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TE Comps
ITL LAB

Experiment 8: Mule

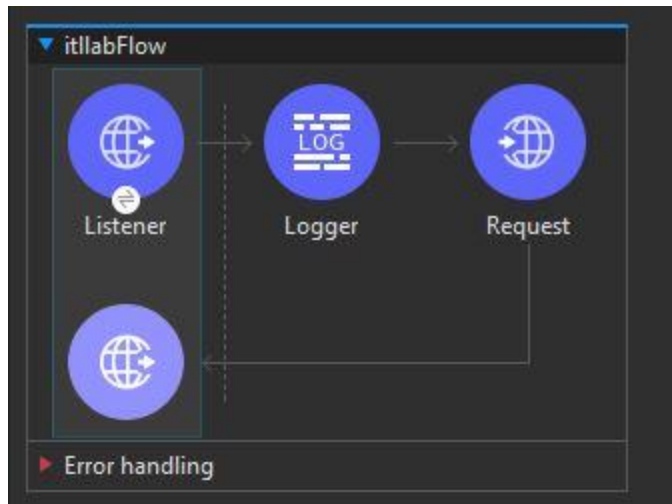**Aim**: Implement a web mashup using Mulesoft

Theory :

Mule is the lightweight integration engine that allows you to connect anything, anywhere. Rather than creating multiple point-to-point integrations between systems, services, APIs, and devices, you can use Mule to intelligently manage message routing, data mapping, orchestration, reliability, security, and scalability between nodes. Plug other systems and applications into Mule and let it handle all the communication between systems, enabling you to track and monitor everything that happens.

Mule is so named because it "carries the heavy development load" of connecting systems.

With Mule, you can…
- integrate applications or systems on-premises or in the cloud
- use out-of-the-box connectors to create SaaS integration applications
- build and expose APIs
- consume APIs
- create Web services that orchestrate calls to other services
- create interfaces to expose applications for mobile consumption
- integrate B2B with solutions that are secure, efficient, and quick to build and deploy
- shift applications onto the cloud
- connect B2B e-commerce activities

News API:

XML CODE:

```xml
<?xml version="1.0" encoding="UTF-8"?>

<mule xmlns:http="http://www.mulesoft.org/schema/mule/http"
xmlns="http://www.mulesoft.org/schema/mule/core"
      xmlns:doc="http://www.mulesoft.org/schema/mule/documentation"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.mulesoft.org/schema/mule/core
http://www.mulesoft.org/schema/mule/core/current/mule.xsd
```

```
http://www.mulesoft.org/schema/mule/http
http://www.mulesoft.org/schema/mule/http/current/mule-http.xsd">
        <http:listener-config name="HTTP_Listener_config" doc:name="HTTP Listener
config" doc:id="999147d0-6d6f-4459-8d12-4d16d283bee4" >
                <http:listener-connection host="localhost" port="8081" />
        </http:listener-config>
        <flow name="itllabFlow" doc:id="f8ce99fe-d602-41f1-a7fc-6b5dcdc2bb10" >
                <http:listener doc:name="Listener"
doc:id="2aa49575-0cba-476f-85e7-3a9bf073fb1e" config-ref="HTTP_Listener_config"
path="/"/>
                <logger level="INFO" doc:name="Logger"
doc:id="a4406328-8229-42e5-8c5b-9c54aea0a62f" />
                <http:request method="GET" doc:name="Request"
doc:id="3a0712f7-a1e9-46cb-a291-ecf65f8a8f38"
url="https://newsapi.org/v2/top-headlines?country=us&amp;category=sports&amp;api
Key=2680777f2b434adc879881bd3f666169"/>
        </flow>
</mule>
```

Cricbuzz API:

XML Code:

```xml
<?xml version="1.0" encoding="UTF-8"?>

<mule xmlns:http="http://www.mulesoft.org/schema/mule/http"
xmlns="http://www.mulesoft.org/schema/mule/core"
       xmlns:doc="http://www.mulesoft.org/schema/mule/documentation"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.mulesoft.org/schema/mule/core
http://www.mulesoft.org/schema/mule/core/current/mule.xsd
http://www.mulesoft.org/schema/mule/http
http://www.mulesoft.org/schema/mule/http/current/mule-http.xsd">
       <http:listener-config name="HTTP_Listener_config" doc:name="HTTP Listener
config" doc:id="d1d54172-dbad-4cdb-b2e8-56f0c2e3dbbe" >
             <http:listener-connection host="localhost" port="8081" />
       </http:listener-config>
       <flow name="cricbuzzFlow" doc:id="6475c4e5-4333-466c-9d34-94f51a744fb4"
>
             <http:listener doc:name="Listener"
doc:id="79965cf7-0d6d-46ba-b887-ac06e0a92bc9"
config-ref="HTTP_Listener_config" path="/"/>
             <logger level="INFO" doc:name="Logger"
doc:id="9ac7232a-7f72-40ce-ba12-a0b8bf39ef6f" />
```
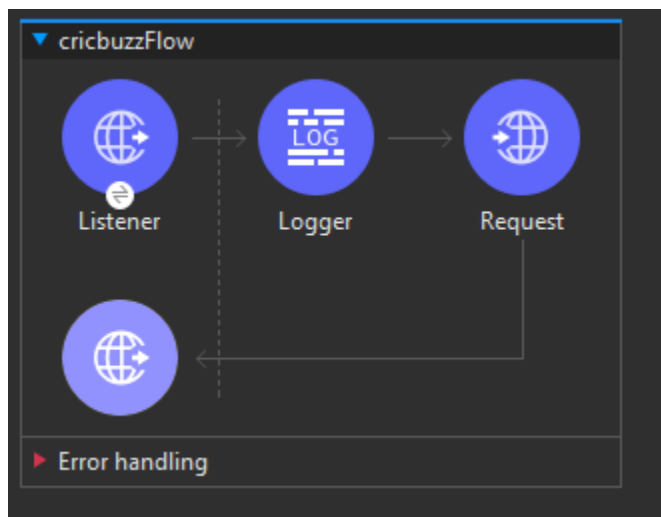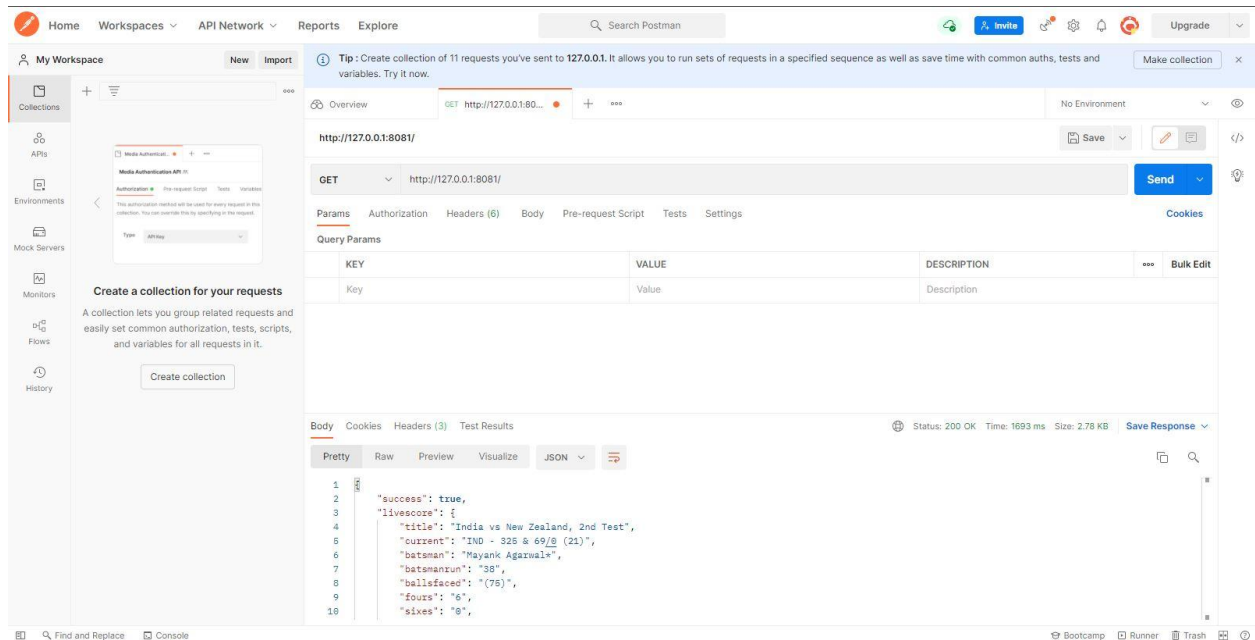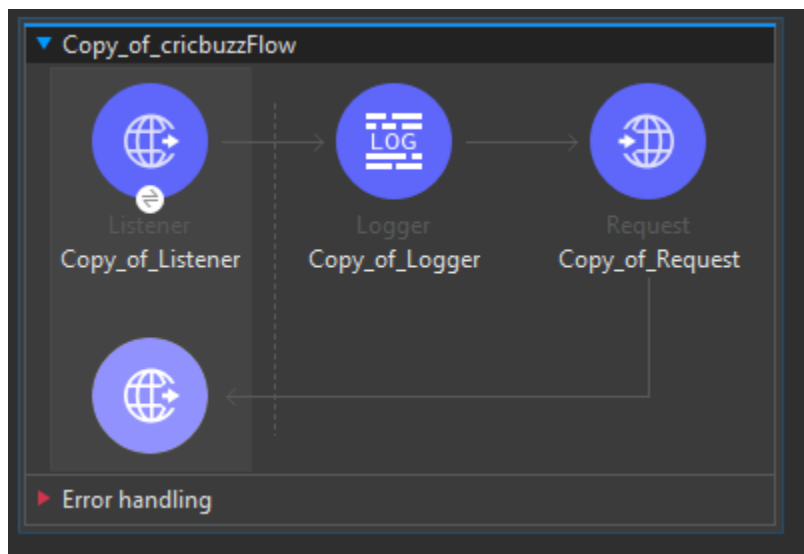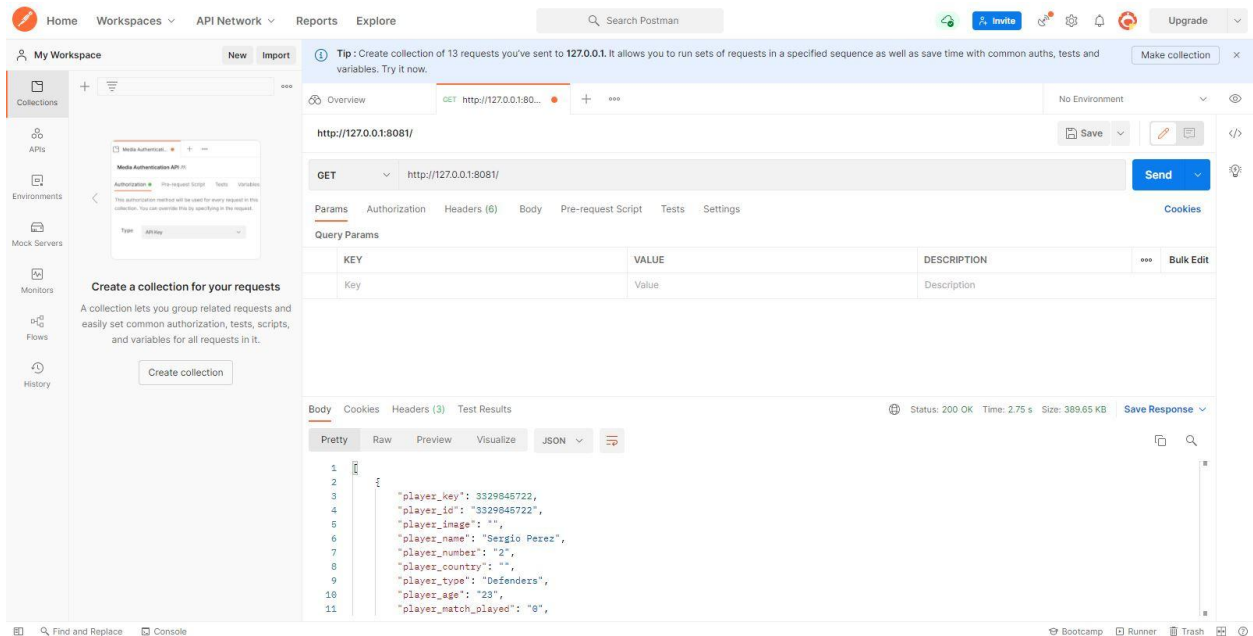
```
            <http:request method="GET" doc:name="Request"
doc:id="b9991aff-28a0-44ef-aae6-cf1ddb12f31b"
url="http://cricket-api.vercel.app/cri.php">
                    <http:query-params ><![CDATA[#[output application/java
---
{
    "url" :
"https://www.cricbuzz.com/live-cricket-scores/38511/ban-vs-pak-2nd-test-pakistan-to
ur-of-bangladesh-2021"
}]]]></http:query-params>
            </http:request>
        </flow>
</mule>
```

API-Football API:

XML Code:

```xml
<?xml version="1.0" encoding="UTF-8"?>

<mule xmlns:http="http://www.mulesoft.org/schema/mule/http"
xmlns="http://www.mulesoft.org/schema/mule/core"
      xmlns:doc="http://www.mulesoft.org/schema/mule/documentation"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.mulesoft.org/schema/mule/core
http://www.mulesoft.org/schema/mule/core/current/mule.xsd
http://www.mulesoft.org/schema/mule/http
http://www.mulesoft.org/schema/mule/http/current/mule-http.xsd">
      <http:listener-config name="HTTP_Listener_config" doc:name="HTTP Listener
config" doc:id="58d9aa46-8460-41ef-8d1c-9b07cbbd2424" >
            <http:listener-connection host="localhost" port="8081" />
      </http:listener-config>
      <flow name="Copy_of_cricbuzzFlow"
doc:id="08d12362-996d-496e-84ca-e2d8dfb32399" >
            <http:listener doc:name="Copy_of_Listener"
doc:id="1437532a-0aa0-40cb-8c15-c8c5de1b1dd8"
config-ref="HTTP_Listener_config" path="/" />
            <logger level="INFO" doc:name="Copy_of_Logger"
doc:id="8caa4a3c-9f4d-48f4-9b67-20c10982fa97" />
```

```xml
        <http:request method="PATCH" doc:name="Copy_of_Request"
doc:id="19541d60-c1df-4c4d-bd63-2bcda4ec988b"
url="https://apiv3.apifootball.com/?action=get_players&amp;player_name=Sergio&amp;APIkey=6402b997e14caac68fa96de892a8195771e7795fd9db87017f74a1a00cf4062c" >
            <http:query-params ><![CDATA[#[output application/java
---
{
    "url" :
"https://www.cricbuzz.com/live-cricket-scores/38587/2nd-test-new-zealand-tour-of-india-2021"
}]]]></http:query-params>
        </http:request>
    </flow>
</mule>
```

Conclusion:

In this experiment, we learned how to integrate APIs using Mulesoft.