Card Checker with Location

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Agenda
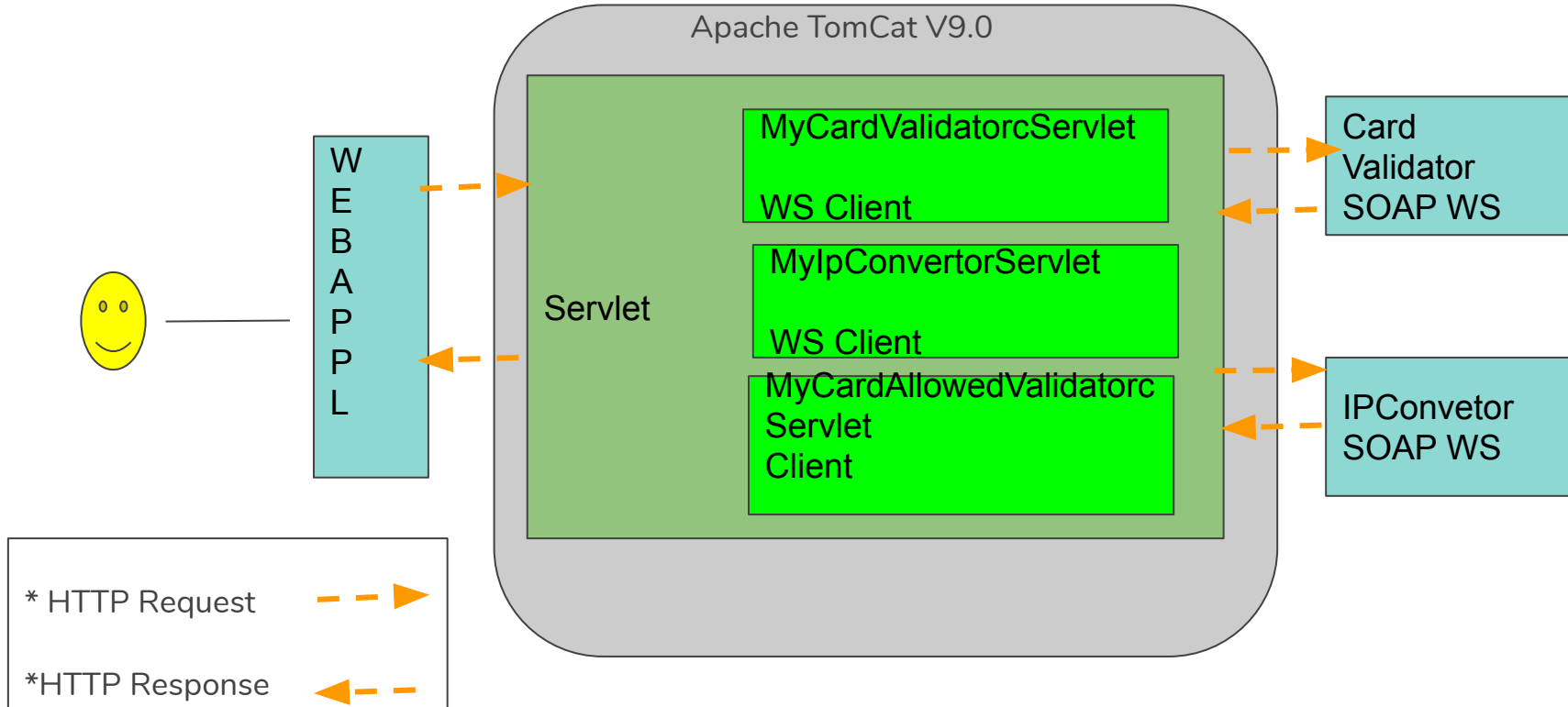
Goal

Develop a Web application to inform user, that a specified credit card can be used in the country.

Architecture

Apache TomCat V9.0

W
E
B
A
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Servlet

MyCardValidatorcServlet

WS Client

MyIpConvertorServlet

WS Client

MyCardAllowedValidatorc
Servlet
Client

Card
Validator
SOAP WS

IPConvetor
SOAP WS

* HTTP Request

*HTTP Response

Business Logic

Card length must be more than 13 and less than 17 characters

Validate with Master and Visa card prohibited countries

User can verify the location or card individually.

Implementation - Settings

Application environment uses jdk1.8._151, therefore it need to downgrade the facet from 4.0 to 3.0. This can be done modifying the org.eclipse.wst.common.project.facet.core.xml in the .settings directory. I accessed the directory via terminal for the modification.


```
GNU nano 2.0.6                  File: org.eclipse.wst.common.project.facet.core.xml

<?xml version="1.0" encoding="UTF-8"?>
<faceted-project>
  <runtime name="Apache Tomcat v9.0"/>
  <fixed facet="wst.jsdt.web"/>
  <fixed facet="jst.web"/>
  <fixed facet="java"/>
  <installed facet="java" version="1.8"/>
  <installed facet="jst.web" version="3.0"/>
  <installed facet="wst.jsdt.web" version="1.0"/>
</faceted-project>
```

Implementation - Validity check Screenshot

Card Checker with IP addr

This application is only for Demo purpose and do not stor

| Enter your IP address | Navigate |
| Enter your card number without space char | Validate |

check

Not Found

Please, provide a card number!

Card Checker with IP add

This application is only for Demo purpose and do not st

| Enter your IP address | Navigate |
| 37223423434 | Validate |

check

Not Found

invalid card length of chars

Implementation - Validation Screenshot
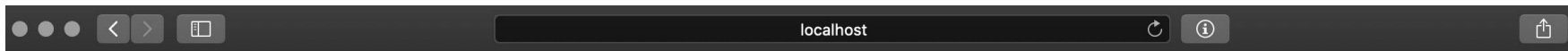
localhost

Card Checker with IP address Tracker

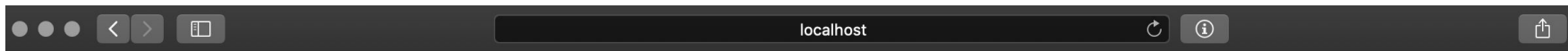This application is only for Demo purpose and do not store any data.

84.250.83.11	Navigate
4090893939372913	Validate
check	

You can use this VISA in this Finland Jyv�skyl�

THe Web application uses the following web services. You can get more details about the services by clicking on the URL.

Service Name	Description	URL
IP2Geo	This service can accept the ip address and give the detailed information about the location such as country, city, latitude, etc. For the testing purpose we need to set the licence key to 0.	Link to WSDL
CreditCardValidator	This service can accept the card number and give information such as card type, validity, valid length period, etc. There is a validCard method in the service, however this needs two parameters including expiration date for the execution. Therefore, I created the method to validate the card length in the servlet.	Link to WSDL

Implementation - Restricted Screenshot

Card Checker with IP address Tracker

This application is only for Demo purpose and do not store any data.

| 41.254.66.58 | Navigate |
| 4090878765654342 | Validate |

| check |

Due to some protocols reasons, This VISA card is not be able to use in this Libyan Arab Jamahiriya null . Please contact your service provide

THe Web application uses the following web services. You can get more details about the services by clicking on the URL.

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Implementation - Business Logic

MyCardAllowdValidator_Servlet validation code

```java
String country = client.getCountry(value);
String countryCode = client.getCountryCode(value);
String mCountry[] = {"AL", "BY", "BA", "CU", "CD", "ER", "IR", "IQ", "QZ", "LB","LY","MK","ME","NI","KP","RU","RS","SO","SS","SD","SY","TN","TR",
ArrayList<String> mcRestricted =  new ArrayList<String>(Arrays.asList(mCountry));


String vCountry[] = {"AL", "BY", "BA", "CU", "CD","IR", "IQ","LB","LY","ME","NI","KP","SO","SS","SD","SY","TR","UA","VE","YE","ZW"};
ArrayList<String> vcRestricted = new ArrayList<String>(Arrays.asList(vCountry));
String result = "";

CardValidator cardClient = new CardValidator();
String cardType = cardClient.getCardType(card);

if((mcRestricted.contains(countryCode) || countryCode.isEmpty()) && cardType.equals("MASTERCARD")) {
    result = "Due to some protocols reasons, This "+cardType +" is not be able to use in this "+ country+ ". Sorry for the incovenience";
}
else if((vcRestricted.contains(countryCode) || countryCode.isEmpty()) && cardType.equals("VISA")) {
    result = "Due to some protocols reasons, This "+cardType +" card is not be able to use in this "+ country+ ". Please contact your service pro
}
else {
```

Implementation - note

http://localhost:8080/MyServlet_ClientToRemoteWS_NC/

Card Checker with IP address Tracker

This application is only for Demo purpose and do not store any data.

130.234.229.63	Navigate
5314343409999999	Validate
check	

You can use this MASTERCARD in this   Please Obtain a License Key to Test Further or wait 2 hours and you can test more.

Takeaways & Conclusion

Application run on the jdk1.8,0_151, that needs modification for the facets in core.xml.

Goal set to Master and Visa card, however it will validate the other card providers as well.

IP2Geo convertor sometimes gives the country code null.

IP2Geo service require licence without get interrupted response.

CreditCardValidator service gives more methods like debit network id using the card number for possible transaction process.