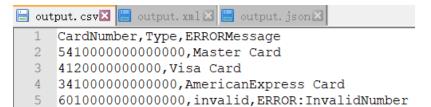➢ Run src/main/Client.java. Enter file name, and get corresponding output file.

```
Please enter your input file name: (Sample.csv/Sample.xml/Sample.json)
Sample.csv
Reading from csv file...
MasterCCHandler got the request...
It is a Master Credit Card
MasterCCHandler got the request...
VisaCCHandler got the request...
It is a Visa Credit Card
MasterCCHandler got the request...
VisaCCHandler got the request...
AmExCCHandler got the request...
It is an AmericanExpress Credit Card
MasterCCHandler got the request...
VisaCCHandler got the request...
AmExCCHandler got the request...
DiscoverCCHandler got the request...
ERROR: It is an Invalid Card!
Successfully read!
Writing to csv file...
Successfully write!

Process finished with exit code 0
```

output.csv ☒   output.xml ☒   output.json ☒
```
1  CardNumber,Type,ERRORMessage
2  5410000000000000,Master Card
3  4120000000000,Visa Card
4  341000000000000,AmericanExpress Card
5  6010000000000000,invalid,ERROR:InvalidNumber
```

```
Please enter your input file name: (Sample.csv/Sample.xml/Sample.json)
Sample.xml
Reading from xml file...
MasterCCHandler got the request...
It is a Master Credit Card
MasterCCHandler got the request...
VisaCCHandler got the request...
It is a Visa Credit Card
MasterCCHandler got the request...
VisaCCHandler got the request...
AmExCCHandler got the request...
It is an AmericanExpress Credit Card
MasterCCHandler got the request...
VisaCCHandler got the request...
AmExCCHandler got the request...
DiscoverCCHandler got the request...
ERROR: It is an Invalid Card!
Successfully read!
Writing to xml file...
Successfully write!
```

output.csv   output.xml   output.json

```xml
1  <?xml version="1.0" encoding="UTF-8" standalone="no"?>
2  <root>
3      <row>
4          <CardNumber>5410000000000000</CardNumber>
5          <Type>Master Card</Type>
6          <ERRORMessage/>
7      </row>
8      <row>
9          <CardNumber>4120000000000</CardNumber>
10         <Type>Visa Card</Type>
11         <ERRORMessage/>
12     </row>
13     <row>
14         <CardNumber>341000000000000</CardNumber>
15         <Type>AmericanExpress Card</Type>
16         <ERRORMessage/>
17     </row>
18     <row>
19         <CardNumber>6010000000000000</CardNumber>
20         <Type>invalid</Type>
21         <ERRORMessage>ERROR:InvalidNumber</ERRORMessage>
22     </row>
23  </root>
```

```
Please enter your input file name: (Sample.csv/Sample.xml/Sample.json)
Sample.json
Reading from json file...
MasterCCHandler got the request...
It is a Master Credit Card
MasterCCHandler got the request...
VisaCCHandler got the request...
It is a Visa Credit Card
MasterCCHandler got the request...
VisaCCHandler got the request...
AmExCCHandler got the request...
It is an AmericanExpress Credit Card
MasterCCHandler got the request...
VisaCCHandler got the request...
AmExCCHandler got the request...
DiscoverCCHandler got the request...
ERROR: It is an Invalid Card!
Successfully read!
Writing to json file...
Successfully write!
```

output.csv   output.xml   output.json

```json
1  {
2      "CardNumber" : "5410000000000000",
3      "Type" : "Master Card",
4      "ERRORMessage" : ""
5  }{
6      "CardNumber" : "4120000000000",
7      "Type" : "Visa Card",
8      "ERRORMessage" : ""
9  }{
10     "CardNumber" : "341000000000000",
11     "Type" : "AmericanExpress Card",
12     "ERRORMessage" : ""
13 }{
14     "CardNumber" : "6010000000000000",
15     "Type" : "invalid",
16     "ERRORMessage" : "ERROR:InvalidNumber"
17 }
```

➢   Run Junit test file src/test/TestRunner.java. Console text print:

```
 1 "C:\Program Files\Java\jdk-13.0.1\bin\java.exe" "-
   javaagent:C:\Program Files\JetBrains\IntelliJ IDEA
   Community Edition 2020.2.1\lib\idea_rt.jar=51718:C:\
   Program Files\JetBrains\IntelliJ IDEA Community
   Edition 2020.2.1\bin" -Dfile.encoding=UTF-8 -
   classpath "C:\Users\alism\Desktop\202SW Sys Engr\
   IndividualProject\CreditCard\out\production\
   CreditCard;C:\Users\alism\Desktop\202SW Sys Engr\
   IndividualProject\CreditCard\lib\jackson-all-1.9.0.
   jar;C:\Users\alism\Desktop\202SW Sys Engr\
   IndividualProject\CreditCard\lib\json-simple-1.1.jar;
   C:\Users\alism\Desktop\202SW Sys Engr\
   IndividualProject\CreditCard\lib\junit.jar;C:\Users\
   alism\Desktop\202SW Sys Engr\IndividualProject\
   CreditCard\lib\junit-4.12.jar;C:\Users\alism\Desktop\
   202SW Sys Engr\IndividualProject\CreditCard\lib\
   hamcrest-core-1.3.jar" test.TestRunner
 2
 3 Testing Master Card ...
 4 MasterCCHandler got the request...
 5 It is a Master Credit Card
 6 MasterCCHandler got the request...
 7 VisaCCHandler got the request...
 8 AmExCCHandler got the request...
 9 DiscoverCCHandler got the request...
10 ERROR: It is an Invalid Card!
11 MasterCCHandler got the request...
12 VisaCCHandler got the request...
13 AmExCCHandler got the request...
14 DiscoverCCHandler got the request...
15 ERROR: It is an Invalid Card!
16 MasterCCHandler got the request...
17 VisaCCHandler got the request...
18 AmExCCHandler got the request...
19 DiscoverCCHandler got the request...
20 ERROR: It is an Invalid Card!
21
22 Testing Visa Card ...
23 MasterCCHandler got the request...
24 VisaCCHandler got the request...
25 It is a Visa Credit Card
26 MasterCCHandler got the request...
27 VisaCCHandler got the request...
28 AmExCCHandler got the request...
```

```
29 DiscoverCCHandler got the request...
30 ERROR: It is an Invalid Card!
31 MasterCCHandler got the request...
32 VisaCCHandler got the request...
33 It is a Visa Credit Card
34 MasterCCHandler got the request...
35 VisaCCHandler got the request...
36 AmExCCHandler got the request...
37 DiscoverCCHandler got the request...
38 ERROR: It is an Invalid Card!
39
40 Testing AmericanExpress Card ...
41 MasterCCHandler got the request...
42 VisaCCHandler got the request...
43 AmExCCHandler got the request...
44 It is an AmericanExpress Credit Card
45 MasterCCHandler got the request...
46 VisaCCHandler got the request...
47 AmExCCHandler got the request...
48 DiscoverCCHandler got the request...
49 ERROR: It is an Invalid Card!
50 MasterCCHandler got the request...
51 VisaCCHandler got the request...
52 AmExCCHandler got the request...
53 It is an AmericanExpress Credit Card
54 MasterCCHandler got the request...
55 VisaCCHandler got the request...
56 AmExCCHandler got the request...
57 DiscoverCCHandler got the request...
58 ERROR: It is an Invalid Card!
59 MasterCCHandler got the request...
60 VisaCCHandler got the request...
61 AmExCCHandler got the request...
62 DiscoverCCHandler got the request...
63 ERROR: It is an Invalid Card!
64
65 Testing Discover Card ...
66 MasterCCHandler got the request...
67 VisaCCHandler got the request...
68 AmExCCHandler got the request...
69 DiscoverCCHandler got the request...
70 ERROR: It is an Invalid Card!
71 MasterCCHandler got the request...
72 VisaCCHandler got the request...
```

```
73 AmExCCHandler got the request...
74 DiscoverCCHandler got the request...
75 It is an Discover Credit Card
76 MasterCCHandler got the request...
77 VisaCCHandler got the request...
78 AmExCCHandler got the request...
79 DiscoverCCHandler got the request...
80 ERROR: It is an Invalid Card!
81
82 Master Card Test Result:
83 true
84
85 Visa Card Test Result:
86 true
87
88 AmericanExpress Card Test Result:
89 true
90
91 Discover Card Test Result:
92 true
93
94 Process finished with exit code 0
95
```