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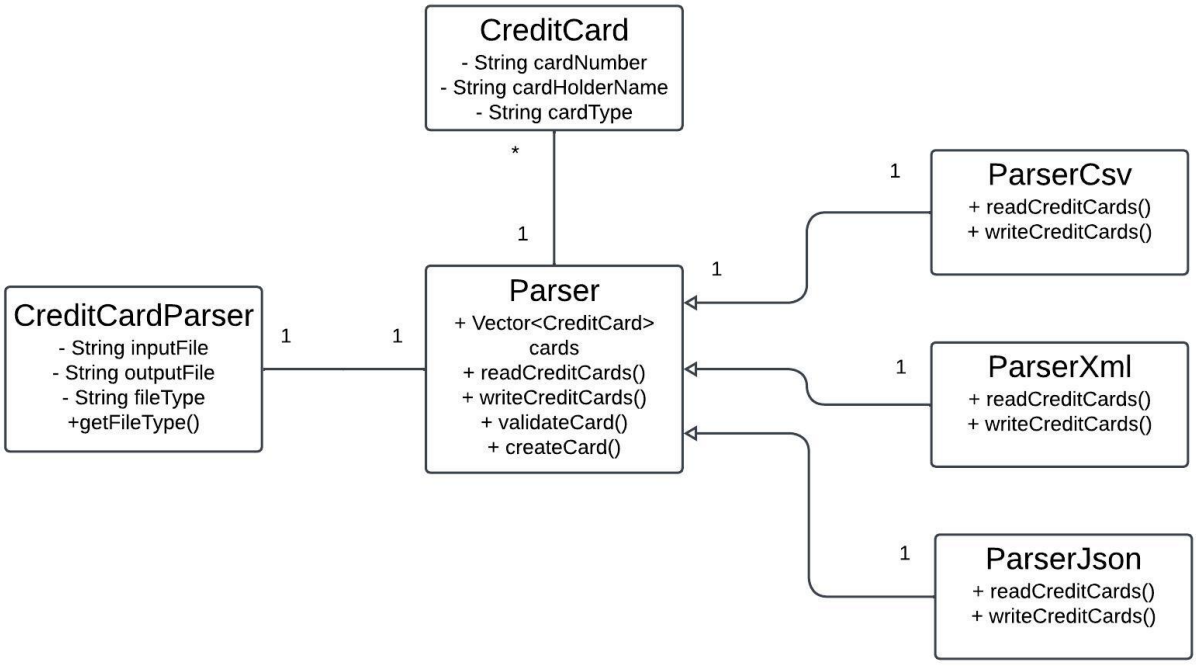
CMPE 202-01 – SW Systems Eng
Mr. Vinodh
Design

Github link: https://github.com/azunino97/CreditCardReader

- Describe what is the primary problem you try to solve.
    - The primary problem the project is trying to solve is validating the credit card information for each of the input file types. The coding design should be able to parse the credit card information.
- Describe what are the secondary problems you try to solve (if there are any).
    - The secondary problem is being able to read different file types and accommodate each of the file types to fulfill the primary problem of validating each credit card. The second part also includes writing to an output file with the validated credit card information.
- Describe what design pattern(s) you use how (use plain text and diagrams).
    - This project uses a strategy design pattern to pick which algorithm to use depending on the input file type. I created a superclass, Parser, which has subclasses for each file type. The main strategy class, CreditCardParser, then sets the Parser subclass (ParserCsv, ParserXml, etc.) depending on the file type, and it's extended virtual functions readCreditCards() and writeCreditCards() are called to parse the input file and write the validated cards to an output file.



- Describe the consequences of using this/these pattern(s).
    - The consequence of strategy pattern is increased complexity of the subclasses and makes debugging more complex in finding out which concrete algorithm is being used and where. Selecting and recomputing which strategy to use can also be taxing on the system during runtime.