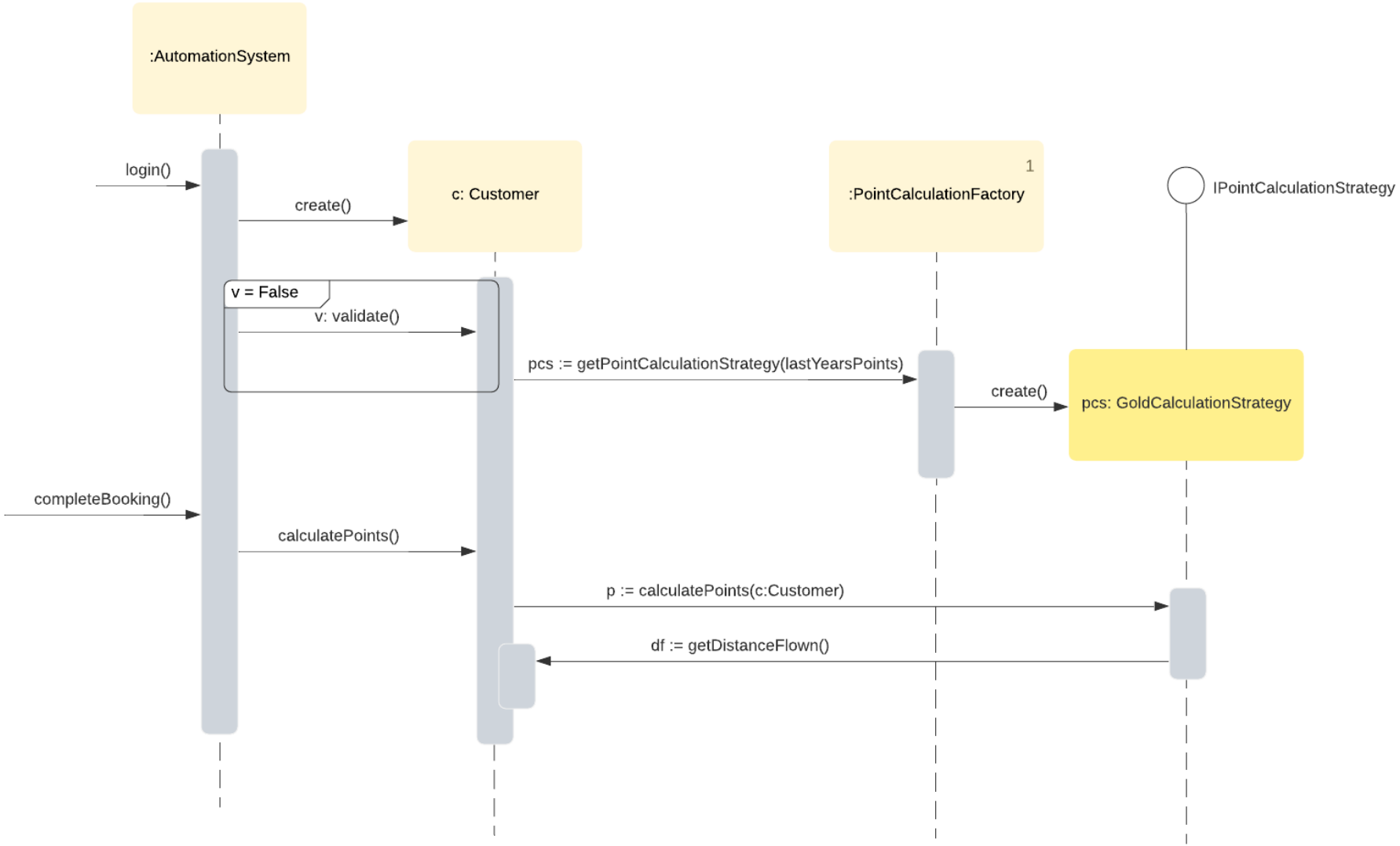
2. Calculate Points Sequence Diagram: Silver Status

In my design, I assumed that points of customers with **silver status** are calculated using a **total years based algorithm**. User logs into the system and a *Customer* instance is created. After *Customer* validates login information, *PointCalculationFactory* gets the point calculation strategy (*SilverCalculationStrategy* in this case) using last year's flight points. After booking process is completed, *SilverCalculationStrategy* calculates points using total years information and returns the result to *Customer*.



3. Calculate Points Sequence Diagram: Gold Status

In my design, I assumed that points of customers with **gold status** are calculated using a **distance flown based algorithm**. User logs into the system and a *Customer* instance is created. After *Customer* validates login information, *PointCalculationFactory* gets the point calculation strategy (*GoldCalculationStrategy* in this case) using last year's flight points. After booking process is completed, *GoldCalculationStrategy* calculates points using flown distance information and returns the result to *Customer*.



4. Calculate Points Sequence Diagram: Platinum Status

In my design, I assumed that points of customers with **platinum status** are calculated using a **registered cards based algorithm**. User logs into the system and a *Customer* instance is created. After *Customer* validates login information, *PointCalculationFactory* gets the point calculation strategy (*PlatinumCalculationStrategy* in this case) using last year's flight points. After booking process is completed, *PlatinumCalculationStrategy* calculates points using registered card information and returns the result to *Customer*.