CMPE 202 – Individual Project
Credit Card Problem

Part 3
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Demo of the application

Step 1:
mvn clean

```
[(base) arpitha@Arpithas-MacBook-Air individual-project-arpithagurumurthy % mvn clean
[INFO] Scanning for projects...
[WARNING]
[WARNING] Some problems were encountered while building the effective model for org.sjsu:CMPE_202_Project_Arpitha:jar:1.0-SNAPSHOT
[WARNING] 'build.plugins.plugin.version' for org.apache.maven.plugins:maven-jar-plugin is missing. @ line 67, column 21
[WARNING]
[WARNING] It is highly recommended to fix these problems because they threaten the stability of your build.
[WARNING]
[WARNING] For this reason, future Maven versions might no longer support building such malformed projects.
[WARNING]
[INFO]
[INFO] ------------------< org.sjsu:CMPE_202_Project_Arpitha >------------------
[INFO] Building CMPE_202_Project_Arpitha 1.0-SNAPSHOT
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ CMPE_202_Project_Arpitha ---
[INFO] Deleting /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/target
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  0.162 s
[INFO] Finished at: 2021-05-08T17:37:11-07:00
[INFO] ------------------------------------------------------------------------
(base) arpitha@Arpithas-MacBook-Air individual-project-arpithagurumurthy %
```

Step 2:
mvn install

```
[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ CMPE_202_Project_Arpitha ---
[INFO] Building jar: /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/target/CreditCard/CreditCard
Validator.jar
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ CMPE_202_Project_Arpitha ---
[INFO] Installing /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/target/CreditCard/CreditCardVal
idator.jar to /Users/arpitha/.m2/repository/org/sjsu/CMPE_202_Project_Arpitha/1.0-SNAPSHOT/CMPE_202_Project_Arpitha-1.0-SNAPSHOT.j
ar
[INFO] Installing /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/pom.xml to /Users/arpitha/.m2/r
epository/org/sjsu/CMPE_202_Project_Arpitha/1.0-SNAPSHOT/CMPE_202_Project_Arpitha-1.0-SNAPSHOT.pom
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  2.603 s
[INFO] Finished at: 2021-05-08T17:38:35-07:00
[INFO] ------------------------------------------------------------------------
(base) arpitha@Arpithas-MacBook-Air individual-project-arpithagurumurthy %
```

```
    -----------------------------------------------------------
     T E S T S
    -----------------------------------------------------------
    Running MasterCreditCardTest
    Tests run: 12, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.126 sec
    Running AmexCreditCardTest
    Tests run: 12, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.004 sec
    Running VisaCreditCardTest
    Tests run: 12, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.01 sec
    Running DiscoverCreditCardTest
    Tests run: 12, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.01 sec
    Running InvalidCreditCardTest
    Tests run: 3, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.002 sec

    Results :

    Tests run: 51, Failures: 0, Errors: 0, Skipped: 0
```

Step 3:
Running the application

CSV input file

```
(base) arpitha@Arpithas-MacBook-Air individual-project-arpithagurumurthy % ls
Part_1_Individual.pdf   README.md              src
Part_2_Individual.pdf   pom.xml                target
(base) arpitha@Arpithas-MacBook-Air individual-project-arpithagurumurthy % cd target/CreditCard
(base) arpitha@Arpithas-MacBook-Air CreditCard % ls
CreditCardValidator.jar lib
(base) arpitha@Arpithas-MacBook-Air CreditCard % java -jar CreditCardValidator.jar /Users/arpitha/Documents/202_IndividualProj/ind
ividual-project-arpithagurumurthy/src/main/resources/cards.csv ./
Received 2 arguments /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/src/main/resources/cards.csv
 : ./
(base) arpitha@Arpithas-MacBook-Air CreditCard % ls
CreditCardValidator.jar creditcard_output.csv   lib
(base) arpitha@Arpithas-MacBook-Air CreditCard % cat creditcard_output.csv
5410000000000000,Alice,3/20/2030,MasterCard
4120000000000,Bob,4/20/2030,Visa
341000000000000,Eve,5/20/2030,Amex
6011000000000000,Richard,6/20/2030,Discover
1200000000000000000,Invalid,6/20/2030,Invalid
(base) arpitha@Arpithas-MacBook-Air CreditCard % █
```

JSON input file

```
(base) arpitha@Arpithas-MacBook-Air CreditCard % java -jar CreditCardValidator.jar /Users/arpitha/Documents/202_IndividualProj/ind
ividual-project-arpithagurumurthy/src/main/resources/cards.json ./
Received 2 arguments /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/src/main/resources/cards.jso
n : ./
(base) arpitha@Arpithas-MacBook-Air CreditCard % ls
CreditCardValidator.jar creditcard_output.csv   creditcard_output.json  lib
(base) arpitha@Arpithas-MacBook-Air CreditCard % cat creditcard_output.json
["{\n  \"cardNumber\" : \"5410000000000000\",\n  \"cardName\" : \"Alice\",\n  \"expirationDate\" : \"3/20/2030\",\n  \"cardType\"
 : \"MasterCard\"\n}","{\n  \"cardNumber\" : \"4120000000000\",\n  \"cardName\" : \"Bob\",\n  \"expirationDate\" : \"4/20/2030\",\n
  \"cardType\" : \"Visa\"\n}","{\n  \"cardNumber\" : \"341000000000000\",\n  \"cardName\" : \"Eve\",\n  \"expirationDate\" : \"5/2
0/2030\",\n  \"cardType\" : \"Amex\"\n}","{\n  \"cardNumber\" : \"6011000000000000\",\n  \"cardName\" : \"Richard\",\n  \"expirati
onDate\" : \"6/20/2030\",\n  \"cardType\" : \"Discover\"\n}","{\n  \"cardNumber\" : \"90012000000000000\",\n  \"cardName\" : \"Inv
alid\",\n  \"expirationDate\" : \"6/20/2030\",\n  \"cardType\" : \"Invalid\"\n}"]█
(base) arpitha@Arpithas-MacBook-Air CreditCard % █
```

XML input file

```
(base) arpitha@Arpithas-MacBook-Air CreditCard % java -jar CreditCardValidator.jar /Users/arpitha/Documents/202_IndividualProj/ind
ividual-project-arpithagurumurthy/src/main/resources/cards.xml ./
Received 2 arguments /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/src/main/resources/cards.xm
 : ./
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by com.sun.xml.bind.v2.runtime.reflect.opt.Injector (file:/Users/arpitha/Documents/202_Individ
alProj/individual-project-arpithagurumurthy/target/CreditCard/lib/jaxb-impl-2.2.11.jar) to method java.lang.ClassLoader.defineCla
s(java.lang.String,byte[],int,int)
WARNING: Please consider reporting this to the maintainers of com.sun.xml.bind.v2.runtime.reflect.opt.Injector
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<creditcards>
    <creditCards xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="masterCC">
        <cardNumber>5410000000000000</cardNumber>
        <cardName>Alice</cardName>
        <expirationDate>3/20/2030</expirationDate>
        <type>MasterCard</type>
    </creditCards>
    <creditCards xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="visaCC">
        <cardNumber>4120000000000</cardNumber>
        <cardName>Bob</cardName>
        <expirationDate>4/20/2030</expirationDate>
        <type>Visa</type>
    </creditCards>
    <creditCards xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="amExCC">
        <cardNumber>341000000000000</cardNumber>
        <cardName>Eve</cardName>
        <expirationDate>5/20/2030</expirationDate>
        <type>Amex</type>
    </creditCards>
```

Invalid input file format:

```
(base) arpitha@Arpithas-MacBook-Air CreditCard % java -jar CreditCardValidator.jar /Users/arpitha/Documents/202_IndividualProj/ind
ividual-project-arpithagurumurthy/src/main/resources/cards.invalid ./
Received 2 arguments /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/src/main/resources/cards.inv
alid : ./
No supported parser found for the given file /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/src/
main/resources/cards.invalid
(base) arpitha@Arpithas-MacBook-Air CreditCard %
```

Invalid input file path:

```
(base) arpitha@Arpithas-MacBook-Air CreditCard % java -jar CreditCardValidator.jar /Users/arpitha/Documents/202_IndividualProj/ind
ividual-project-arpithagurumurthy/src/main//cards.csv ./
Received 2 arguments /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/src/main//cards.csv : ./
The provided path is incorrect /Users/arpitha/Documents/202_IndividualProj/individual-project-arpithagurumurthy/src/main/cards.csv
 (No such file or directory)
(base) arpitha@Arpithas-MacBook-Air CreditCard %
```

Project Structure:

individual-project-arpithagurumurthy

Project ▼

- individual-project-arpithagurumurthy ~/Documents/2
  - .idea
  - src
    - main
      - java
        - chainofresponsibility
          - CSVExtractor
          - JSONExtractor
          - Parser
          - ParserClient
          - UtilityFunctions
          - XMLExtractor
        - creditcards
          - AmExCC
          - CreditCard
          - CreditCards
          - DiscoverCC
          - InvalidCC
          - MasterCC
          - VisaCC
        - factory
          - CreditCardFactory
        - template
          - AmexCCValidator
          - CreditCardValidator
          - DiscoverCCValidator
          - MasterCCValidator
          - RetrieveCardType
          - VisaCCValidator
        - CreditCardClient
      - resources
        - cards.csv
        - cards.json
        - cards.xml
  - test