**Create kjar in Drool**

**Objective:**

**1. Create a Drools KJAR Project**

First, create a Maven project that contains your Drools rules and processes.

**Project Structure**

drools-kjar/

│

├── src/

│ ├── main/

│ │ ├── java/

│ │ │ └── com/

│ │ │ └── example/

│ │ │ └── Customer.java

│ │ ├── resources/

│ │ │ └── rules/

│ │ │ └── discountRules.drl

├── pom.xml

└── README.md

**pom.xml for Drools KJAR Project**

**pom.xml**:

<project xmlns="http://maven.apache.org/POM/4.0.0"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/POM/4.0.0">

<modelVersion>4.0.0</modelVersion>

<groupId>com.example</groupId>

<artifactId>drools-kjar</artifactId>

<version>1.0-SNAPSHOT</version>

<packaging>jar</packaging>

<dependencies>

<dependency>

<groupId>org.drools</groupId>

<artifactId>drools-core</artifactId>

<version>8.0.0.Final</version>

</dependency>

<dependency>

<groupId>org.drools</groupId>

<artifactId>drools-compiler</artifactId>

<version>8.0.0.Final</version>

</dependency>

<dependency>

<groupId>org.kie</groupId>

<artifactId>kie-api</artifactId>

<version>8.0.0.Final</version>

</dependency>

<!-- Add other dependencies as needed -->

</dependencies>

<build>

<plugins>

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-jar-plugin</artifactId>

<version>3.2.0</version>

<configuration>

<archive>

<manifestEntries>

<Main-Class>com.example.Main</Main-Class>

</manifestEntries>

</archive>

</configuration>

</plugin>

</plugins>

</build>

</project>

**Customer.java**

**src/main/java/com/example/Customer.java**:

package com.example;

public class Customer {

private String name;

private double purchaseAmount;

private boolean isPremium;

// Constructors, getters, and setters

public Customer(String name, double purchaseAmount, boolean isPremium) {

this.name = name;

this.purchaseAmount = purchaseAmount;

this.isPremium = isPremium;

}

public String getName() { return name; }

public void setName(String name) { this.name = name; }

public double getPurchaseAmount() { return purchaseAmount; }

public void setPurchaseAmount(double purchaseAmount) { this.purchaseAmount = purchaseAmount; }

public boolean isPremium() { return isPremium; }

public void setPremium(boolean isPremium) { this.isPremium = isPremium; }

}

**discountRules.drl**

**src/main/resources/rules/discountRules.drl**:

package com.example.rules;

import com.example.Customer;

rule "Premium Customer Discount"

when

$customer : Customer(isPremium == true)

then

System.out.println($customer.getName() + " is eligible for a premium discount.");

end

rule "High Purchase Amount Discount"

when

$customer : Customer(purchaseAmount > 100)

then

System.out.println($customer.getName() + " is eligible for a high purchase amount discount.");

end

**2. Build the KJAR**

Navigate to the drools-kjar project directory and build the JAR file:

mvn clean package

The output KJAR file will be located in the target directory, named drools-kjar-1.0-SNAPSHOT.jar.

**3. Use the KJAR in Another Project**

Now, create a new project that uses the KJAR.

**Project Structure**

drools-consumer/

│

├── src/

│ ├── main/

│ │ ├── java/

│ │ │ └── com/

│ │ │ └── example/

│ │ │ └── DroolsApp.java

├── pom.xml

└── README.md

**pom.xml for Drools Consumer Project**

**pom.xml**:

<project xmlns="http://maven.apache.org/POM/4.0.0"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/POM/4.0.0">

<modelVersion>4.0.0</modelVersion>

<groupId>com.example</groupId>

<artifactId>drools-consumer</artifactId>

<version>1.0-SNAPSHOT</version>

<repositories>

<repository>

<id>local-repo</id>

<url>file://${project.basedir}/../drools-kjar/target</url>

</repository>

</repositories>

<dependencies>

<dependency>

<groupId>com.example</groupId>

<artifactId>drools-kjar</artifactId>

<version>1.0-SNAPSHOT</version>

<scope>compile</scope>

</dependency>

<dependency>

<groupId>org.drools</groupId>

<artifactId>drools-core</artifactId>

<version>8.0.0.Final</version>

</dependency>

<dependency>

<groupId>org.drools</groupId>

<artifactId>drools-compiler</artifactId>

<version>8.0.0.Final</version>

</dependency>

<dependency>

<groupId>org.kie</groupId>

<artifactId>kie-api</artifactId>

<version>8.0.0.Final</version>

</dependency>

</dependencies>

</project>

**DroolsApp.java**

**src/main/java/com/example/DroolsApp.java**:

package com.example;

import org.kie.api.KieServices;

import org.kie.api.runtime.KieContainer;

import org.kie.api.runtime.KieSession;

import com.example.Customer;

public class DroolsApp {

public static void main(String[] args) {

try {

// Load the KJAR

KieServices kieServices = KieServices.Factory.get();

KieContainer kieContainer = kieServices.newKieClasspathContainer();

KieSession kieSession = kieContainer.newKieSession();

// Create test data

Customer customer1 = new Customer("Alice", 150.0, true);

Customer customer2 = new Customer("Bob", 90.0, false);

// Insert data into session

kieSession.insert(customer1);

kieSession.insert(customer2);

// Fire rules

kieSession.fireAllRules();

kieSession.dispose();

} catch (Exception e) {

e.printStackTrace();

}

}

}

**4. Run the Consumer Project**

Navigate to the drools-consumer project directory and build and run the application:

mvn clean package

java -cp target/drools-consumer-1.0-SNAPSHOT.jar com.example.DroolsApp

**Explanation**

1. **Drools KJAR Project**: Defines Drools rules and processes, and packages them into a JAR file.
2. **Drools Consumer Project**: Uses the KJAR file by adding it as a dependency and runs rules against test data.