

Add a new country

Country.java

```
package com.addnewcountry;
```

```
public class Country {
```

```
    private String code;
```

```
    private String name;
```

```
    public Country(String code, String name) {
```

```
        this.code = code;
```

```
        this.name = name;
```

```
    }
```

```
    public String getCode() {
```

```
        return code;
```

```
    }
```

```
    public String getName() {
```

```
        return name;
```

```
    }
```

```
    @Override
```

```
    public String toString() {
```

```
        return "Country [code=" + code + ", name=" + name + "];"
```

```
    }
```

```
}
```

CountryManager.java

```
package com.addnewcountry;

import java.util.ArrayList;
import java.util.List;

public class CountryManager {
    private List<Country> countries = new ArrayList<>();

    public void addCountry(Country country) {
        countries.add(country);
        System.out.println("Added: " + country);
    }

    public List<Country> getCountries() {
        return countries;
    }
}
```

Main.java

```
package com.addnewcountry;

public class Main {
    public static void main(String[] args) {
        CountryManager manager = new CountryManager();
        manager.addCountry(new Country("IN", "India"));
        manager.addCountry(new Country("US", "United States"));
        manager.addCountry(new Country("JP", "Japan"));
        System.out.println("All countries: " + manager.getCountries());
    }
}
```

}

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>com.addnewcountry</groupId>
  <artifactId>AddNewCountryProject</artifactId>
  <packaging>jar</packaging>
  <version>1.0-SNAPSHOT</version>
  <name>AddNewCountryProject</name>
  <url>http://maven.apache.org</url>
  <dependencies>
  </dependencies>
</project>
```

OUTPUT :-

HQL Query Result:

```
1 John 5000.0
2 Alice 6000.0
```

Native Query Result:

```
1 John 5000.0
2 Alice 6000.0
```

Demonstrate writing Hibernate Query Language and Native Query

HQLAndNativeQueryDemo.java

```
package com.demo.app;

import com.demo.model.Employee;
import com.demo.util.HibernateUtil;
import org.hibernate.Session;
import org.hibernate.Transaction;

import java.util.List;

public class HQLAndNativeQueryDemo {
    public static void main(String[] args) {
        Session session = HibernateUtil.getSessionFactory().openSession();
        Transaction tx = session.beginTransaction();

        Employee emp1 = new Employee(); emp1.setName("John");
        emp1.setSalary(5000);

        Employee emp2 = new Employee(); emp2.setName("Alice");
        emp2.setSalary(6000);

        session.save(emp1); session.save(emp2);

        tx.commit();

        List<Employee> employeesHQL = session.createQuery("from Employee",
        Employee.class).list();

        System.out.println("HQL Query Result:");

        for (Employee e : employeesHQL) {
            System.out.println(e.getId() + " " + e.getName() + " " + e.getSalary());
        }
    }
}
```

```

    }

    List<Object[]> employeesNative = session.createNativeQuery("SELECT id,
name, salary FROM employee").list();

    System.out.println("\nNative Query Result:");
    for (Object[] row : employeesNative) {
        System.out.println(row[0] + " " + row[1] + " " + row[2]);
    }

    session.close();
    HibernateUtil.shutdown();
}
}

```

Employee.java

```

package com.demo.model;

import javax.persistence.*;

@Entity
@Table(name = "employee")
public class Employee {
    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    private int id;

    @Column(name = "name")
    private String name;

```

```

@Column(name = "salary")
private double salary;

public int getId() { return id; }
public void setId(int id) { this.id = id; }

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

public double getSalary() { return salary; }
public void setSalary(double salary) { this.salary = salary; }
}

```

HibernateUtil.java

```

package com.demo.util;

import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;

public class HibernateUtil {
    private static final SessionFactory sessionFactory = buildSessionFactory();

    private static SessionFactory buildSessionFactory() {
        try {
            return new
Configuration().configure("hibernate.cfg.xml").buildSessionFactory();
        } catch (Throwable ex) {
            throw new ExceptionInInitializerError(ex);
        }
    }
}

```

```

    }

    public static SessionFactory getSessionFactory() {
        return sessionFactory;
    }

    public static void shutdown() {
        getSessionFactory().close();
    }
}

```

hibernate.cfg.xml

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE hibernate-configuration PUBLIC
    "-//Hibernate/Hibernate Configuration DTD 3.0//EN"
    "http://hibernate.sourceforge.net/hibernate-configuration-3.0.dtd">
<hibernate-configuration>
    <session-factory>
        <property name="hibernate.connection.driver_class">org.h2.Driver</property>
        <property name="hibernate.connection.url">jdbc:h2:mem:testdb</property>
        <property name="hibernate.dialect">org.hibernate.dialect.H2Dialect</property>
        <property name="hibernate.hbm2ddl.auto">create</property>
        <property name="hibernate.show_sql">true</property>
        <mapping class="com.demo.model.Employee"/>
    </session-factory>
</hibernate-configuration>

```

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/xsd/maven-4.0.0.xsd">
<modelVersion>4.0.0</modelVersion>
<groupId>com.demo</groupId>
<artifactId>HibernateQueriesDemo</artifactId>
<version>1.0-SNAPSHOT</version>
<dependencies>
  <dependency>
    <groupId>org.hibernate</groupId>
    <artifactId>hibernate-core</artifactId>
    <version>5.4.21.Final</version>
  </dependency>
  <dependency>
    <groupId>com.h2database</groupId>
    <artifactId>h2</artifactId>
    <version>1.4.200</version>
  </dependency>
</dependencies>
</project>
```

OUTPUT –

HQL Query Result:

```
1 John 5000.0
2 Alice 6000.0
```

Native Query Result:

```
1 John 5000.0
2 Alice 6000.0
```


Implement services for managing Country

CountryController

```
package com.example.countrymanager.controller;

import com.example.countrymanager.model.Country;
import com.example.countrymanager.service.CountryService;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.*;

import java.util.List;

@RestController
@RequestMapping("/countries")
public class CountryController {

    @Autowired
    private CountryService countryService;

    @GetMapping
    public List<Country> getAllCountries() {
        return countryService.getAllCountries();
    }

    @GetMapping("/{id}")
    public Country getCountryById(@PathVariable Long id) {
        return countryService.getCountryById(id);
    }
}
```

```
@PostMapping
```

```
public Country addCountry(@RequestBody Country country) {  
    return countryService.addCountry(country);  
}
```

```
@PutMapping("/{id}")
```

```
public Country updateCountry(@PathVariable Long id, @RequestBody Country  
country) {  
    return countryService.updateCountry(id, country);  
}
```

```
@DeleteMapping("/{id}")
```

```
public void deleteCountry(@PathVariable Long id) {  
    countryService.deleteCountry(id);  
}  
}
```

Country

```
package com.example.countrymanager.model;
```

```
public class Country {
```

```
    private Long id;
```

```
    private String name;
```

```
    private String capital;
```

```
    public Country() {}
```

```
    public Country(Long id, String name, String capital) {
```

```
        this.id = id;
```

```
        this.name = name;
```

```
        this.capital = capital;
    }

    public Long getId() {
        return id;
    }

    public void setId(Long id) {
        this.id = id;
    }

    public String getName() {
        return name;
    }

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

    public String getCapital() {
        return capital;
    }

    public void setCapital(String capital) {
        this.capital = capital;
    }
}
```

CountryService.java

```
package com.example.countrymanager.service;

import com.example.countrymanager.model.Country;
import java.util.List;

public interface CountryService {
    List<Country> getAllCountries();
    Country getCountryById(Long id);
    Country addCountry(Country country);
    Country updateCountry(Long id, Country country);
    void deleteCountry(Long id);
}
```

CountryServiceImpl.java

```
package com.example.countrymanager.service;

import com.example.countrymanager.model.Country;
import org.springframework.stereotype.Service;

import java.util.ArrayList;
import java.util.List;
import java.util.concurrent.atomic.AtomicLong;

@Service
public class CountryServiceImpl implements CountryService {
    private List<Country> countries = new ArrayList<>();
    private AtomicLong idCounter = new AtomicLong();

    @Override
```

```
public List<Country> getAllCountries() {  
    return countries;  
}
```

@Override

```
public Country getCountryById(Long id) {  
    return countries.stream().filter(c -> c.getId().equals(id)).findFirst().orElse(null);  
}
```

@Override

```
public Country addCountry(Country country) {  
    country.setId(idCounter.incrementAndGet());  
    countries.add(country);  
    return country;  
}
```

@Override

```
public Country updateCountry(Long id, Country country) {  
    Country existing = getCountryById(id);  
    if (existing != null) {  
        existing.setName(country.getName());  
        existing.setCapital(country.getCapital());  
    }  
    return existing;  
}
```

@Override

```
public void deleteCountry(Long id) {  
    countries.removeIf(c -> c.getId().equals(id));  
}
```

```
}  
}
```

Application.java

```
package com.example.countrymanager;  
  
import org.springframework.boot.SpringApplication;  
import org.springframework.boot.autoconfigure.SpringBootApplication;  
  
@SpringBootApplication  
public class Application {  
    public static void main(String[] args) {  
        SpringApplication.run(Application.class, args);  
    }  
}
```

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/xsd/maven-4.0.0.xsd">  
    <modelVersion>4.0.0</modelVersion>  
    <groupId>com.example</groupId>  
    <artifactId>countrymanager</artifactId>  
    <version>0.0.1-SNAPSHOT</version>  
    <packaging>jar</packaging>  
    <name>Country Manager</name>  
    <description>Spring Boot project for managing Country</description>
```

```
<parent>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-parent</artifactId>
  <version>3.2.0</version>
  <relativePath/> <!-- lookup parent from repository -->
</parent>
```

```
<dependencies>
  <dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-web</artifactId>
  </dependency>
  <dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-test</artifactId>
    <scope>test</scope>
  </dependency>
</dependencies>
```

```
<build>
  <plugins>
    <plugin>
      <groupId>org.springframework.boot</groupId>
      <artifactId>spring-boot-maven-plugin</artifactId>
    </plugin>
  </plugins>
</build>
</project>
```

OUTPUT:-



Demonstrate implementation of O/R Mapping

App.java

```
package com.orm.demo;

import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;

public class App {
    public static void main(String[] args) {
        SessionFactory factory = new Configuration().configure().buildSessionFactory();
        Session session = factory.openSession();

        session.beginTransaction();

        Student student = new Student("John Doe", "Computer Science");
        session.save(student);

        session.getTransaction().commit();
        session.close();

        System.out.println("Student saved successfully!");
    }
}
```

Student.java

```
package com.orm.demo;
```

```
public class Student {
```

```
    private int id;
```

```
    private String name;
```

```
    private String department;
```

```
    public Student() {}
```

```
    public Student(String name, String department) {
```

```
        this.name = name;
```

```
        this.department = department;
```

```
    }
```

```
    public int getId() { return id; }
```

```
    public void setId(int id) { this.id = id; }
```

```
    public String getName() { return name; }
```

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

```
    public String getDepartment() { return department; }
```

```
    public void setDepartment(String department) { this.department = department; }
```

```
}
```

hibernate.cfg.xml

```
<?xml version='1.0' encoding='utf-8'?>
```

```

<!DOCTYPE hibernate-configuration PUBLIC
    "-//Hibernate/Hibernate Configuration DTD 3.0//EN"
    "http://hibernate.sourceforge.net/hibernate-configuration-3.0.dtd">
<hibernate-configuration>
    <session-factory>
        <property
name="hibernate.connection.driver_class">com.mysql.cj.jdbc.Driver</property>
        <property
name="hibernate.connection.url">jdbc:mysql://localhost:3306/testdb</property>
        <property name="hibernate.connection.username">root</property>
        <property name="hibernate.connection.password">password</property>
        <property
name="hibernate.dialect">org.hibernate.dialect.MySQLDialect</property>
        <property name="show_sql">true</property>
        <mapping resource="student.hbm.xml"/>
    </session-factory>
</hibernate-configuration>

```

student.hbm.xml

```

<?xml version="1.0"?>
<!DOCTYPE hibernate-mapping PUBLIC
    "-//Hibernate/Hibernate Mapping DTD 3.0//EN"
    "http://www.hibernate.org/dtd/hibernate-mapping-3.0.dtd">
<hibernate-mapping>
    <class name="com.orm.demo.Student" table="student">
        <id name="id" column="id" type="int">
            <generator class="increment"/>
        </id>
        <property name="name" column="name" type="string"/>
        <property name="department" column="department" type="string"/>
    </class>
</hibernate-mapping>

```

```
</class>
</hibernate-mapping>
```

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/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.orm</groupId>
  <artifactId>OrmMappingDemo</artifactId>
  <version>1.0-SNAPSHOT</version>
  <dependencies>
    <dependency>
      <groupId>org.hibernate</groupId>
      <artifactId>hibernate-core</artifactId>
      <version>5.4.21.Final</version>
    </dependency>
    <dependency>
      <groupId>mysql</groupId>
      <artifactId>mysql-connector-java</artifactId>
      <version>8.0.21</version>
    </dependency>
  </dependencies>
</project>
```

OUTPUT –

```
Hibernate: insert into student (name, department, id) values (?, ?, ?)
Student saved successfully!
```

HQLAndNativeQueryDemo.java

```
package com.demo.app;

import com.demo.model.Employee;
import com.demo.util.HibernateUtil;
import org.hibernate.Session;
import org.hibernate.Transaction;

import java.util.List;

public class HQLAndNativeQueryDemo {
    public static void main(String[] args) {
        Session session = HibernateUtil.getSessionFactory().openSession();
        Transaction tx = session.beginTransaction();

        Employee emp1 = new Employee(); emp1.setName("John");
        emp1.setSalary(5000);

        Employee emp2 = new Employee(); emp2.setName("Alice");
        emp2.setSalary(6000);

        session.save(emp1); session.save(emp2);

        tx.commit();
    }
}
```

```

        List<Employee> employeesHQL = session.createQuery("from Employee",
Employee.class).list();

        System.out.println("HQL Query Result:");
        for (Employee e : employeesHQL) {
            System.out.println(e.getId() + " " + e.getName() + " " + e.getSalary());
        }

        List<Object[]> employeesNative = session.createNativeQuery("SELECT id,
name, salary FROM employee").list();

        System.out.println("\nNative Query Result:");
        for (Object[] row : employeesNative) {
            System.out.println(row[0] + " " + row[1] + " " + row[2]);
        }

        session.close();
        HibernateUtil.shutdown();
    }
}

```

Employee.java

```
package com.demo.model;
```

```
import javax.persistence.*;
```

```
@Entity
```

```
@Table(name = "employee")
```

```
public class Employee {
```

```
    @Id
```

```
    @GeneratedValue(strategy = GenerationType.IDENTITY)
```

```
private int id;

@Column(name = "name")
private String name;

@Column(name = "salary")
private double salary;

public int getId() { return id; }
public void setId(int id) { this.id = id; }

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

public double getSalary() { return salary; }
public void setSalary(double salary) { this.salary = salary; }
}
```

HibernateUtil.java

```
package com.demo.util;

import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
```

```

public class HibernateUtil {

    private static final SessionFactory sessionFactory = buildSessionFactory();

    private static SessionFactory buildSessionFactory() {

        try {

            return new
Configuration().configure("hibernate.cfg.xml").buildSessionFactory();

        } catch (Throwable ex) {

            throw new ExceptionInInitializerError(ex);

        }

    }

    public static SessionFactory getSessionFactory() {

        return sessionFactory;

    }

    public static void shutdown() {

        getSessionFactory().close();

    }

}

```

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/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

```



```
<groupId>com.demo</groupId>
<artifactId>HibernateQueriesDemo</artifactId>
<version>1.0-SNAPSHOT</version>
<dependencies>
  <dependency>
    <groupId>org.hibernate</groupId>
    <artifactId>hibernate-core</artifactId>
    <version>5.4.21.Final</version>
  </dependency>
  <dependency>
    <groupId>com.h2database</groupId>
    <artifactId>h2</artifactId>
    <version>1.4.200</version>
  </dependency>
</dependencies>
</project>
```

OUTPUT-

HQL Query Result:

1 John 5000.0
2 Alice 6000.0

Native Query Result:

1 John 5000.0
2 Alice 6000.0

Demonstrate implementation of Query Methods feature of Spring Data JPA

User.java

```
package com.example.querymethods.entity;

import jakarta.persistence.Entity;
import jakarta.persistence.GeneratedValue;
import jakarta.persistence.GenerationType;
import jakarta.persistence.Id;

@Entity
public class User {

    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    private Long id;

    private String name;
    private String email;

    public User() {}

    public User(String name, String email) {
        this.name = name;
        this.email = email;
    }

    // getters and setters
```

```

public Long getId() { return id; }

public void setId(Long id) { this.id = id; }

public String getName() { return name; }

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

public String getEmail() { return email; }

public void setEmail(String email) { this.email = email; }

@Override

public String toString() {
    return "User{id=" + id + ", name=" + name + ", email=" + email + "}";
}
}

```

UserRepository.java

```

package com.example.querymethods.repository;

import java.util.List;

import org.springframework.data.jpa.repository.JpaRepository;
import com.example.querymethods.entity.User;

public interface UserRepository extends JpaRepository<User, Long> {
    List<User> findByName(String name);
    List<User> findByEmailContaining(String keyword);
    List<User> findByNameAndEmail(String name, String email);
}

```

UserQueryRunner.java

```

package com.example.querymethods.runner;

```

```
import java.util.List;
```

```
import org.springframework.boot.CommandLineRunner;
```

```
import org.springframework.stereotype.Component;
```

```
import com.example.querymethods.entity.User;
```

```
import com.example.querymethods.repository.UserRepository;
```

```
@Component
```

```
public class UserQueryRunner implements CommandLineRunner {
```

```
    private final UserRepository userRepository;
```

```
    public UserQueryRunner(UserRepository userRepository) {
```

```
        this.userRepository = userRepository;
```

```
    }
```

```
@Override
```

```
public void run(String... args) {
```

```
    userRepository.save(new User("Alice", "alice@example.com"));
```

```
    userRepository.save(new User("Bob", "bob@example.com"));
```

```
    userRepository.save(new User("Charlie", "charlie@domain.com"));
```

```
    System.out.println("\nFind by name 'Alice:");
```

```
    List<User> usersByName = userRepository.findByName("Alice");
```

```
    usersByName.forEach(System.out::println);
```

```
    System.out.println("\nFind emails containing 'example:");
```

```
    List<User> usersByEmailKeyword =  
userRepository.findByEmailContaining("example");
```

```

        usersByEmailKeyword.forEach(System.out::println);

        System.out.println("\nFind by name 'Bob' and email 'bob@example.com':");

        List<User> usersByNameAndEmail =
        userRepository.findByNameAndEmail("Bob", "bob@example.com");

        usersByNameAndEmail.forEach(System.out::println);
    }
}

```

QueryMethodsApplication.java

```

package com.example.querymethods;

import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class QueryMethodsApplication {

    public static void main(String[] args) {

        SpringApplication.run(QueryMethodsApplication.class, args);

    }

}

```

application.properties

```

spring.datasource.url=jdbc:h2:mem:testdb
spring.datasource.driverClassName=org.h2.Driver
spring.datasource.username=sa
spring.datasource.password=

```

spring.jpa.database-platform=org.hibernate.dialect.H2Dialect

spring.h2.console.enabled=true

spring.jpa.show-sql=true

spring.jpa.hibernate.ddl-auto=update

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/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <groupId>com.example</groupId>
    <artifactId>query-methods-demo</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <packaging>jar</packaging>
    <name>Query Methods Demo</name>
    <description>Spring Data JPA Query Methods Example</description>
    <parent>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-parent</artifactId>
        <version>3.1.0</version>
    </parent>
    <dependencies>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-data-jpa</artifactId>
        </dependency>
        <dependency>
```

```
<groupId>com.h2database</groupId>
<artifactId>h2</artifactId>
<scope>runtime</scope>
</dependency>
</dependencies>

<build>
  <plugins>
    <plugin>
      <groupId>org.springframework.boot</groupId>
      <artifactId>spring-boot-maven-plugin</artifactId>
    </plugin>
  </plugins>
</build>
</project>
```

OUTPUT :-

```
Find by name 'Alice':
User{id=1, name='Alice', email='alice@example.com'}

Find emails containing 'example':
User{id=1, name='Alice', email='alice@example.com'}
User{id=2, name='Bob', email='bob@example.com'}

Find by name 'Bob' and email 'bob@example.com':
User{id=2, name='Bob', email='bob@example.com'}
```

Find a country based on country code

FindCountryByCode.java

```
package com.example.countryfinder;

import java.util.HashMap;
import java.util.Scanner;

public class FindCountryByCode {
    public static void main(String[] args) {
        HashMap<String, String> countryMap = new HashMap<>();
        countryMap.put("US", "United States");
        countryMap.put("IN", "India");
        countryMap.put("FR", "France");
        countryMap.put("DE", "Germany");
        countryMap.put("JP", "Japan");
        countryMap.put("CN", "China");
        countryMap.put("BR", "Brazil");
        countryMap.put("ZA", "South Africa");

        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter country code (e.g., US): ");
        String code = scanner.nextLine().toUpperCase();

        String country = countryMap.get(code);
        if (country != null) {
            System.out.println("Country name: " + country);
        } else {
            System.out.println("Country code not found.");
        }
    }
}
```



```
        scanner.close();
    }
}
```

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/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <groupId>com.example</groupId>
    <artifactId>countryfinder</artifactId>
    <version>1.0-SNAPSHOT</version>
    <build>
        <plugins>
            <plugin>
                <groupId>org.apache.maven.plugins</groupId>
                <artifactId>maven-compiler-plugin</artifactId>
                <version>3.8.1</version>
                <configuration>
                    <source>1.8</source>
                    <target>1.8</target>
                </configuration>
            </plugin>
        </plugins>
    </build>
</project>
```

OUTPUT :-

```
Console X
<terminated> FindCountryByCode [Java Application] C:\Program Files\Java\jdk-23\bin\javaw.exe (7 Jul 2025, 9:36:18 am - 9:36:56 am elapsed: 0:00:37.396) [pid: 28296]
Enter country code (e.g., US): IN
Country name: India
```