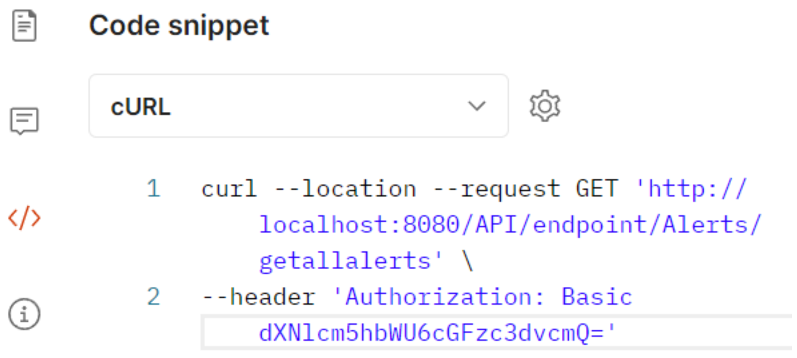
CODE DOCUMENTATION

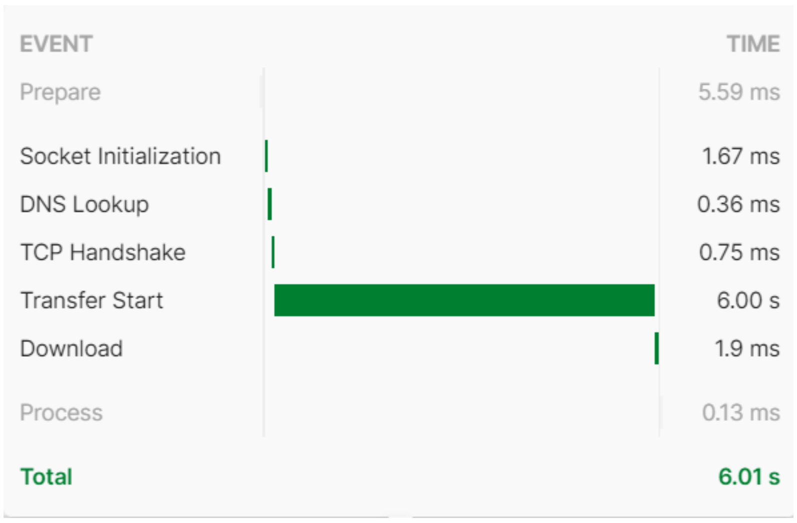
I GET All Alerts

End Point	http://localhost:8080/API/endpoint/Alerts/getallalerts
Method	GET
Produces	JSON
Session Management	N/A – Cookies
Curl	



```
curl --location --request GET 'http://localhost:8080/API/endpoint/Alerts/getallalerts' \
--header 'Authorization: Basic dXNlcm5hbWU6cGFzc3dvcmQ='
```

Image 1-CURL



EVENT	TIME
Prepare	5.59 ms
Socket Initialization	1.67 ms
DNS Lookup	0.36 ms
TCP Handshake	0.75 ms
Transfer Start	6.00 s
Download	1.9 ms
Process	0.13 ms
Total	6.01 s

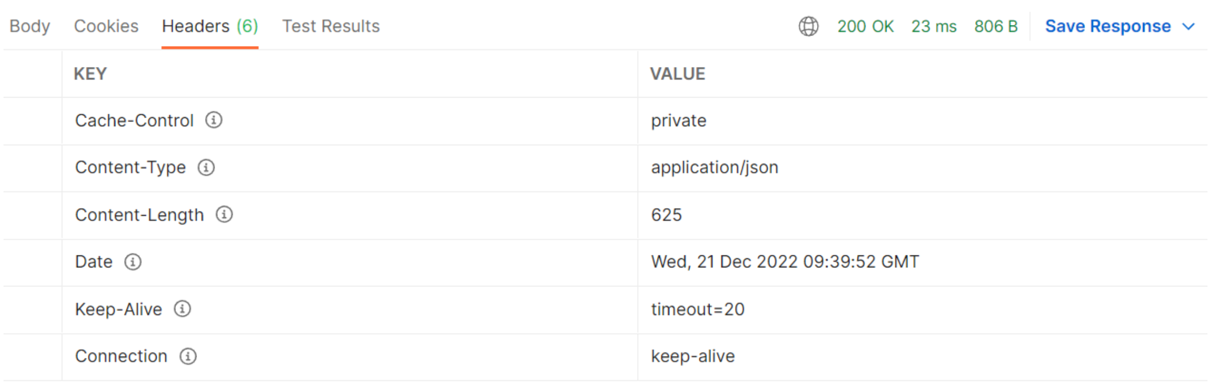
Image 2 (Transmission Rate)

Transaction output

```
Dec 21, 2022 4:20:01 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 2 * Server has received a request on thread http-nio-8080-exec-7
2 > GET http://localhost:8080/API/endpoint/Alerts/getallalerts
2 > accept: */*
```

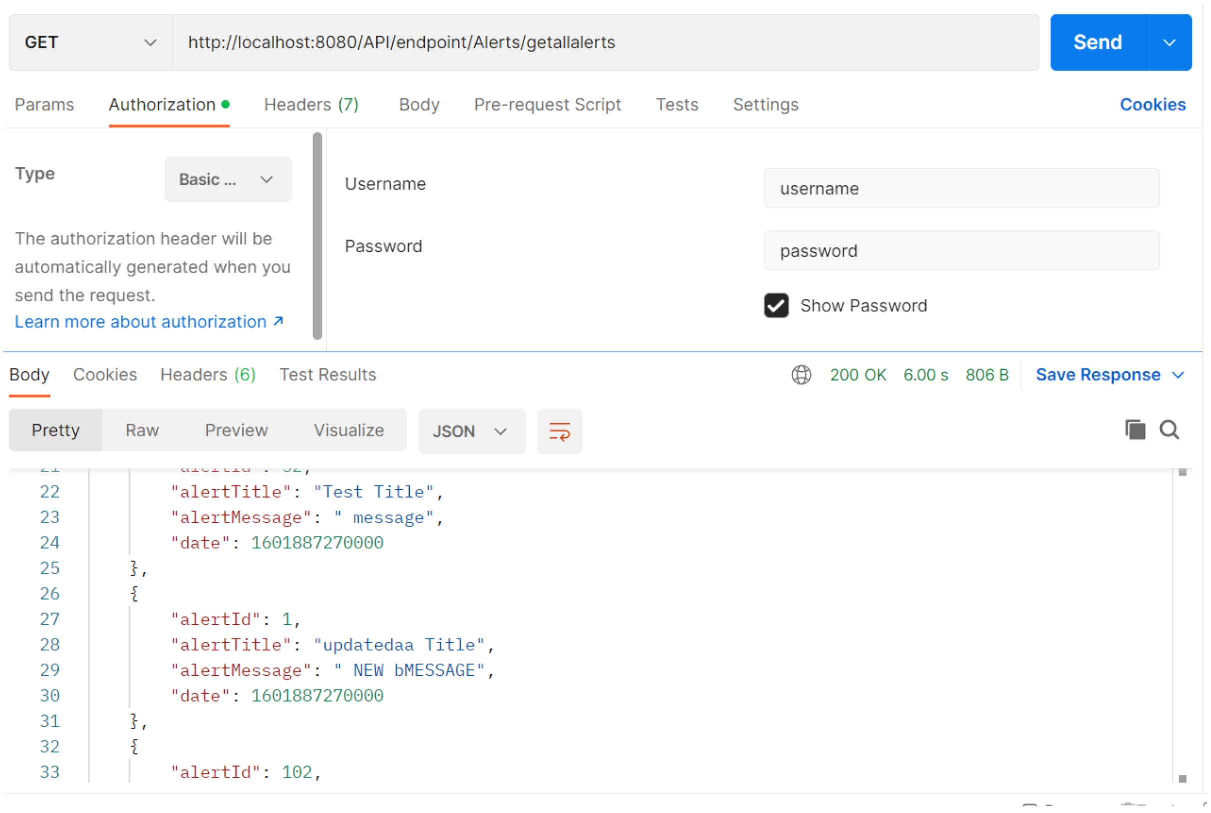
```
2 > accept-encoding: gzip, deflate, br
2 > authorization: authorization: Basic dXNlcm5hbWU6cGFzc3dvcmQ=
2 > connection: keep-alive
2 > host: localhost:8080
2 > postman-token: 560f8ce4-b3d9-416c-9af2-f501c570adec
2 > user-agent: PostmanRuntime/7.30.0

username
password
security filter called
GET ALETS FUNCTION INVOKED
Hibernate:
    /*
from
    Alert */ select
        a1_0.alertId,
        a1_0.AlertMessage,
        a1_0.AlertTitle,
        a1_0.date
    from
        AlertModel a1_0
FINAL executed
Dec 21, 2022 4:20:01 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 2 * Server responded with a response on thread http-nio-8080-exec-7
2 < 200
2 < Content-Type: application/json
```

Encryption with BASIC-AUTH (authentication and Authorization)



KEY	VALUE
Cache-Control	private
Content-Type	application/json
Content-Length	625
Date	Wed, 21 Dec 2022 09:39:52 GMT
Keep-Alive	timeout=20
Connection	keep-alive

Response output


GET http://localhost:8080/API/endpoint/Alerts/getallalerts Send

Params | Authorization ● | Headers (7) | Body | Pre-request Script | Tests | Settings | Cookies

Type: Basic ...

The authorization header will be automatically generated when you send the request.
Learn more about authorization ↗

Username	username
Password	password

✓ Show Password

Body | Cookies | Headers (6) | Test Results — 200 OK 6.00 s 806 B Save Response

Pretty | Raw | Preview | Visualize | JSON

```
            "alertTitle": "Test Title",
            "alertMessage": " message",
            "date": 1601887270000
        },
        {
            "alertId": 1,
            "alertTitle": "updatedaa Title",
            "alertMessage": " NEW bMESSAGE",
            "date": 1601887270000
        },
        {
            "alertId": 102,
```

II – GET SINGLE ALERT

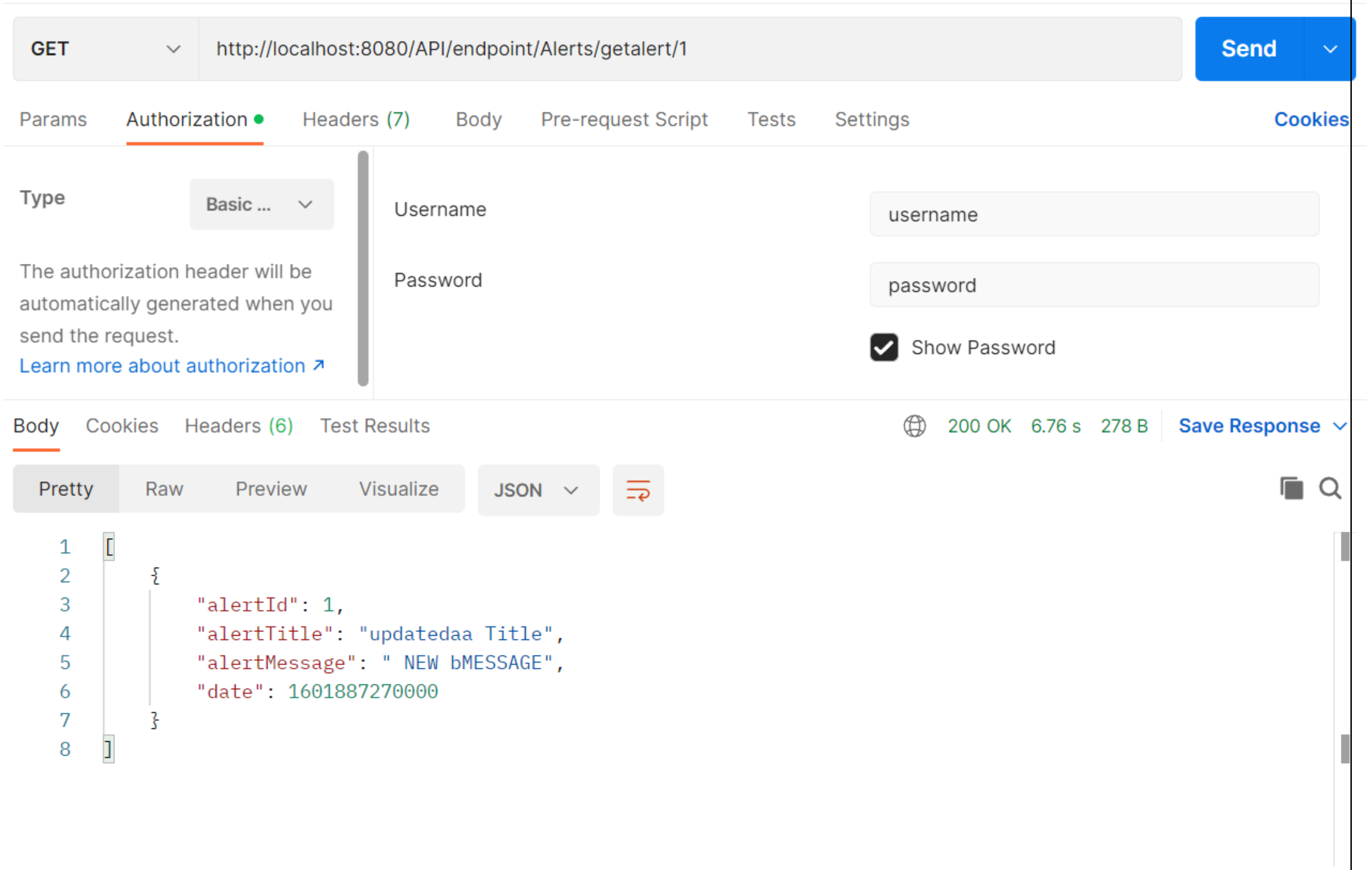
End Point	http://localhost:8080/API/endpoint/Alerts/getalert/1
Method	GET
Produces	JSON
Session Management	N/A – Cookies

Transmission output

```
INFO: 1 * Server has received a request on thread http-nio-8080-exec-3
1 > GET http://localhost:8080/API/endpoint/Alerts/getalert/1
1 > accept: */*
1 > accept-encoding: gzip, deflate, br
1 > authorization: Basic dXNlcm5hbWU6cGFzc3dvcmQ=
1 > connection: keep-alive
1 > host: localhost:8080
1 > postman-token: 7cfd2063-155f-4b08-9b51-6837d5eccaec
1 > user-agent: PostmanRuntime/7.30.0

username
password
security filter called
Dec 21, 2022 4:17:03 PM org.hibernate.Version logVersion
INFO: HHH000412: Hibernate ORM core version 6.0.2.Final
```

```
Dec 21, 2022 4:17:04 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl configure
WARN: HHH10001002: Using built-in connection pool (not intended for
production use)
Dec 21, 2022 4:17:04 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl buildCreator
INFO: HHH10001005: Loaded JDBC driver class: org.postgresql.Driver
Dec 21, 2022 4:17:04 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl buildCreator
INFO: HHH10001012: Connecting with JDBC URL
[jdbc:postgresql://localhost:5432/WeConnect?createDatabaseIfNotExist=true&&
autoReconnect=true]
Dec 21, 2022 4:17:04 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl buildCreator
INFO: HHH10001001: Connection properties: {password=****, user=postgres}
Dec 21, 2022 4:17:04 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl buildCreator
INFO: HHH10001003: Autocommit mode: false
Dec 21, 2022 4:17:04 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl$PooledConnections <init>
INFO: HHH10001115: Connection pool size: 20 (min=1)
Dec 21, 2022 4:17:04 PM
org.hibernate.engine.jdbc.dialect.internal.DialectFactoryImpl
logSelectedDialect
INFO: HHH000400: Using dialect: org.hibernate.dialect.PostgreSQLDialect
Dec 21, 2022 4:17:07 PM
org.hibernate.resource.transaction.backend.jdbc.internal.DdlTransactionIsol
atorNonJtaImpl getIsolatedConnection
INFO: HHH10001501: Connection obtained from JdbcConnectionAccess
[org.hibernate.engine.jdbc.env.internal.JdbcEnvironmentInitiator$Connection
ProviderJdbcConnectionAccess@41d2c01d] for (non-JTA) DDL execution was not
in auto-commit mode; the Connection 'local transaction' will be committed
and the Connection will be set into auto-commit mode.
Hibernate:
    /*
FROM
    api.main.AlertSystem.Alert object
WHERE
    object.alertId = : id */ select
        a1_0.alertId,
        a1_0.AlertMessage,
        a1_0.AlertTitle,
        a1_0.date
    from
        AlertModel a1_0
    where
        a1_0.alertId=?
Dec 21, 2022 4:17:09 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 1 * Server responded with a response on thread http-nio-8080-exec-3
1 < 200
1 < Content-Type: application/json
```

Output


GET http://localhost:8080/API/endpoint/Alerts/getalert/1

Type: Basic ...

The authorization header will be automatically generated when you send the request.
Learn more about authorization ↗

Username: username

Password: password

✓ Show Password

200 OK 6.76 s 278 B

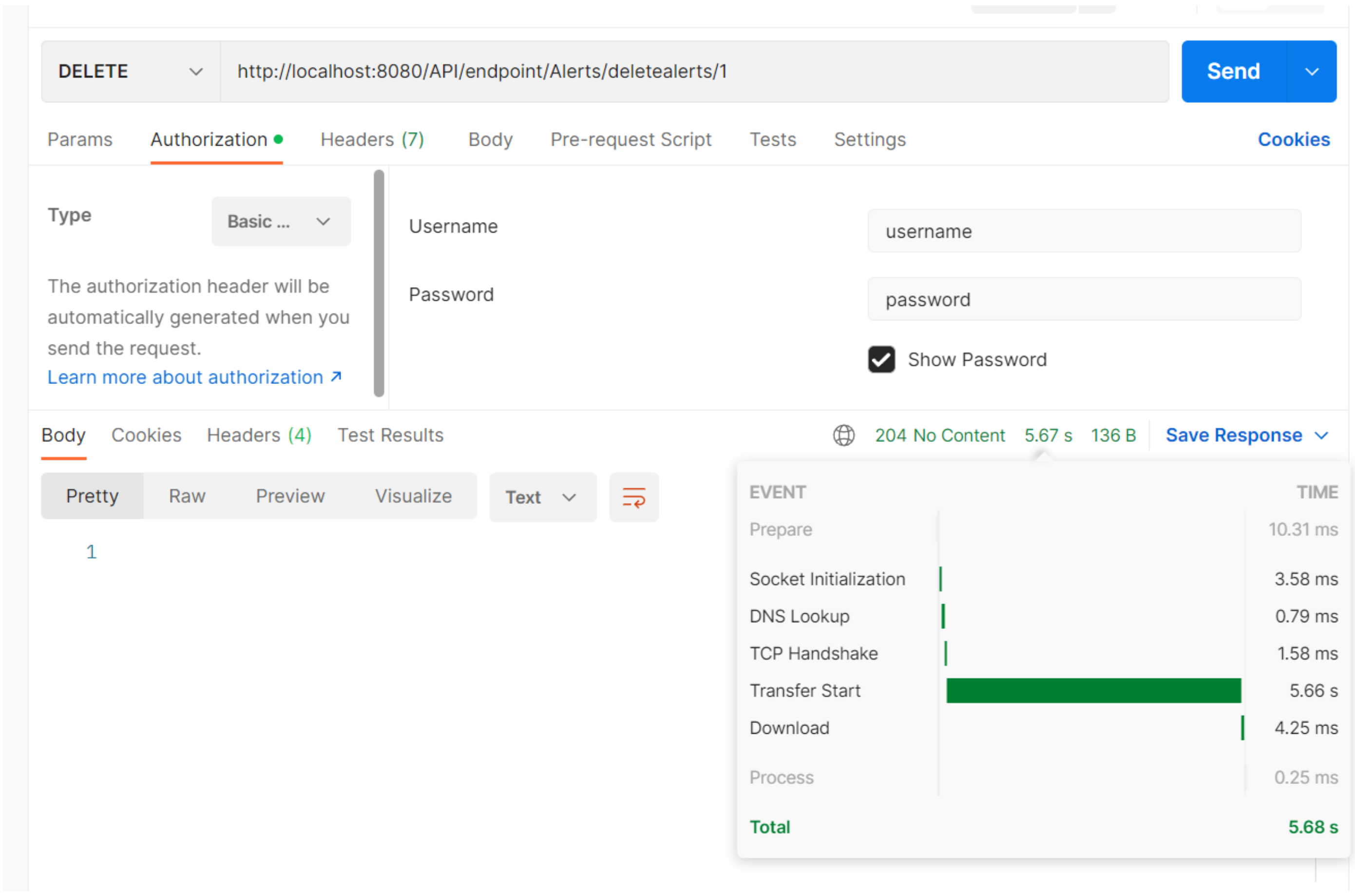
```
[
    {
        "alertId": 1,
        "alertTitle": "updatedaa Title",
        "alertMessage": " NEW bMESSAGE",
        "date": 1601887270000
    }
]
```

III Delete alert

End Point	http://localhost:8080/API/endpoint/Alerts/deletealerts/1
Method	Delete
Produces	204 NO_CONTENT
Session Management	N/A – Cookies

Transmission output

```
Dec 21, 2022 4:27:23 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 1 * Server has received a request on thread http-nio-8080-exec-1
1 > DELETE http://localhost:8080/API/endpoint/Alerts/deletealerts/1
1 > accept: */*
1 > accept-encoding: gzip, deflate, br
1 > authorization: Basic dXNlcm5hbWU6cGFzc3dvcmQ=
1 > connection: keep-alive
1 > host: localhost:8080
1 > postman-token: 44379134-4428-4bbd-abe8-0a12550b4aad
1 > user-agent: PostmanRuntime/7.30.0

username
password

NFO: HHH10001501: Connection obtained from JdbcConnectionAccess
[org.hibernate.engine.jdbc.env.internal.JdbcEnvironmentInitiator$Connection
ProviderJdbcConnectionAccess@53cb6147] for (non-JTA) DDL execution was not
in auto-commit mode; the Connection 'local transaction' will be committed
and the Connection will be set into auto-commit mode.
Hibernate:
    /* DELETE
    FROM
        api.main.AlertSystem.Alert object
    WHERE
        object.alertId= : id */ delete
    from
        AlertModel
    where
        alertId=?
Dec 21, 2022 4:27:29 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 1 * Server responded with a response on thread http-nio-8080-exec-1
1 < 204
```



DELETE http://localhost:8080/API/endpoint/Alerts/deletealerts/1

Authorization — Type: Basic ...

The authorization header will be automatically generated when you send the request.
Learn more about authorization ↗

Username: username
Password: password
✓ Show Password

Body — 204 No Content 5.67 s 136 B

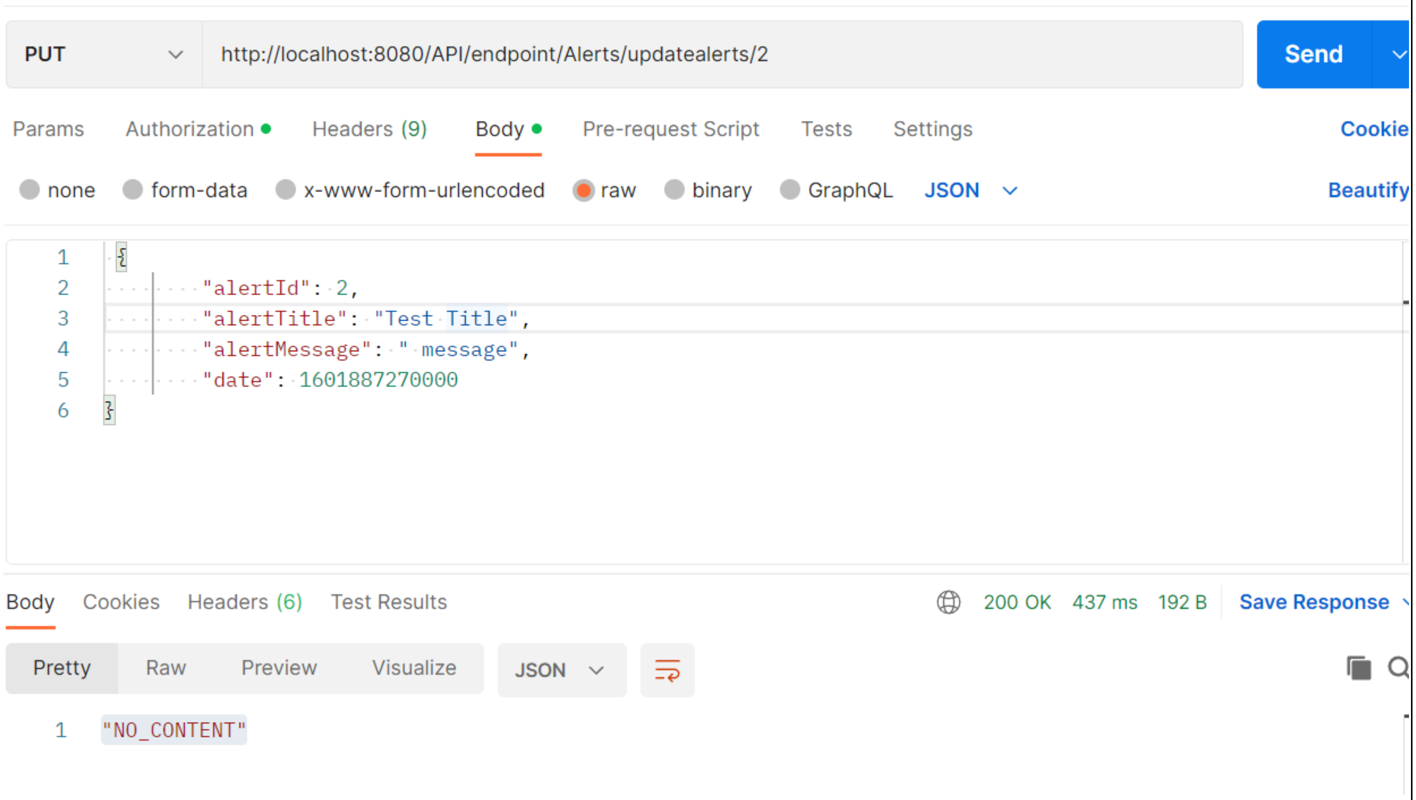
```
EVENT                 TIME
Prepare               10.31 ms
Socket Initialization 3.58 ms
DNS Lookup            0.79 ms
TCP Handshake         1.58 ms
Transfer Start        5.66 s
Download              4.25 ms
Process               0.25 ms
Total                 5.68 s
```

IV Update alerts

End point	http://localhost:8080/API/endpoint/Alerts/updatealerts/2
Method	PUT
Produces	200 OK "NO_CONTENT"
Consumes	JSON
Session Management	N/A – Cookies

Transmission output

```
Dec 21, 2022 5:37:14 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 1 * Server responded with a response on thread http-nio-8080-exec-10
1 < 200
1 < Content-Type: application/json

Dec 21, 2022 5:37:54 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 2 * Server has received a request on thread http-nio-8080-exec-12
2 > GET http://localhost:8080/API/endpoint/Alerts/updatealerts/2
2 > accept: */*
2 > accept-encoding: gzip, deflate, br
2 > authorization: Basic dXNlcm5hbWU6cGFzc3dvcmQ=
2 > connection: keep-alive
2 > content-length: 133
2 > content-type: application/json
2 > host: localhost:8080
2 > postman-token: afcf1347-1864-4c7d-9bc8-f6145d7a9099
2 > user-agent: PostmanRuntime/7.30.0

Dec 21, 2022 5:37:54 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 2 * Server responded with a response on thread http-nio-8080-exec-12
2 < 405
2 < Allow: OPTIONS,PUT

Dec 21, 2022 5:37:58 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 3 * Server has received a request on thread http-nio-8080-exec-13
3 > PUT http://localhost:8080/API/endpoint/Alerts/updatealerts/2
3 > accept: */*
3 > accept-encoding: gzip, deflate, br
3 > authorization: Basic dXNlcm5hbWU6cGFzc3dvcmQ=
3 > connection: keep-alive
3 > content-length: 133
3 > content-type: application/json
3 > host: localhost:8080
3 > postman-token: 220e9d04-b2b4-433d-9ffe-2101bbaf2129
3 > user-agent: PostmanRuntime/7.30.0

username
password
security filter called
Hibernate:
    /*
FROM
    api.main.AlertSystem.Alert object
WHERE
    object.alertId = : id */ select
        a1_0.alertId,
        a1_0.AlertMessage,
        a1_0.AlertTitle,
        a1_0.date
    from
        AlertModel a1_0
    where
        a1_0.alertId=?
alert msg and tile
Hibernate:
    /* UPDATE
        api.main.AlertSystem.Alert object
    SET
        object.alertMessage= : msg ,
        object.alertTitle= : title
    where
        object.alertId= : id */ update AlertModel
    set
        AlertMessage=?,
        AlertTitle=?
    where
        alertId=?
Dec 21, 2022 5:37:59 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 3 * Server responded with a response on thread http-nio-8080-exec-13
3 < 200
3 < Content-Type: application/json
```



http://localhost:8080/API/endpoint/Alerts/updatealerts/2

```
{
    "alertId": 2,
    "alertTitle": "Test Title",
    "alertMessage": " message",
    "date": 1601887270000
}
```

200 OK 437 ms 192 B

```
"NO_CONTENT"
```

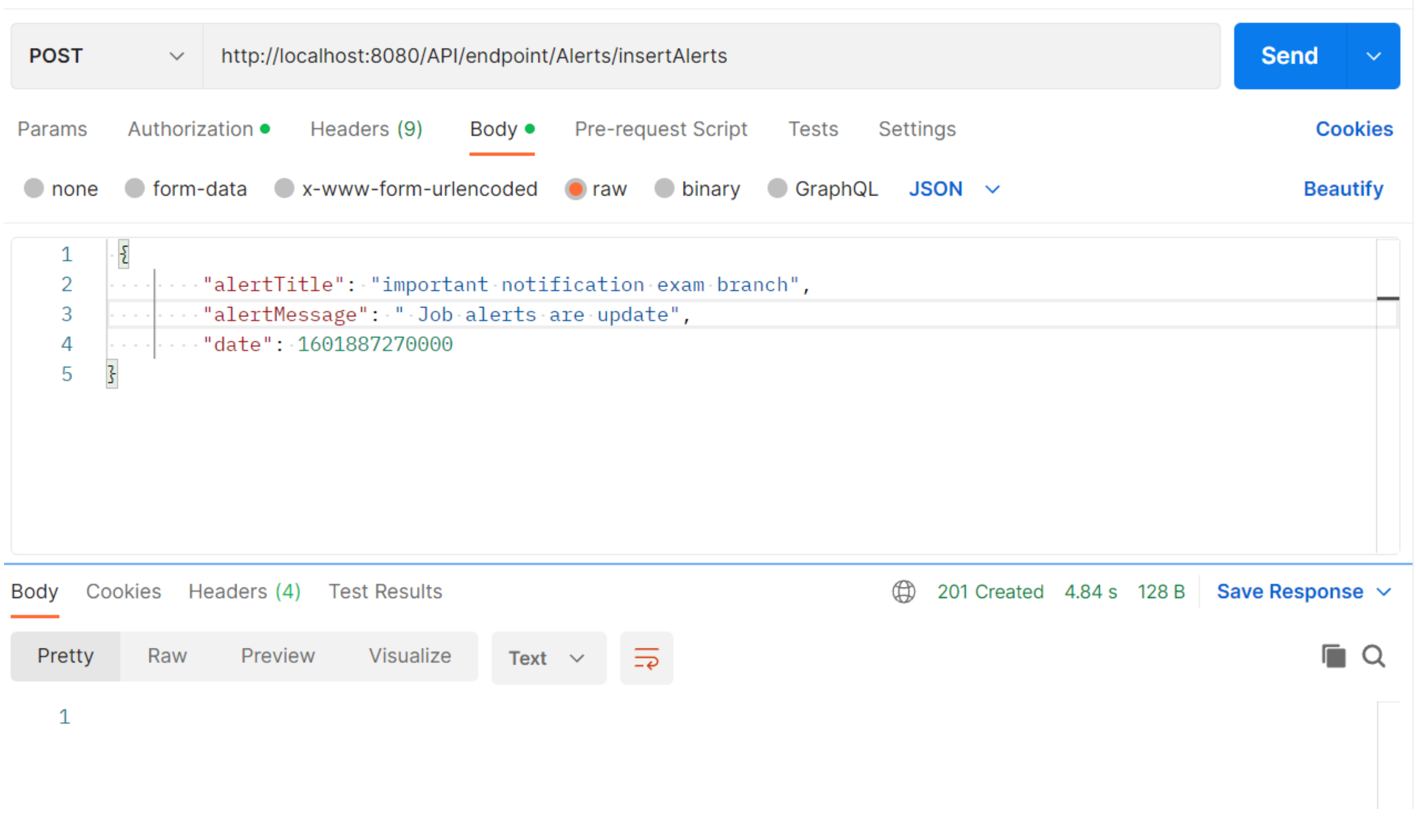
V.INSERT ALERTS

End point	http://localhost:8080/API/endpoint/Alerts/insertAlerts
Method	POST
Produces	201 OK "created”
Consumes	JSON
Session Management	N/A – Cookies

Transmission output

```
Dec 21, 2022 5:46:12 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 1 * Server has received a request on thread http-nio-8080-exec-15
1 > POST http://localhost:8080/API/endpoint/Alerts/insertAlerts
1 > accept: */*
1 > accept-encoding: gzip, deflate, br
1 > authorization: Basic dXNlcm5hbWU6cGFzc3dvcmQ=
1 > connection: keep-alive
1 > content-length: 148
1 > content-type: application/json
1 > host: localhost:8080
1 > postman-token: 20f5d266-065a-4534-a13e-3e0462453c20
1 > user-agent: PostmanRuntime/7.30.0

username
password
security filter called
Dec 21, 2022 5:46:13 PM org.hibernate.Version logVersion
INFO: HHH000412: Hibernate ORM core version 6.0.2.Final
Dec 21, 2022 5:46:14 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl configure
WARN: HHH10001002: Using built-in connection pool (not intended for
production use)
Dec 21, 2022 5:46:14 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl buildCreator
INFO: HHH10001005: Loaded JDBC driver class: org.postgresql.Driver
Dec 21, 2022 5:46:14 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl buildCreator
INFO: HHH10001012: Connecting with JDBC URL
[jdbc:postgresql://localhost:5432/WeConnect?createDatabaseIfNotExist=true&&
autoReconnect=true]
Dec 21, 2022 5:46:14 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl buildCreator
INFO: HHH10001001: Connection properties: {password=****, user=postgres}
Dec 21, 2022 5:46:14 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl buildCreator
INFO: HHH10001003: Autocommit mode: false
Dec 21, 2022 5:46:14 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProvi
derImpl$PooledConnections <init>
INFO: HHH10001115: Connection pool size: 20 (min=1)
```

```
Dec 21, 2022 5:46:14 PM
org.hibernate.engine.jdbc.dialect.internal.DialectFactoryImpl
logSelectedDialect
INFO: HHH000400: Using dialect: org.hibernate.dialect.PostgreSQLDialect
Dec 21, 2022 5:46:16 PM
org.hibernate.resource.transaction.backend.jdbc.internal.DdlTransactionIsol
atorNonJtaImpl getIsolatedConnection
INFO: HHH10001501: Connection obtained from JdbcConnectionAccess
[org.hibernate.engine.jdbc.env.internal.JdbcEnvironmentInitiator$Connection
ProviderJdbcConnectionAccess@58fa939] for (non-JTA) DDL execution was not
in auto-commit mode; the Connection 'local transaction' will be committed
and the Connection will be set into auto-commit mode.
Hibernate:
    select
        nextval('AlertModel_SEQ')
Hibernate:
    /* insert api.main.AlertSystem.Alert
        */ insert
    into
        AlertModel (AlertMessage, AlertTitle, date, alertId)
    values
        (?, ?, ?, ?)
Dec 21, 2022 5:46:17 PM org.glassfish.jersey.filter.LoggingFilter log
INFO: 1 * Server responded with a response on thread http-nio-8080-exec-15
1 < 201
```

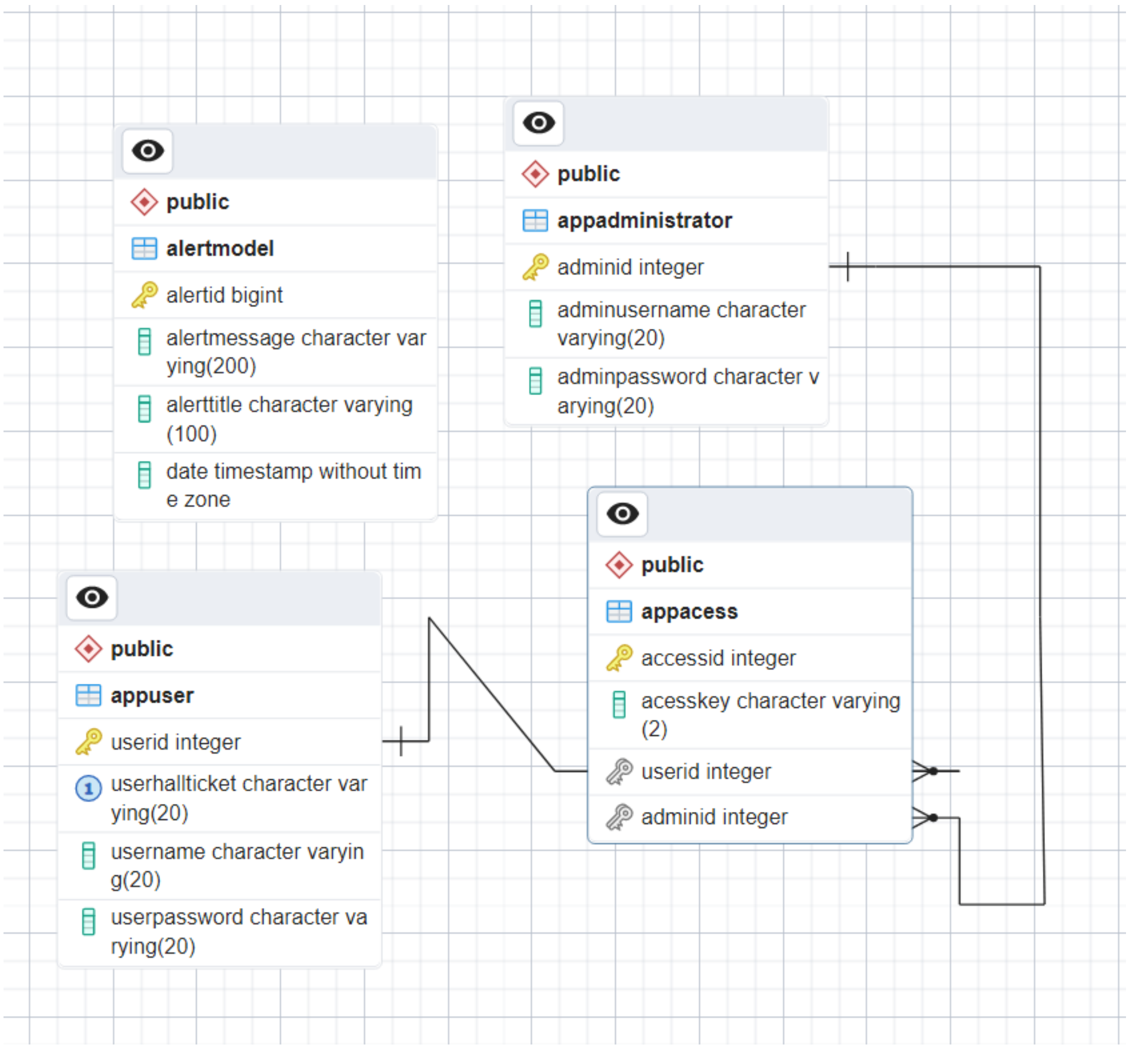


http://localhost:8080/API/endpoint/Alerts/insertAlerts

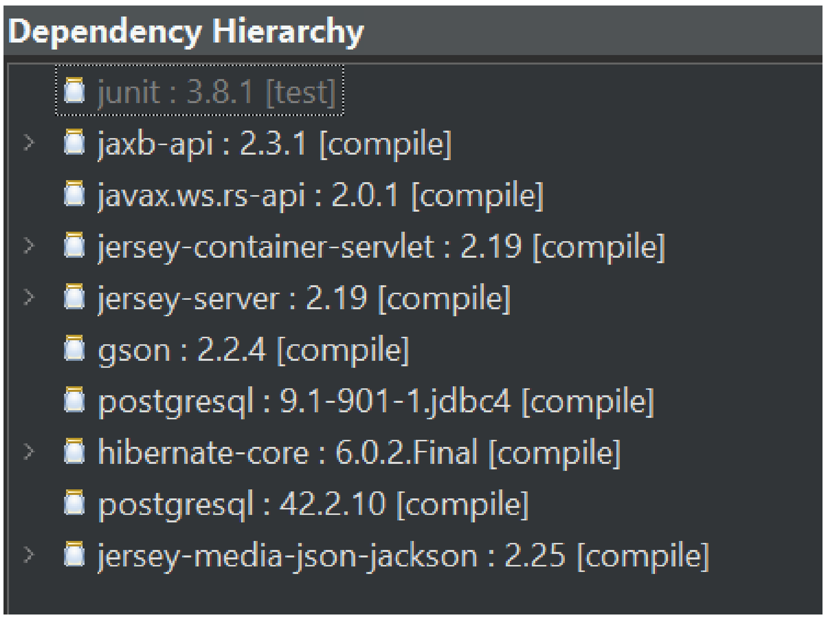
```
{
    "alertTitle": "important notification exam branch",
    "alertMessage": " Job alerts are update",
    "date": 1601887270000
}
```

201 Created 4.84 s 128 B

DATABASE SCHEMA

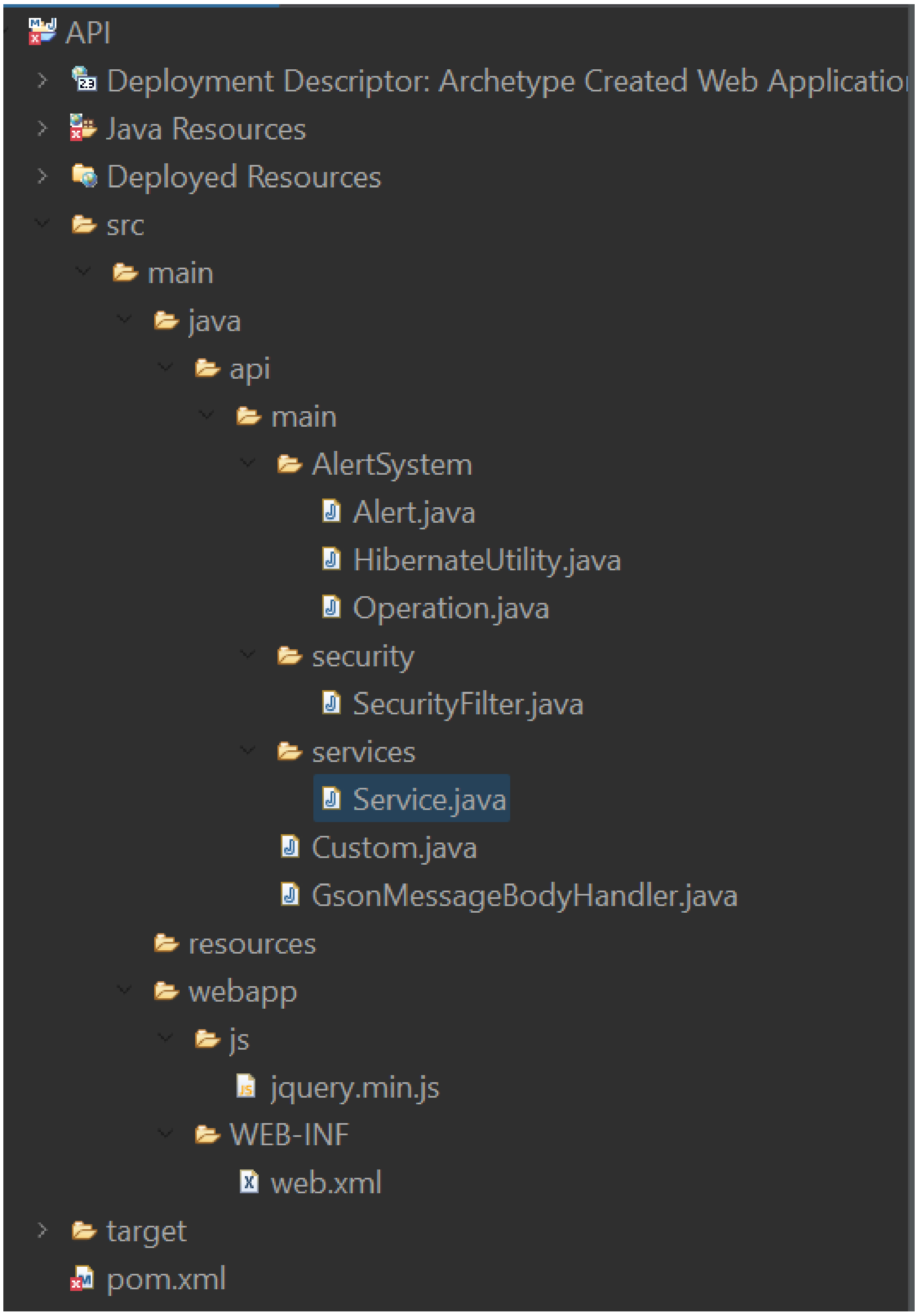

public
alertmodel
alertid bigint
alertmessage character varying(200)
alerttitle character varying (100)
date timestamp without time zone
public
appadministrator
adminid integer
adminusername character varying(20)
adminpassword character varying(20)
public
appaccess
accessid integer
acesskey character varying (2)
userid integer
adminid integer
public
appuser
userid integer
userhallticket character varying(20)
username character varying(20)
userpassword character varying(20)

Dependency


Dependency Hierarchy

```
  junit : 3.8.1 [test]
> jaxb-api : 2.3.1 [compile]
  javax.ws.rs-api : 2.0.1 [compile]
> jersey-container-servlet : 2.19 [compile]
> jersey-server : 2.19 [compile]
  gson : 2.2.4 [compile]
  postgresql : 9.1-901-1.jdbc4 [compile]
> hibernate-core : 6.0.2.Final [compile]
  postgresql : 42.2.10 [compile]
> jersey-media-json-jackson : 2.25 [compile]
```

Project Structure

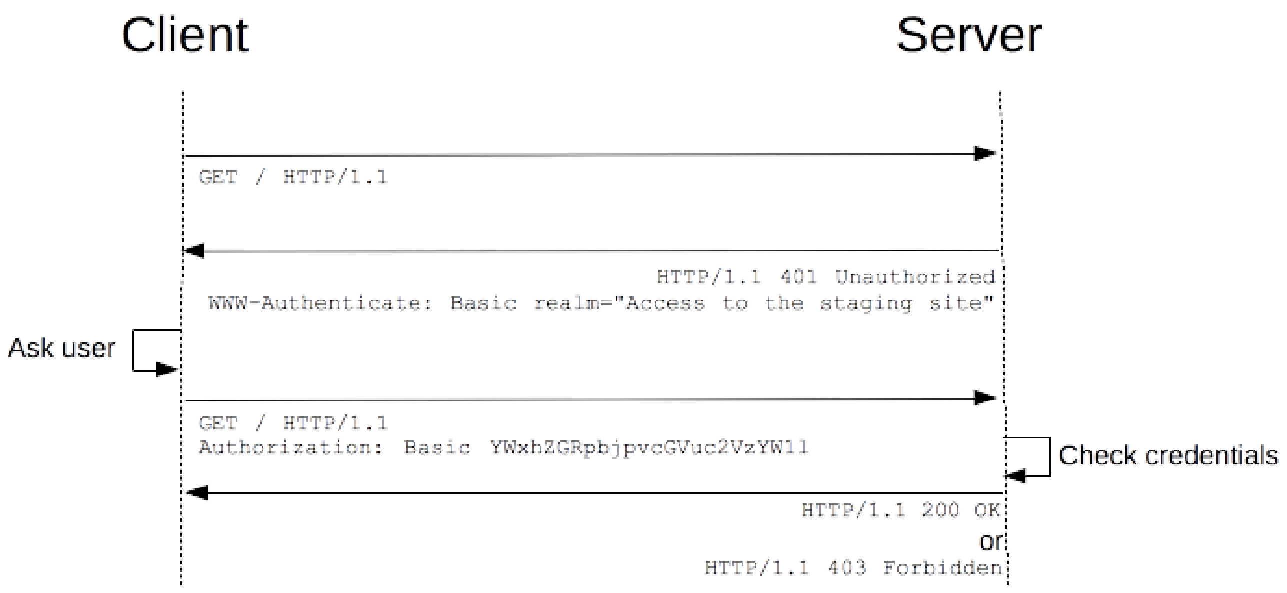


```
API
  > Deployment Descriptor: Archetype Created Web Applicatio
  > Java Resources
  > Deployed Resources
  v src
      v main
          v java
              v api
                  v main
                      v AlertSystem
                            Alert.java
                            HibernateUtility.java
                            Operation.java
                      v security
                            SecurityFilter.java
                      v services
                            Service.java
                        Custom.java
                        GsonMessageBodyHandler.java
            resources
          v webapp
              v js
                    jquery.min.js
              v WEB-INF
                    web.xml
  > target
    pom.xml
```

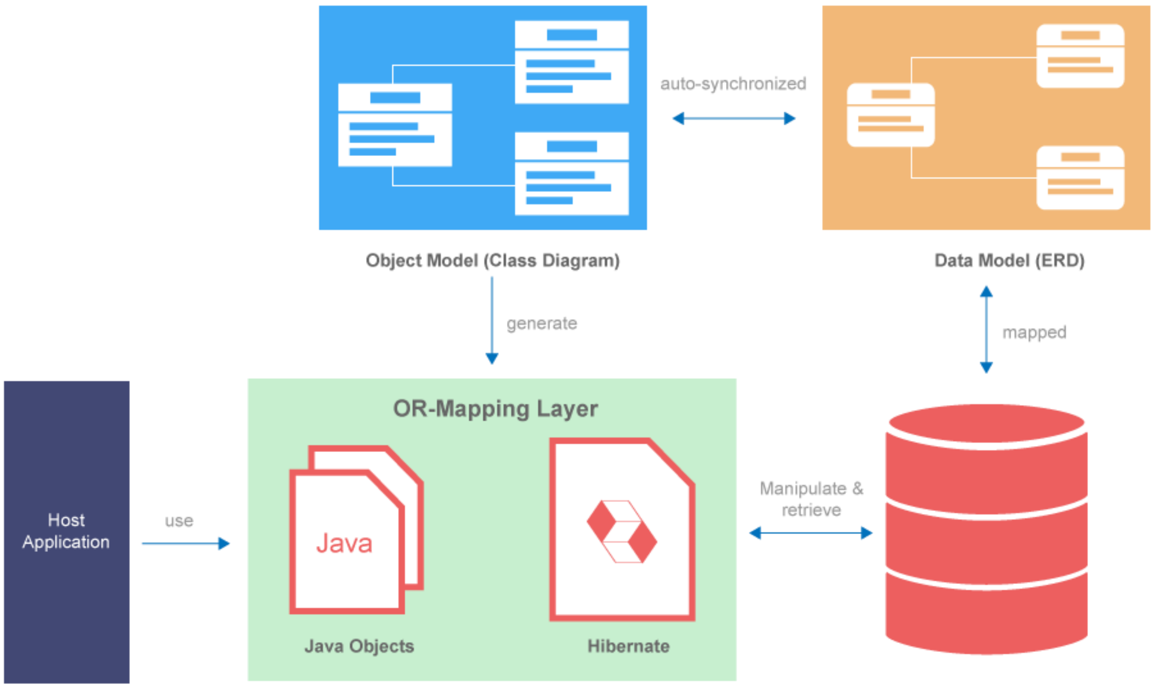
ORM (Object Relational Model)

```java
@XmlRootElement()
@Entity
@Table(name="AlertModel")
public class Alert  implements Serializable{
	private static final long serialVersionUID = 1L;
	@Id
	@GeneratedValue(strategy = GenerationType.AUTO)
	long alertId;
	@Column(name="AlertTitle",length=100,nullable=false)
	String alertTitle;
	@Column (name="AlertMessage",length=200,nullable=false)
	String alertMessage;
	@Column(name="date", columnDefinition="TIMESTAMP DEFAULT 
CURRENT_TIMESTAMP",nullable=false)
	private Date date;
	public  long getAlertId() {
		return alertId;
	}
	public void setAlertId(long alertId) {
		this.alertId = alertId;
	}
	public String getAlertTitle() {
		return alertTitle;
	}
	public void setAlertTitle(String alertTitle) {
		this.alertTitle = alertTitle;
	}
	public String getAlertMessage() {
		return alertMessage;
	}
	public void setAlertMessage(String alertMessage) {
		this.alertMessage = alertMessage;
	}
	public Date getDate() {
		return date;
	}
	public void setDate(Date date) {
		this.date = date;
	}
	public static long getSerialversionuid() {
		return serialVersionUID;
	}
}
```

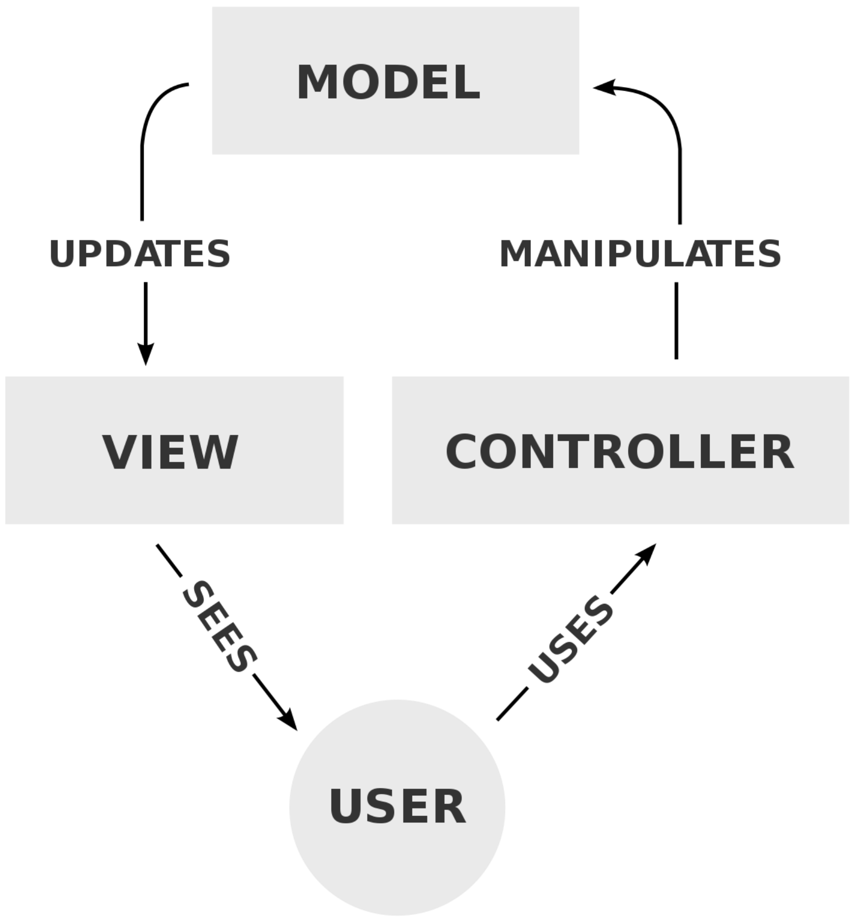
UML


Client
Server
GET / HTTP/1.1
HTTP/1.1 401 Unauthorized
WWW-Authenticate: Basic realm="Access to the staging site"
Ask user
GET / HTTP/1.1
Authorization: Basic YWxhZGRpbjpvcGVuc2VzYW1l
Check credentials
HTTP/1.1 200 OK
or
HTTP/1.1 403 Forbidden

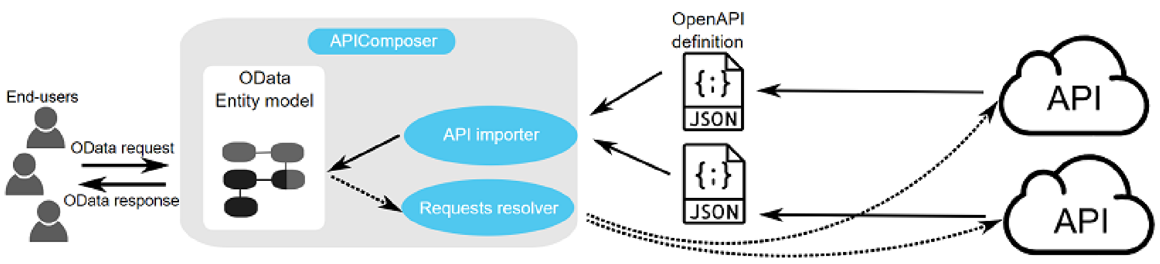
Basic authorization



Hibernate



Model View controller



Representational state behaviour API

Project source Code

Root\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/maven-v4_0_0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>WeConnect</groupId>
  <artifactId>API</artifactId>
  <packaging>war</packaging>
  <version>0.0.1-SNAPSHOT</version>
  <name>API Maven Webapp</name>
  <url>http://maven.apache.org</url>
  <repositories>
        <repository>
            <id>maven2-repository.java.net</id>
            <name>Java.net Repository for Maven</name>
            <url>http://download.java.net/maven/2/</url>
            <layout>default</layout>
        </repository>
    </repositories>
    <properties>
        <jersey2.version>2.19</jersey2.version>
        <jaxrs.version>2.0.1</jaxrs.version>
    </properties>
  <dependencies>
    <dependency>
      <groupId>junit</groupId>
      <artifactId>junit</artifactId>
      <version>3.8.1</version>
      <scope>test</scope>
    </dependency>
    <dependency>
    <groupId>javax.xml.bind</groupId>
    <artifactId>jaxb-api</artifactId>
    <version>2.3.1</version>
</dependency>

    <!-- JAX-RS -->
        <dependency>
            <groupId>javax.ws.rs</groupId>
            <artifactId>javax.ws.rs-api</artifactId>
            <version>${jaxrs.version}</version>
        </dependency>
        <dependency>
            <groupId>org.glassfish.jersey.containers</groupId>
            <artifactId>jersey-container-servlet</artifactId>
            <version>${jersey2.version}</version>
        </dependency>
        <dependency>
            <groupId>org.glassfish.jersey.core</groupId>
            <artifactId>jersey-server</artifactId>
            <version>${jersey2.version}</version>
        </dependency>
        <dependency>
            <groupId>com.google.code.gson</groupId>
            <artifactId>gson</artifactId>
            <version>2.2.4</version>
        </dependency>
        <dependency>
            <groupId>postgresql</groupId>
            <artifactId>postgresql</artifactId>
            <version>9.1-901-1.jdbc4</version>
        </dependency>
        <dependency>
            <groupId>org.hibernate.orm</groupId>
            <artifactId>hibernate-core</artifactId>
            <version>6.0.2.Final</version>
        </dependency>
        <dependency>
            <groupId>org.postgresql</groupId>
            <artifactId>postgresql</artifactId>
            <version>42.2.10</version>
        </dependency>

        <dependency>
            <groupId>org.glassfish.jersey.media</groupId>
            <artifactId>jersey-media-json-jackson</artifactId>
            <version>2.25</version>
        </dependency>
  </dependencies>
  <build>
    <finalName>API</finalName>
    <plugins>
            <plugin>
                <artifactId>maven-compiler-plugin</artifactId>
                <configuration>
                    <source>1.7</source>
                    <target>1.7</target>
                </configuration>
            </plugin>
        </plugins>
  </build>
</project>
```

Root\.classpath

```xml
<?xml version="1.0" encoding="UTF-8"?>
<classpath>
    <classpathentry kind="src" output="target/classes" path="src/main/java">
        <attributes>
            <attribute name="optional" value="true"/>
            <attribute name="maven.pomderived" value="true"/>
        </attributes>
    </classpathentry>
    <classpathentry excluding="**" kind="src" output="target/classes"
path="src/main/resources">
        <attributes>
            <attribute name="maven.pomderived" value="true"/>
        </attributes>
    </classpathentry>
    <classpathentry kind="src" output="target/test-classes"
path="src/test/java">
        <attributes>
            <attribute name="optional" value="true"/>
            <attribute name="maven.pomderived" value="true"/>
            <attribute name="test" value="true"/>
        </attributes>
    </classpathentry>
    <classpathentry kind="con"
path="org.eclipse.jdt.launching.JRE_CONTAINER/org.eclipse.jdt.internal.debug.u
i.launcher.StandardVMType/JavaSE-1.7">
        <attributes>
            <attribute name="maven.pomderived" value="true"/>
        </attributes>
    </classpathentry>
    <classpathentry kind="con"
path="org.eclipse.m2e.MAVEN2_CLASSPATH_CONTAINER">
        <attributes>
            <attribute name="maven.pomderived" value="true"/>
        </attributes>
    </classpathentry>
    <classpathentry kind="src" path="target/generated-sources/annotations">
        <attributes>
            <attribute name="optional" value="true"/>
            <attribute name="maven.pomderived" value="true"/>
            <attribute name="ignore_optional_problems" value="true"/>
            <attribute name="m2e-apt" value="true"/>
        </attributes>
    </classpathentry>
    <classpathentry kind="src" output="target/test-classes"
path="target/generated-test-sources/test-annotations">
        <attributes>
            <attribute name="optional" value="true"/>
            <attribute name="maven.pomderived" value="true"/>
            <attribute name="ignore_optional_problems" value="true"/>
            <attribute name="m2e-apt" value="true"/>
            <attribute name="test" value="true"/>
        </attributes>
    </classpathentry>
    <classpathentry kind="output" path="target/classes"/>
</classpath>
```

Root\src\main\webapp\WEB-INF\web.xml

```
<!DOCTYPE web-app PUBLIC
 "-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN"
 "http://java.sun.com/dtd/web-app_2_3.dtd" >

<web-app>
  <display-name>Archetype Created Web Application</display-name>

  <servlet>
    <servlet-name>Jersey REST Service</servlet-name>
    <servlet-class>org.glassfish.jersey.servlet.ServletContainer</servlet-
class>
    <init-param>
      <param-name>javax.ws.rs.Application</param-name>
      <param-value>api.main.Custom</param-value>
    </init-param>
    <load-on-startup>1</load-on-startup>
  </servlet>
  <servlet-mapping>
    <servlet-name>Jersey REST Service</servlet-name>
    <url-pattern>/*</url-pattern>
  </servlet-mapping>
  <security-constraint>
    <display-name>Secure REST Area</display-name>
    <web-resource-collection>
      <web-resource-name>Secure REST</web-resource-name>
      <url-pattern>/*</url-pattern>
      <http-method>PUT</http-method>
      <http-method>GET</http-method>
      <http-method>POST</http-method>
      <http-method>DELETE</http-method>
    </web-resource-collection>

  </security-constraint>
  <login-config>
    <auth-method>BASIC</auth-method>
    <realm-name>default</realm-name>
  </login-config>
</web-app>
```

Root\ src\main\java\api\main\AlertSystem\Alert.java

```
package api.main.AlertSystem;

import java.io.Serializable;
import java.util.Date;

import javax.xml.bind.annotation.XmlRootElement;

import jakarta.persistence.Column;
import jakarta.persistence.Entity;
import jakarta.persistence.GeneratedValue;
import jakarta.persistence.GenerationType;
import jakarta.persistence.Id;
import jakarta.persistence.Table;
@XmlRootElement()
@Entity
@Table(name="AlertModel")
public class Alert  implements Serializable{
    private static final long serialVersionUID = 1L;
    @Id
    @GeneratedValue(strategy = GenerationType.AUTO)
    long alertId;
    @Column(name="AlertTitle",length=100,nullable=false)
    String alertTitle;
    @Column (name="AlertMessage",length=200,nullable=false)
    String alertMessage;
    @Column(name="date", columnDefinition="TIMESTAMP DEFAULT
CURRENT_TIMESTAMP",nullable=false)
    private Date date;
    public  long getAlertId() {
        return alertId;
    }
    public void setAlertId(long alertId) {
        this.alertId = alertId;
    }
    public String getAlertTitle() {
        return alertTitle;
    }
    public void setAlertTitle(String alertTitle) {
        this.alertTitle = alertTitle;
    }
    public String getAlertMessage() {
        return alertMessage;
    }
    public void setAlertMessage(String alertMessage) {
        this.alertMessage = alertMessage;
    }
    public Date getDate() {
        return date;
    }
    public void setDate(Date date) {
        this.date = date;
    }
    public static long getSerialversionuid() {
        return serialVersionUID;
    }
}
```

Root\ src\main\java\api\main\AlertSystem\HibernateUtility.java

```
package api.main.AlertSystem;

import org.hibernate.boot.registry.StandardServiceRegistryBuilder;
import org.hibernate.SessionFactory;
import java.util.Properties;
import org.hibernate.service.ServiceRegistry;
import org.hibernate.cfg.Configuration;
import org.hibernate.cfg.Environment;
public class HibernateUtility {
    public static SessionFactory sessionfactory;
    public static SessionFactory getsessionfactory() {
        if(sessionfactory == null) {
            try {
                Configuration configuration= new Configuration();
                Properties settings = new Properties();
                settings.put(Environment.DRIVER,
"org.postgresql.Driver");//?autoReconnect=true
                settings.put(Environment.URL,
"jdbc:postgresql://localhost:5432/WeConnect?createDatabaseIfNotExist=true&&aut
oReconnect=true");
                settings.put(Environment.USER, "postgres");
                settings.put(Environment.PASS, "root");
                settings.put(Environment.DIALECT,
"org.hibernate.dialect.PostgreSQLDialect");
                settings.put(Environment.SHOW_SQL, "true");
                settings.put(Environment.FORMAT_SQL,true);
                settings.put(Environment.USE_SQL_COMMENTS,true);
                settings.put(Environment.CURRENT_SESSION_CONTEXT_CLASS,
"thread");
                settings.put(Environment.HBM2DDL_AUTO, "validate");
```

```java
                //settings.put(Environment.HBM2DDL_AUTO, "create");
                configuration.setProperties(settings);
                configuration.addAnnotatedClass(Alert.class);
                ServiceRegistry serviceregistry = new
StandardServiceRegistryBuilder().applySettings(configuration.getProperties()).
build();
                sessionfactory =
configuration.buildSessionFactory(serviceregistry);
            }catch(Exception e) {
                e.printStackTrace();
            }
        }
        return sessionfactory;
    }
    }
```

Root\ src\main\java\api\main\AlertSystem\Operation.java

```java
package api.main.AlertSystem;
import java.util.List;
import org.hibernate.query.Query;
import org.hibernate.Session;
import org.hibernate.Transaction;
public class Operation {

    public List<Alert> getAlerts(){
        Transaction transaction = null;
        Session session = null;

        List<Alert> data = null;
        try {
            System.out.println("GET ALETS FUNCTION INVOKED");
            session = HibernateUtility.getsessionfactory().openSession();
            transaction = session.beginTransaction();
            Query<Alert> query = session.createQuery("from
Alert",Alert.class);
            data = query.getResultList();
            System.out.println("FINAL executed");
            }catch(Exception ex) {
                System.out.println(ex.toString());
                System.out.println("ERROR");
                if(transaction != null) {
                    transaction.rollback();
                }
        }finally {
            if(session!=null)session.close();
        }
        return data;
    }
    public List<Alert> getAlert(long id){
        Transaction transaction = null;
        Session session = null;
        List<Alert> data = null;
        try{
            session  = HibernateUtility.getsessionfactory().openSession();
            transaction = session.beginTransaction();
            Query<Alert> query = session.createQuery("FROM
api.main.AlertSystem.Alert object WHERE object.alertId = : id",Alert.class);
            query.setParameter("id",id);
            data =  query.list();
            session.flush();
        }catch(Exception ex) {
            if(transaction!= null) transaction.rollback();
            ex.printStackTrace();
        }finally{
             if(session!=null)
                 session.close();
          }
        return data;
    }
    public boolean saveAlert(Alert model){
        Transaction transaction = null;
        Session session = null;
        try{
            session = HibernateUtility.getsessionfactory().openSession();
            transaction = session.beginTransaction();
            session.persist(model);
            transaction.commit();
            return true;
        }catch(Exception ex){
            if(transaction!= null)transaction.rollback();
                System.out.println(ex.toString());
        return false;
    }
     finally
     {
         if(session!=null) session.close();
     }
}
    public Boolean updateAlert(Alert alert){
        Session session = null;
        try {
            session = HibernateUtility.getsessionfactory().openSession();
            @SuppressWarnings ("deprecation" )
            Query<?> query = session.createQuery("UPDATE
api.main.AlertSystem.Alert object SET object.alertMessage= : msg
,object.alertTitle= : title where object.alertId= : id");
            query.setParameter("msg", alert.getAlertMessage());
            query.setParameter("title",alert.getAlertTitle());
            query.setParameter("id",alert.getAlertId());
            session.beginTransaction();
            int res = query.executeUpdate();
            session.flush();
            if(res>0)return true;
        }catch(Exception ex) {
            System.out.println(ex.toString());
            return false;
        }finally {
             if(session!=null)
                 session.close();
        }
        return false;
    }
    public Boolean DeleteAlert(long id) {
        //Transaction transaction = null;
        Session session = null;
        try {
            session  = HibernateUtility.getsessionfactory().openSession();
            //transaction = session.beginTransaction();
            @SuppressWarnings("deprecation")
            Query<?> query = session.createQuery("DELETE FROM
api.main.AlertSystem.Alert object WHERE object.alertId= : id");
            query.setParameter("id",id);
            session.beginTransaction();
            int result =query.executeUpdate();
            //session.getTransaction().commit();
            //transaction.commit();
            session.flush();
            if(result>0) return true;

        }catch(Exception ex){
            ex.printStackTrace();
            return false;
        }finally {
             if(session!=null)
                 session.close();
        }
        return false;
        }

}
```

Root\ src\main\java\api\main\security\SecurityFilter.java

```
package api.main.security;
//import java.io.IOException;
import java.lang.reflect.Method;
import java.util.Arrays;
import java.util.HashSet;
import java.util.List;
import java.util.Set;
import java.util.StringTokenizer;

import javax.annotation.security.DenyAll;
import javax.annotation.security.PermitAll;
import javax.annotation.security.RolesAllowed;
//import javax.ws.rs.WebApplicationException;
import javax.ws.rs.container.ContainerRequestContext;
import javax.ws.rs.container.ContainerRequestFilter;
import javax.ws.rs.container.ResourceInfo;
import javax.ws.rs.core.Context;
import javax.ws.rs.core.MultivaluedMap;
import javax.ws.rs.core.Response;
import javax.ws.rs.ext.Provider;

//import org.glassfish.jersey.filter.LoggingFilter;
import org.glassfish.jersey.internal.util.Base64;
//import org.glassfish.jersey.server.ResourceConfig;
@Provider
public class SecurityFilter implements ContainerRequestFilter{
    @Context
    private ResourceInfo resourceInfo;
       private static final String AUTHORIZATION_PROPERTY = "Authorization";
        private static final String AUTHENTICATION_SCHEME = "Basic";
     private static final Response ACCESS_DENIED =
Response.status(Response.Status.UNAUTHORIZED)
                .entity("Invalid").build();
private static final Response ACCESS_FORBIDDEN =
Response.status(Response.Status.FORBIDDEN)
                .entity("Access blocked for all users !!").build();

    @Override
    public void filter(ContainerRequestContext requestContext) {
        try {
        Method method = resourceInfo.getResourceMethod();
         //Access allowed for all
        if( ! method.isAnnotationPresent(PermitAll.class))
        {
            //Access denied for all
            if(method.isAnnotationPresent(DenyAll.class))
            {
                requestContext.abortWith(ACCESS_FORBIDDEN);
                return;
            }

            //Get request headers
            final MultivaluedMap<String, String> headers =
requestContext.getHeaders();

            //Fetch authorization header
            final List<String> authorization =
headers.get(AUTHORIZATION_PROPERTY);

            //If no authorization information present; block access
            if(authorization == null || authorization.isEmpty())
            {
                requestContext.abortWith(ACCESS_DENIED);
                return;
            }

            //Get encoded user name and password
            final String encodedUserPassword =
authorization.get(0).replaceFirst(AUTHENTICATION_SCHEME + " ", "");

            //Decode user name and password
            String usernameAndPassword = new
String(Base64.decode(encodedUserPassword.getBytes()));;

            //Split user name and password tokens
            final StringTokenizer tokenizer = new
StringTokenizer(usernameAndPassword, ":");
            final String username = tokenizer.nextToken();
            final String password = tokenizer.nextToken();

            //Verifying User name and password
            System.out.println(username);
            System.out.println(password);
            System.out.println("security filter called");
            //Verify user access
            if(method.isAnnotationPresent(RolesAllowed.class))
            {
                RolesAllowed rolesAnnotation =
method.getAnnotation(RolesAllowed.class);
                Set<String> rolesSet = new
HashSet<String>(Arrays.asList(rolesAnnotation.value()));

                //Is user valid?
                if( ! isUserAllowed(username, password, rolesSet))
                {
                    requestContext.abortWith(ACCESS_DENIED);
                    return;
                }
            }
        }//end of if block
        }//end of try block
        catch(Exception ex) {
            //throws IOException, WebApplicationException
            System.out.println(ex);
            //requestContext.setRequestUri(
            //return;
        }
    }

    private boolean isUserAllowed(String username, String password,
Set<String> rolesSet) {
        // TODO Auto-generated method stub
        boolean isAllowed = false;

        //Step 1. Fetch password from database and match with password in
argument
        //If both match then get the defined role for user from database and
continue; else return isAllowed [false]
        //Access the database and do this part yourself
        //String userRole = userMgr.getUserRole(user name);

        if(username.equals("username") && password.equals("password"))
        {
            String userRole = "ADMIN";

            //Step 2. Verify user role
            if(rolesSet.contains(userRole))
            {
                isAllowed = true;
            }
        }
        return isAllowed;
    }

}
```

Path Root\src\main\java\api\main\services\Service.java

```
package api.main.services;
import java.util.List;

import javax.annotation.security.RolesAllowed;
import javax.ws.rs.Consumes;
import javax.ws.rs.DELETE;
import javax.ws.rs.GET;
import javax.ws.rs.POST;
import javax.ws.rs.PUT;
import javax.ws.rs.Path;
import javax.ws.rs.PathParam;
import javax.ws.rs.Produces;
import javax.ws.rs.core.Application;
import javax.ws.rs.core.MediaType;
import javax.ws.rs.core.Response;

import api.main.AlertSystem.*;
@Path("/endpoint")
public class Service extends Application{
    @RolesAllowed("ADMIN")
    @Path("test")
    @GET
    @Produces(MediaType.TEXT_PLAIN)
    public String testing() {
        return "hello";
    }
    @RolesAllowed("ADMIN")
    @GET
    @Path("/Alerts/getallalerts")
    @Produces(MediaType.APPLICATION_JSON)
    public Response getAllAlerts(){
           List < Alert > data=new Operation().getAlerts();
            if (!data.isEmpty()) {
                return Response.ok(data).build();
            } else {
                return Response.status(Response.Status.NOT_FOUND).build();
            }
    }//end of get all alerts
    @GET
    @Path("/Alerts/getalert/{id}")
    //@Produces(MediaType.APPLICATION_XML)
    @Produces(MediaType.APPLICATION_JSON)
    public List<Alert> getAlert(@PathParam("id") long id){
    //  return Response.ok(new Repository().getAlert(id)).build();
    List<Alert> data=   new Operation().getAlert(id);
    if(!data.isEmpty())
        return data;
```

```java
            return null;
    }

    @DELETE
    @Path("/Alerts/deletealerts/{id}")
    @Produces(MediaType.APPLICATION_JSON)
    public Response DeleteAlert(@PathParam("id") long id) {
        if(new Operation().DeleteAlert(id))
                    return
Response.ok().status(Response.Status.NO_CONTENT).build();
                    return Response.notModified().build();
        }

    @PUT
    @Path("/Alerts/updatealerts/{id}")
    @Produces(MediaType.APPLICATION_JSON)
    @Consumes(MediaType.APPLICATION_JSON)
    public Response UpdateAlerts(@PathParam("id") long id,Alert alerts){
        boolean res = false;
        if(id >= 0){
            List<Alert> model = new Operation().getAlert(id);
        if(!model.isEmpty())
            if(alerts.getAlertMessage()!=null && alerts.getAlertTitle()==null)
{
                System.out.println("alert msg");
                model.get(0).setAlertMessage(alerts.getAlertMessage());
                res = (new Operation().updateAlert(model.get(0)))?true:false;
            }
            else if(alerts.getAlertTitle() != null
&&alerts.getAlertMessage()==null ) {
                System.out.println("alert title");
                model.get(0).setAlertTitle(alerts.getAlertTitle());
                res = (new Operation().updateAlert(model.get(0)))?true:false;
            }else if(alerts.getAlertMessage()!= null &&
alerts.getAlertTitle()!=null) {
                System.out.println("alert msg and tile");
                model.get(0).setAlertMessage(alerts.getAlertMessage());
                model.get(0).setAlertTitle(alerts.getAlertTitle());
                res = (new Operation().updateAlert(model.get(0)))?true:false;
            }
        }
        if(res)
            return
Response.status(200).entity(Response.Status.NO_CONTENT).build();
            return Response.notModified().build();
    }
    @POST
    @Produces(MediaType.APPLICATION_JSON)
    @Path("/Alerts/insertAlerts")
    //@Produces(MediaType.TEXT_PLAIN)
    @Consumes(MediaType.APPLICATION_JSON)
    public Response insertAlert(Alert model){
        //boolean res =new Repository().updateAlert(model);
         if (new Operation().saveAlert(model)) {
                return Response.ok().status(Response.Status.CREATED).build();
            } else {
                return Response.notModified().build();
            }
    }

}
```

Path : Root\src\main\java\api\main\Custom.java

```
package api.main;

import org.glassfish.jersey.filter.LoggingFilter;
import org.glassfish.jersey.server.ResourceConfig;

import api.main.security.*;

public class Custom extends ResourceConfig
{
    public Custom()
    {
        packages("api.main");
        register(LoggingFilter.class);
        register(GsonMessageBodyHandler.class);
        register(SecurityFilter.class);
    }
}
```

GIT Repository https://github.com/itsrinuhere/WeConnect.git

For any Queries contact @itsrinuhere1@gmail.com