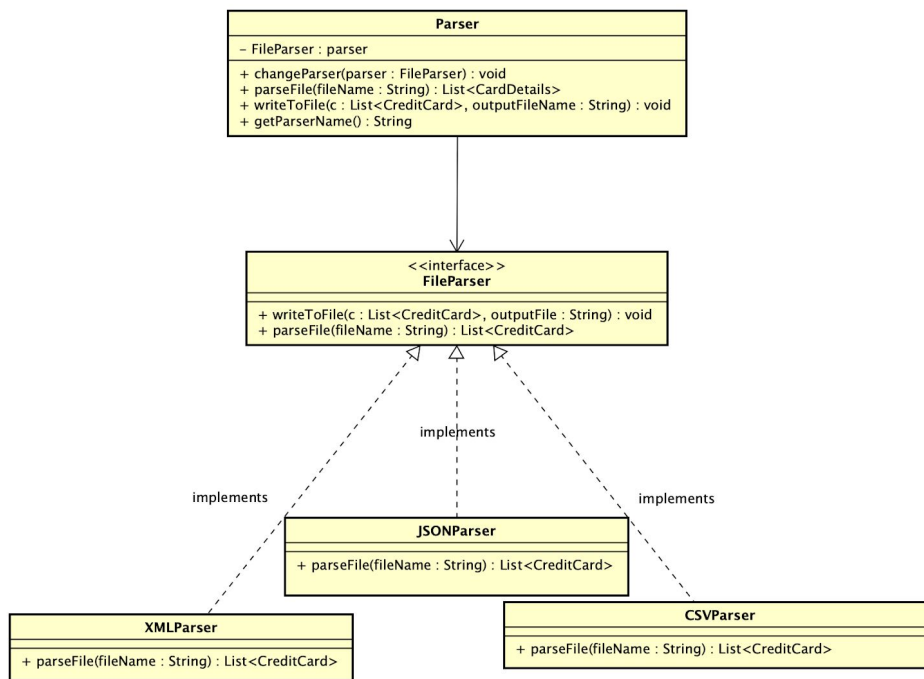


## Design patterns

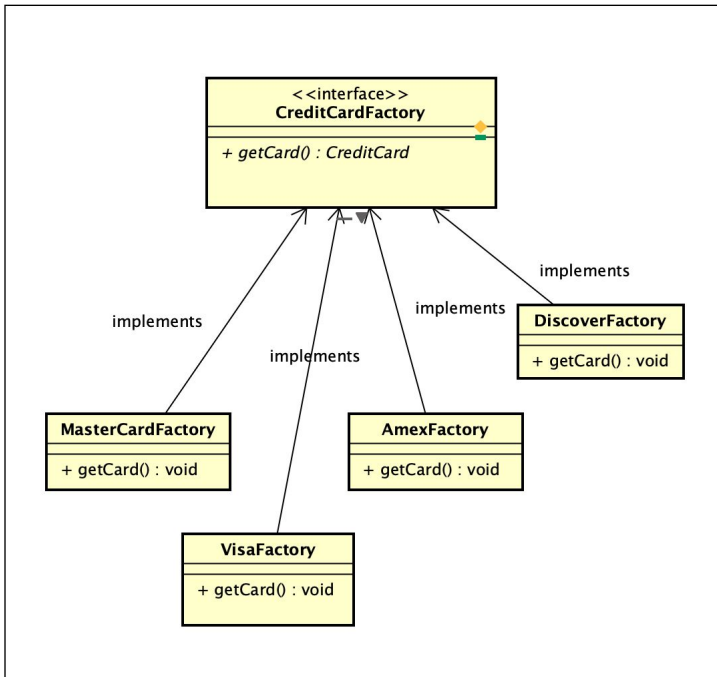
The design patterns used to build this system are:

1. Strategy Pattern
2. Factory Design Pattern
3. Chain of Responsibility

Strategy Pattern is used for the parsing where there is a parser class where multiple parsers like JSON, XML, CSV parser are implemented from a file parser interface to perform the common method of parsing the file with different behaviour which is a strategy pattern.



I have used the **Factory design Pattern** to get different cards from a factory of cards. An interface is present which is implemented by all the other card types. At run time, the required card class can be generated from this factory of cards.



I have used the **Chain of Responsibility Pattern** to perform Validations on the Card Type. Since we do not know the type of the card on the first instance of reading the card number, an order can be given as a chain of card types and card type is tested against each type one after the other until it matches the right card.