IMPLEMENTATION JOURNAL

Camel Route Visualizer

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Test Case Version	1.0
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Goal :

To build a visual tool that:

- Accepts a GitHub URL as input.
- Extracts Apache Camel route XMLs from the repository.
- Parses routing logic (<from>, <to>, <choice>, <when>, <otherwise>) using Python.
- Renders service-wise Mermaid diagrams inside a dynamic, searchable web UI.
- Supports interactivity like zoom, full-screen view, download, and right-click tooltips.

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Project Workflow Documentation (with Docker Installation)

Approach 1 :

Step 1: Create the `run_visualizer.sh` File

Create the shell script:

```
nano run_visualizer.sh
```

Paste the following content:

```
#!/bin/bash

# Step 1: Check for Docker
if ! command -v docker &> /dev/null
then
    echo "🐋 Docker not found. Installing Docker..."

    # Update and install Docker for Ubuntu
    sudo apt-get update
    sudo apt-get install -y \
        ca-certificates \
        curl \
        gnupg \
        lsb-release

    # Add Docker's official GPG key
    sudo mkdir -p /etc/apt/keyrings
    curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg
--dearmor -o /etc/apt/keyrings/docker.gpg
```

```
    # Set up stable repo
    echo \
      "deb [arch=$(dpkg --print-architecture)
signed-by=/etc/apt/keyrings/docker.gpg]
https://download.docker.com/linux/ubuntu \
      $(lsb_release -cs) stable" | \
      sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

    sudo apt-get update
    sudo apt-get install -y docker-ce docker-ce-cli containerd.io
docker-compose-plugin

    echo "✅ Docker installed successfully."
else
    echo "✅ Docker already installed."
fi

# Step 2: Pull Docker Image
echo "📥 Pulling Docker image: atresh/camelflow-visualizer:latest"
docker pull atresh/camelflow-visualizer:latest

# Step 3: Run the Container
echo "🚀 Running CamelFlow Visualizer on port 5000"
docker run -it -p 5000:5000 atresh/camelflow-visualizer:latest
```

Step 2: Run the Script

```
bash run_visualizer.sh
```

Expected output will show:

- Whether Docker was installed or already present
- Docker container starts and runs

Step 3: Enter GitHub URL and Version

After container launch (or in UI or inside the container), prompt the user to provide:

- **Git Repository URL**

  Example: http://localhost/abc/camel-input

- **Version**

Step 4: Click on Clone

Through:

- UI button

And routes will be made with their respective diagram

Approach 2:

Step 1: Create the `run_script.sh` File

Create the shell script:

```
nano run_script.sh
```

Paste the following content:

```
#!/bin/bash

IMAGE_NAME="aryanmamania17/route-visualizer:latest"
CONTAINER_NAME="camel-route-visualizer"

# Step 1: Check if Docker is installed
if ! command -v docker &> /dev/null
then
    echo "🚧 Docker not found. Installing Docker..."

    # Update & install prerequisites
    sudo apt-get update
    sudo apt-get install -y ca-certificates curl gnupg lsb-release

    # Add Docker’s GPG key
    sudo mkdir -p /etc/apt/keyrings
    curl -fsSL https://download.docker.com/linux/ubuntu/gpg | \
      sudo gpg --dearmor -o /etc/apt/keyrings/docker.gpg

    # Add Docker repo
    echo \
      "deb [arch=$(dpkg --print-architecture)
signed-by=/etc/apt/keyrings/docker.gpg] \
      https://download.docker.com/linux/ubuntu $(lsb_release -cs)
stable" | \
      sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

    # Install Docker
```

```
    sudo apt-get update
    sudo apt-get install -y docker-ce docker-ce-cli containerd.io
docker-buildx-plugin docker-compose-plugin

    echo "✅ Docker installed successfully."
else
    echo "✅ Docker is already installed."
fi

# Step 2: Pull your image
echo "📦 Pulling image: $IMAGE_NAME"
docker pull $IMAGE_NAME

# Step 3: Run container
echo "🚀 Running container..."
docker run -d --rm --name $CONTAINER_NAME -p 5000:5000 $IMAGE_NAME

echo "🌐 Application running at: http://localhost:5000"
```

Step 2: Run the Script

```
bash run_script.sh
```

Expected output will show:

- Whether Docker was installed or already present
- Docker container starts and runs

Step 3: Enter GitHub URL and Version

After container launch (or in UI or inside the container), prompt the user to provide:

- **Git Repository URL**

  Example: http://<your-ip>/abc/camel-input

- **Version**

Step 4: Click on Clone

Through:

- UI button

And routes will be made with their respective diagram