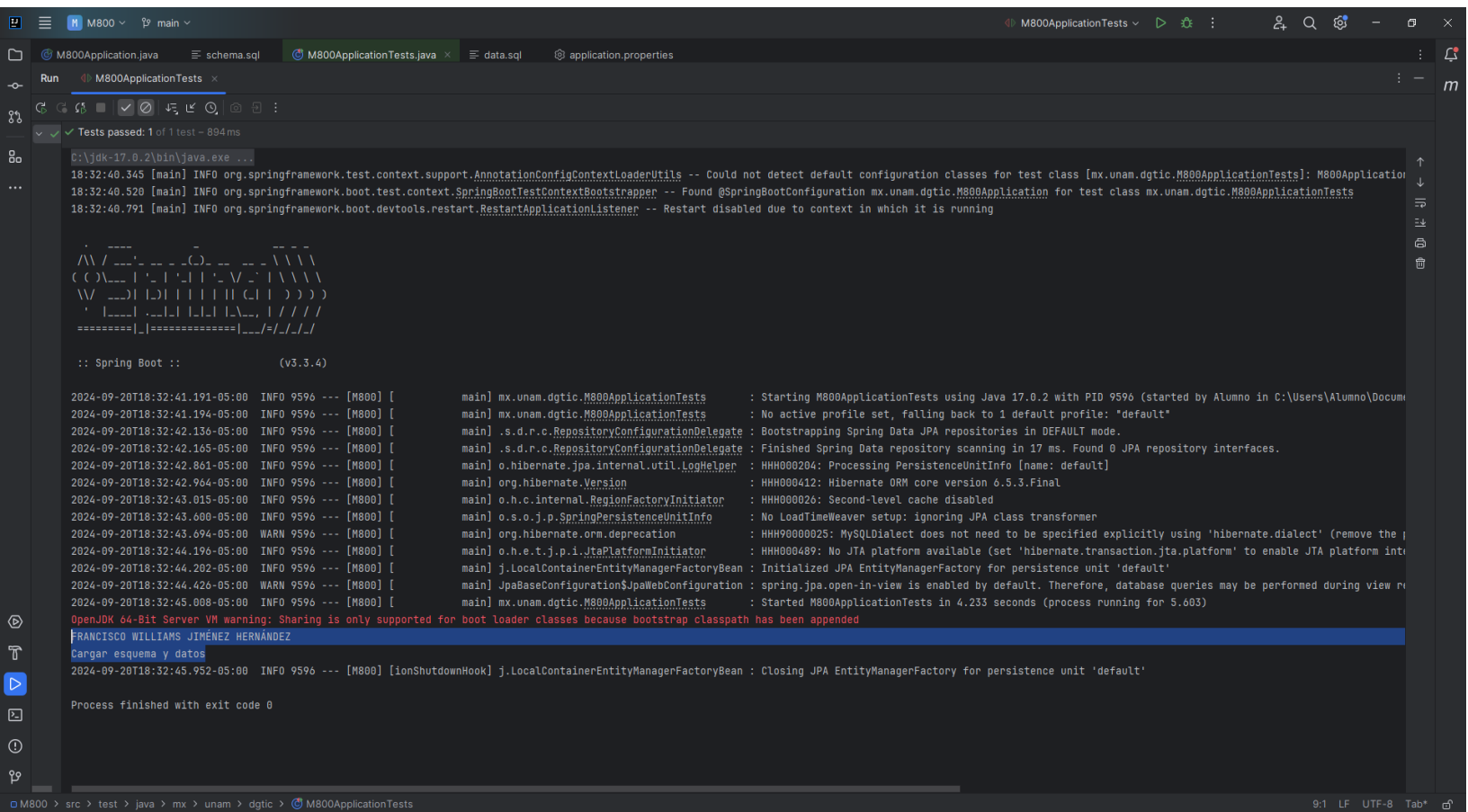
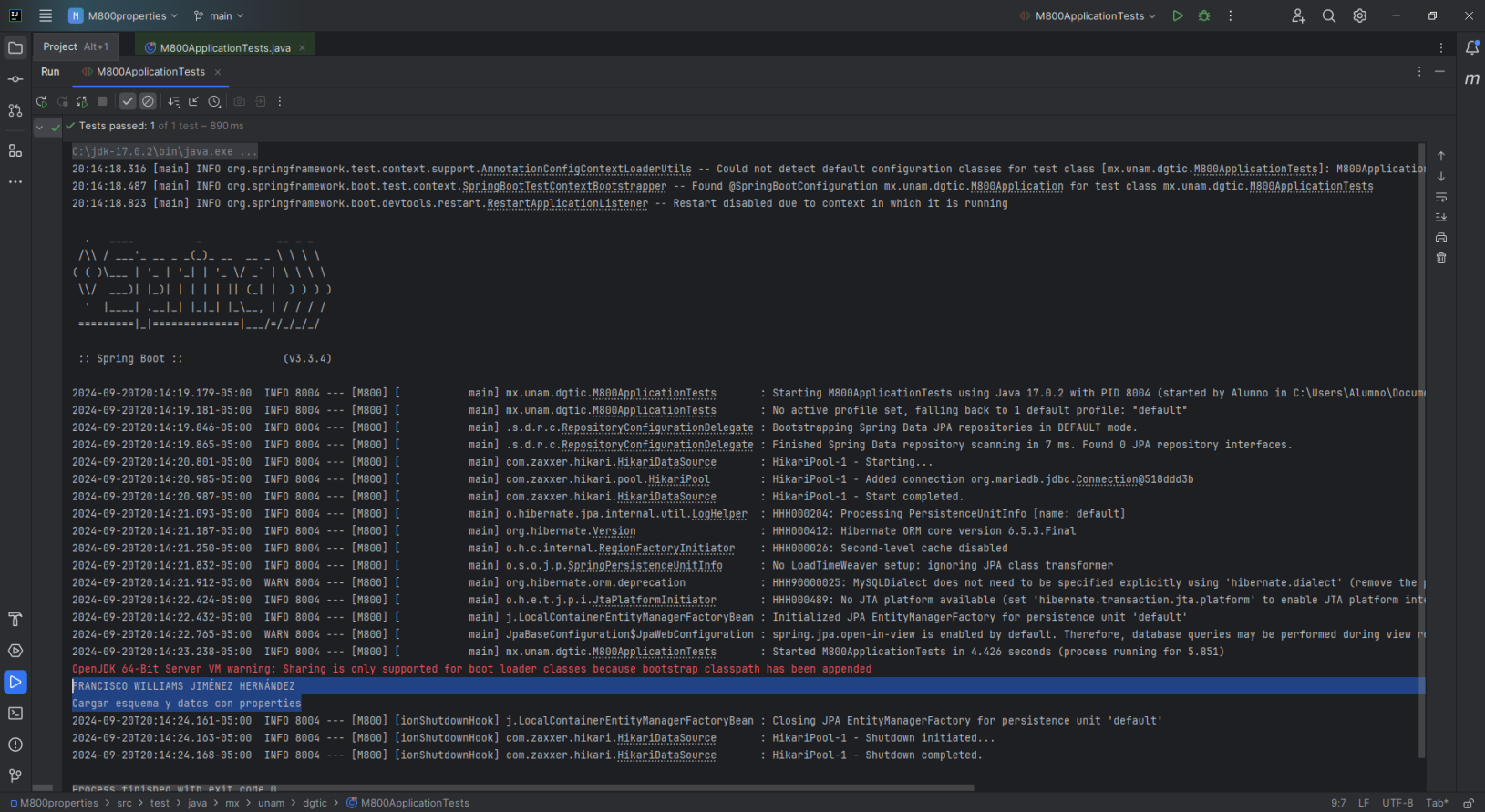


# 1. Carga de esquema y datos



## 2. Properties



```
Project Alt+1 M800ApplicationTests.java x
Run M800ApplicationTests x
Tests passed: 1 of 1 test - 890ms

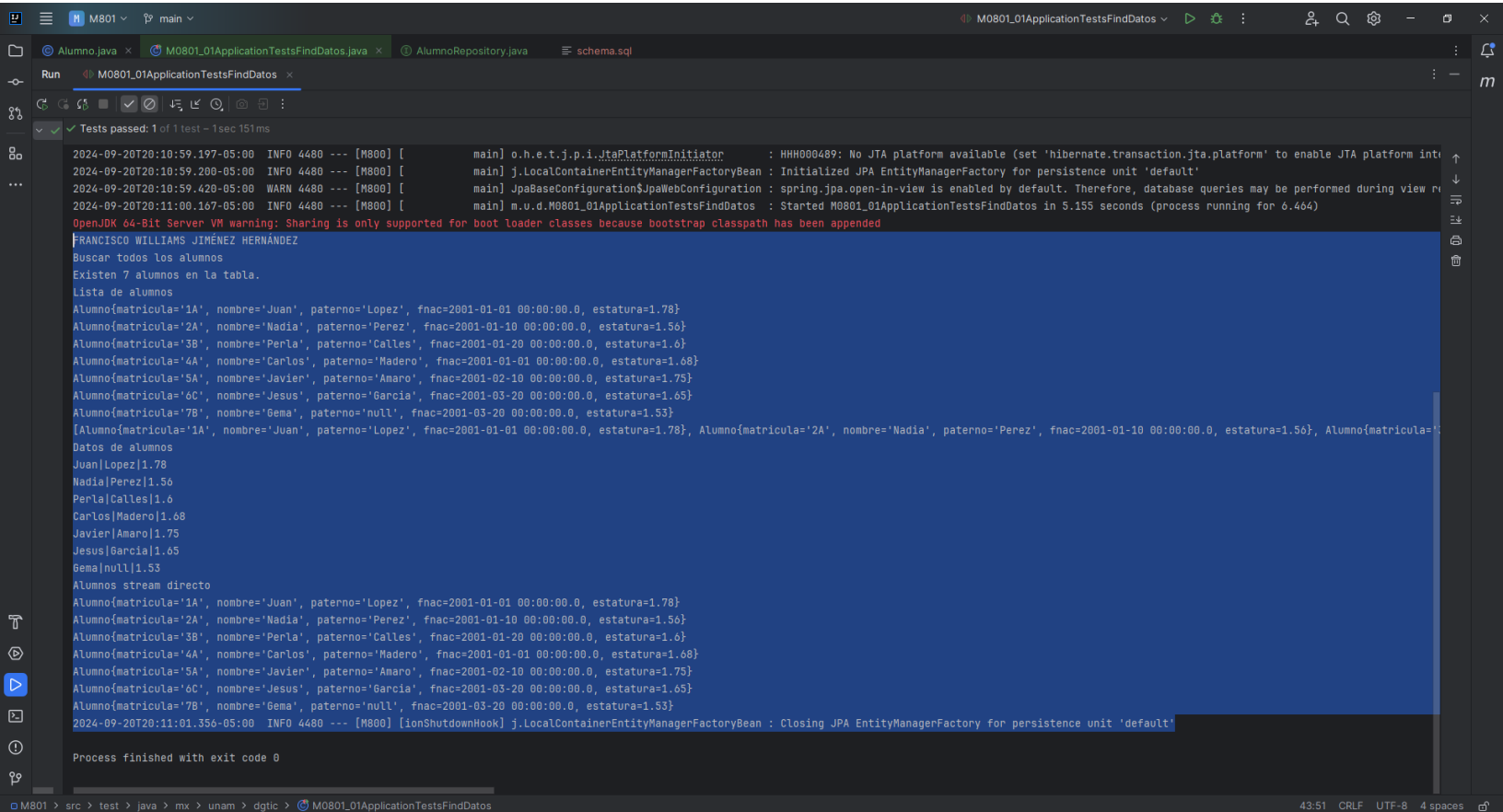
C:\jdk-17.0.2\bin\java.exe ...
20:14:18.316 [main] INFO org.springframework.test.context.support.AnnotationConfigContextLoaderUtils -- Could not detect default configuration classes for test class [mx.unam.dgtic.M800ApplicationTests]: M800ApplicationTests
20:14:18.487 [main] INFO org.springframework.boot.test.context.SpringBootTestContextBootstrapper -- Found @SpringBootConfiguration mx.unam.dgtic.M800Application for test class mx.unam.dgtic.M800ApplicationTests
20:14:18.823 [main] INFO org.springframework.boot.devtools.restart.RestartApplicationListener -- Restart disabled due to context in which it is running

:: Spring Boot :: (v3.3.4)

2024-09-20T20:14:19.179-05:00 INFO 8004 --- [M800] [main] mx.unam.dgtic.M800ApplicationTests : Starting M800ApplicationTests using Java 17.0.2 with PID 8004 (started by Alumno in C:\Users\Alumno\Documents)
2024-09-20T20:14:19.181-05:00 INFO 8004 --- [M800] [main] mx.unam.dgtic.M800ApplicationTests : No active profile set, falling back to 1 default profile: "default"
2024-09-20T20:14:19.846-05:00 INFO 8004 --- [M800] [main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
2024-09-20T20:14:19.865-05:00 INFO 8004 --- [M800] [main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 7 ms. Found 0 JPA repository interfaces.
2024-09-20T20:14:20.801-05:00 INFO 8004 --- [M800] [main] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Starting...
2024-09-20T20:14:20.985-05:00 INFO 8004 --- [M800] [main] com.zaxxer.hikari.pool.HikariPool : HikariPool-1 - Added connection org.mariadb.jdbc.Connection@518ddd3b
2024-09-20T20:14:20.987-05:00 INFO 8004 --- [M800] [main] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Start completed.
2024-09-20T20:14:21.093-05:00 INFO 8004 --- [M800] [main] o.hibernate.jpa.internal.util.LogHelper : HHH000204: Processing PersistenceUnitInfo [name: default]
2024-09-20T20:14:21.187-05:00 INFO 8004 --- [M800] [main] org.hibernate.Version : HHH000412: Hibernate ORM core version 6.5.3.Final
2024-09-20T20:14:21.250-05:00 INFO 8004 --- [M800] [main] o.h.c.internal.RegionFactoryInitiator : HHH000026: Second-level cache disabled
2024-09-20T20:14:21.832-05:00 INFO 8004 --- [M800] [main] o.s.o.j.p.SpringPersistenceUnitInfo : No LoadTimeWeaver setup: ignoring JPA class transformer
2024-09-20T20:14:21.912-05:00 WARN 8004 --- [M800] [main] org.hibernate.orm.deprecation : HHH90000025: MySQLDialect does not need to be specified explicitly using 'hibernate.dialect' (remove the 'hibernate.dialect' property)
2024-09-20T20:14:22.424-05:00 INFO 8004 --- [M800] [main] o.h.e.t.j.p.i.JtaPlatformInitiator : HHH000489: No JTA platform available (set 'hibernate.transaction.jta.platform' to enable JTA platform integration)
2024-09-20T20:14:22.432-05:00 INFO 8004 --- [M800] [main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2024-09-20T20:14:22.765-05:00 WARN 8004 --- [M800] [main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rendering.
2024-09-20T20:14:23.238-05:00 INFO 8004 --- [M800] [main] mx.unam.dgtic.M800ApplicationTests : Started M800ApplicationTests in 4.426 seconds (process running for 5.851)
OpenJDK 64-Bit Server VM warning: Sharing is only supported for boot loader classes because bootstrap classpath has been appended
Francisco Williams Jiménez Hernández
Cargar esquema y datos con properties
2024-09-20T20:14:24.161-05:00 INFO 8004 --- [M800] [ionShutdownHook] j.LocalContainerEntityManagerFactoryBean : Closing JPA EntityManagerFactory for persistence unit 'default'
2024-09-20T20:14:24.163-05:00 INFO 8004 --- [M800] [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown initiated...
2024-09-20T20:14:24.168-05:00 INFO 8004 --- [M800] [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown completed.

Debugger finished with exit code 0
M800properties > src > test > java > mx > unam > dgtic > M800ApplicationTests 9:7 LF UTF-8 Tab*
```

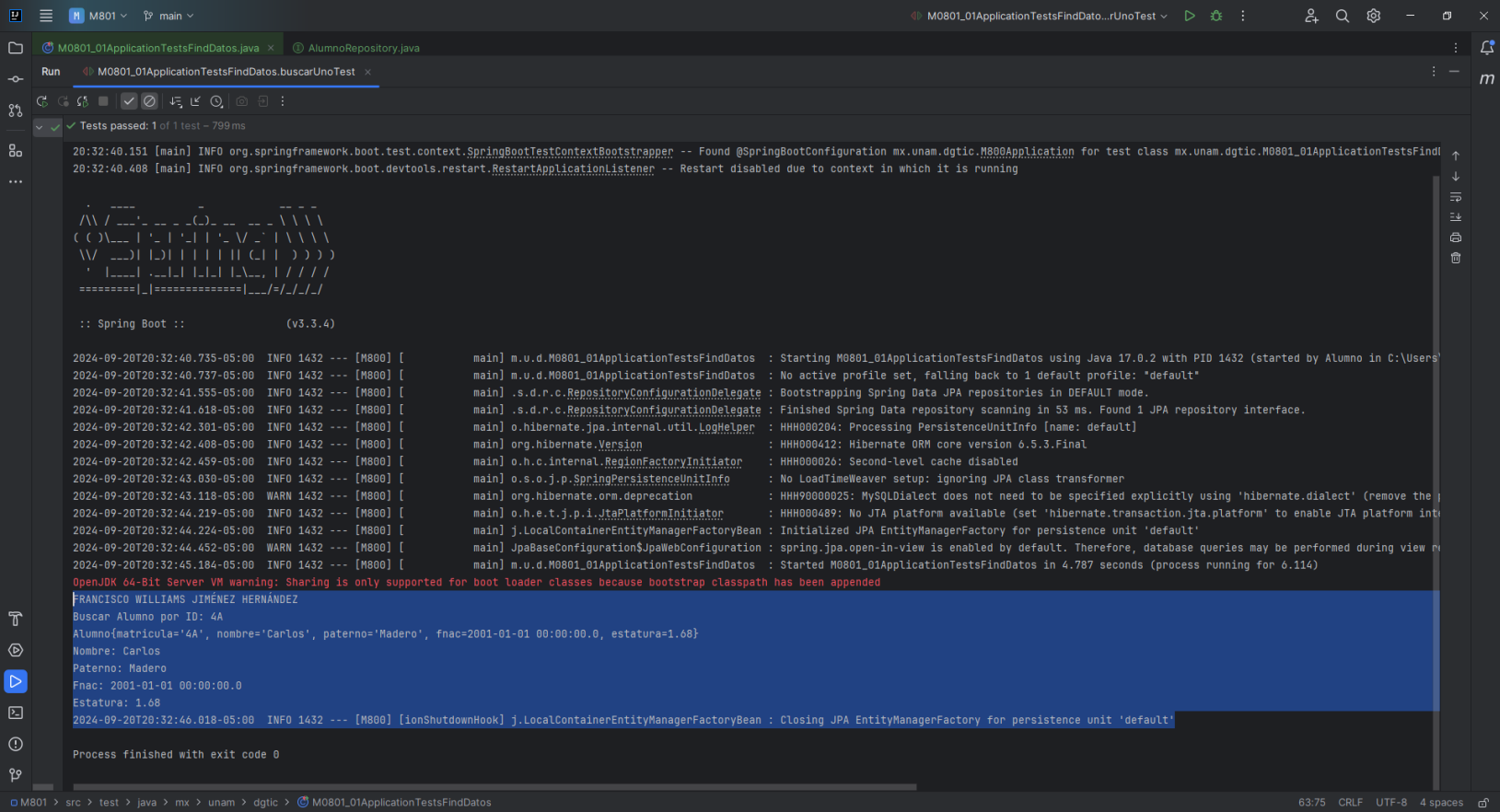
### 3. Buscar todos los alumnos



```
2024-09-20T20:10:59.197-05:00 INFO 4480 --- [M800] [main] o.h.e.t.j.p.i.JtaPlatformInitiator : HHH000489: No JTA platform available (set 'hibernate.transaction.jta.platform' to enable JTA platform integration)
2024-09-20T20:10:59.200-05:00 INFO 4480 --- [M800] [main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2024-09-20T20:10:59.420-05:00 WARN 4480 --- [M800] [main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rendering.
2024-09-20T20:11:00.167-05:00 INFO 4480 --- [M800] [main] m.u.d.M0801_01ApplicationTestsFindDatos : Started M0801_01ApplicationTestsFindDatos in 5.155 seconds (process running for 6.464)
OpenJDK 64-Bit Server VM warning: Sharing is only supported for boot loader classes because bootstrap classpath has been appended
FRANCISCO WILLIAMS JIMÉNEZ HERNÁNDEZ
Buscar todos los alumnos
Existen 7 alumnos en la tabla.
Lista de alumnos
Alumno{matricula='1A', nombre='Juan', paterno='Lopez', fnac=2001-01-01 00:00:00.0, estatura=1.78}
Alumno{matricula='2A', nombre='Nadia', paterno='Perez', fnac=2001-01-10 00:00:00.0, estatura=1.56}
Alumno{matricula='3B', nombre='Perla', paterno='Calles', fnac=2001-01-20 00:00:00.0, estatura=1.6}
Alumno{matricula='4A', nombre='Carlos', paterno='Madero', fnac=2001-01-01 00:00:00.0, estatura=1.68}
Alumno{matricula='5A', nombre='Javier', paterno='Amaro', fnac=2001-02-10 00:00:00.0, estatura=1.75}
Alumno{matricula='6C', nombre='Jesus', paterno='Garcia', fnac=2001-03-20 00:00:00.0, estatura=1.65}
Alumno{matricula='7B', nombre='Gema', paterno='null', fnac=2001-03-20 00:00:00.0, estatura=1.53}
[Alumno{matricula='1A', nombre='Juan', paterno='Lopez', fnac=2001-01-01 00:00:00.0, estatura=1.78}, Alumno{matricula='2A', nombre='Nadia', paterno='Perez', fnac=2001-01-10 00:00:00.0, estatura=1.56}, Alumno{matricula='3B', nombre='Perla', paterno='Calles', fnac=2001-01-20 00:00:00.0, estatura=1.6}, Alumno{matricula='4A', nombre='Carlos', paterno='Madero', fnac=2001-01-01 00:00:00.0, estatura=1.68}, Alumno{matricula='5A', nombre='Javier', paterno='Amaro', fnac=2001-02-10 00:00:00.0, estatura=1.75}, Alumno{matricula='6C', nombre='Jesus', paterno='Garcia', fnac=2001-03-20 00:00:00.0, estatura=1.65}, Alumno{matricula='7B', nombre='Gema', paterno='null', fnac=2001-03-20 00:00:00.0, estatura=1.53}]
Datos de alumnos
Juan|Lopez|1.78
Nadia|Perez|1.56
Perla|Calles|1.6
Carlos|Madero|1.68
Javier|Amaro|1.75
Jesus|Garcia|1.65
Gema|null|1.53
Alumnos stream directo
Alumno{matricula='1A', nombre='Juan', paterno='Lopez', fnac=2001-01-01 00:00:00.0, estatura=1.78}
Alumno{matricula='2A', nombre='Nadia', paterno='Perez', fnac=2001-01-10 00:00:00.0, estatura=1.56}
Alumno{matricula='3B', nombre='Perla', paterno='Calles', fnac=2001-01-20 00:00:00.0, estatura=1.6}
Alumno{matricula='4A', nombre='Carlos', paterno='Madero', fnac=2001-01-01 00:00:00.0, estatura=1.68}
Alumno{matricula='5A', nombre='Javier', paterno='Amaro', fnac=2001-02-10 00:00:00.0, estatura=1.75}
Alumno{matricula='6C', nombre='Jesus', paterno='Garcia', fnac=2001-03-20 00:00:00.0, estatura=1.65}
Alumno{matricula='7B', nombre='Gema', paterno='null', fnac=2001-03-20 00:00:00.0, estatura=1.53}
2024-09-20T20:11:01.356-05:00 INFO 4480 --- [M800] [ionShutdownHook] j.LocalContainerEntityManagerFactoryBean : Closing JPA EntityManagerFactory for persistence unit 'default'

Process finished with exit code 0
```

## 4. Buscar uno



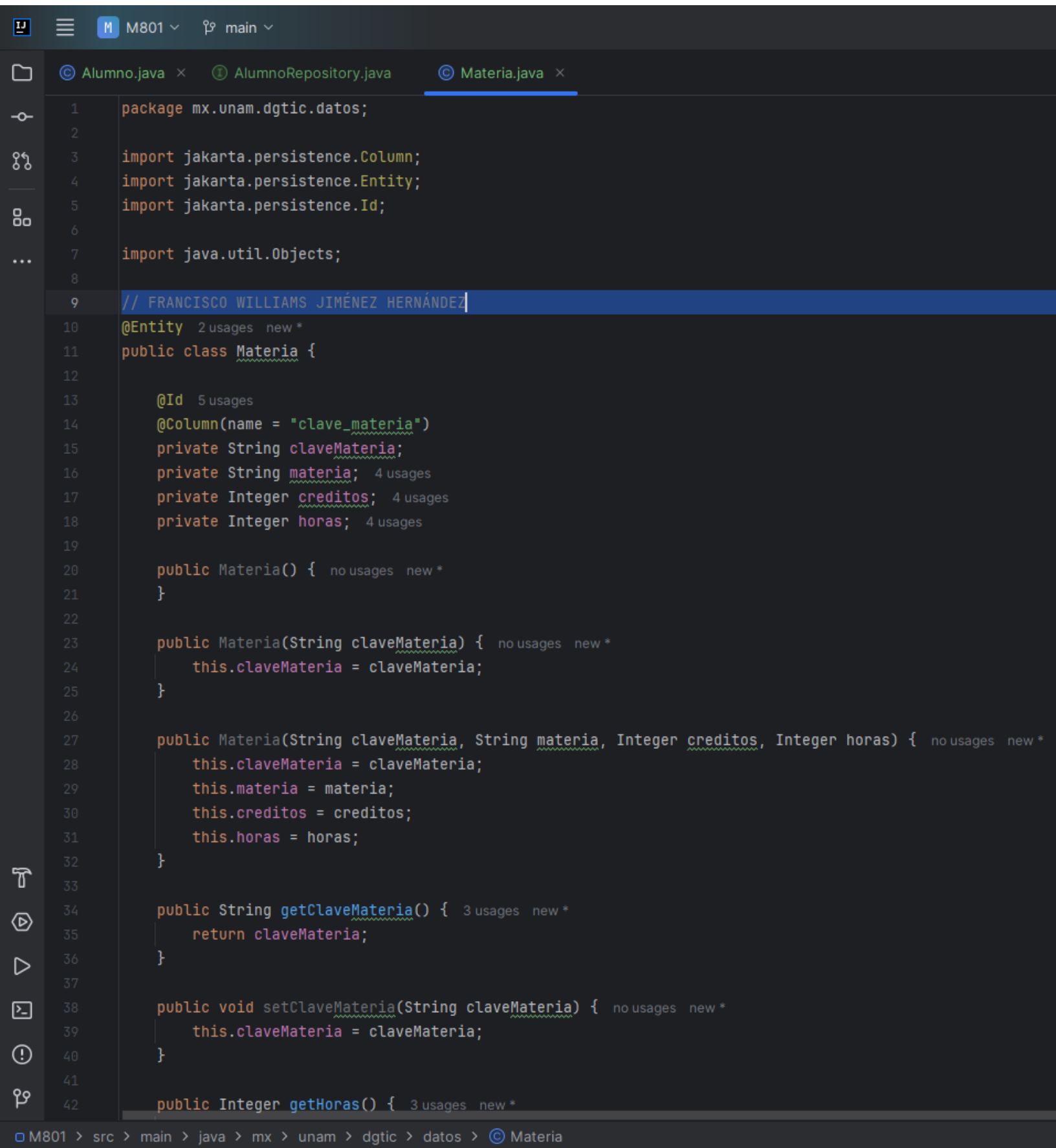
```
20:32:40.151 [main] INFO org.springframework.boot.test.context.SpringBootTestContextBootstrapper -- Found @SpringBootConfiguration mx.unam.dgctic.M800Application for test class mx.unam.dgctic.M0801_01ApplicationTestsFindDatos
20:32:40.408 [main] INFO org.springframework.boot.devtools.restart.RestartApplicationListener -- Restart disabled due to context in which it is running

  ____ _
 / ___ \| | | |
/ /   \| | | |
\ \   /| | | |
 \___/\_|_|\_|_|_|

:: Spring Boot ::                (v3.3.4)

2024-09-20T20:32:40.735-05:00 INFO 1432 --- [M800] [main] m.u.d.M0801_01ApplicationTestsFindDatos : Starting M0801_01ApplicationTestsFindDatos using Java 17.0.2 with PID 1432 (started by Alumno in C:\Users\Francisco\IdeaProjects\unam\src\test\java\mx\unam\dgctic\M0801_01ApplicationTestsFindDatos)
2024-09-20T20:32:40.737-05:00 INFO 1432 --- [M800] [main] m.u.d.M0801_01ApplicationTestsFindDatos : No active profile set, falling back to 1 default profile: "default"
2024-09-20T20:32:41.555-05:00 INFO 1432 --- [M800] [main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
2024-09-20T20:32:41.618-05:00 INFO 1432 --- [M800] [main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 53 ms. Found 1 JPA repository interface.
2024-09-20T20:32:42.301-05:00 INFO 1432 --- [M800] [main] o.hibernate.jpa.internal.util.LogHelper : HHH0000204: Processing PersistenceUnitInfo [name: default]
2024-09-20T20:32:42.408-05:00 INFO 1432 --- [M800] [main] org.hibernate.Version : HHH0000412: Hibernate ORM core version 6.5.3.Final
2024-09-20T20:32:42.459-05:00 INFO 1432 --- [M800] [main] o.h.c.internal.RegionFactoryInitiator : HHH000026: Second-level cache disabled
2024-09-20T20:32:43.030-05:00 INFO 1432 --- [M800] [main] o.s.o.j.p.SpringPersistenceUnitInfo : No LoadTimeWeaver setup: ignoring JPA class transformer
2024-09-20T20:32:43.118-05:00 WARN 1432 --- [M800] [main] org.hibernate.orm.deprecation : HHH90000025: MySQLDialect does not need to be specified explicitly using 'hibernate.dialect' (remove the 'hibernate.dialect' property)
2024-09-20T20:32:44.219-05:00 INFO 1432 --- [M800] [main] o.h.e.t.j.p.i.JtaPlatformInitiator : HHH0000489: No JTA platform available (set 'hibernate.transaction.jta.platform' to enable JTA platform integration)
2024-09-20T20:32:44.224-05:00 INFO 1432 --- [M800] [main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2024-09-20T20:32:44.452-05:00 WARN 1432 --- [M800] [main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rendering.
2024-09-20T20:32:45.184-05:00 INFO 1432 --- [M800] [main] m.u.d.M0801_01ApplicationTestsFindDatos : Started M0801_01ApplicationTestsFindDatos in 4.787 seconds (process running for 6.114)
OpenJDK 64-Bit Server VM warning: Sharing is only supported for boot loader classes because bootstrap classpath has been appended
Francisco Williams Jiménez Hernández
Buscar Alumno por ID: 4A
Alumno(matricula='4A', nombre='Carlos', paterno='Madero', fnac=2001-01-01 00:00:00.0, estatura=1.68)
Nombre: Carlos
Paterno: Madero
Fnac: 2001-01-01 00:00:00.0
Estatura: 1.68
2024-09-20T20:32:46.018-05:00 INFO 1432 --- [M800] [ionShutdownHook] j.LocalContainerEntityManagerFactoryBean : Closing JPA EntityManagerFactory for persistence unit 'default'
Process finished with exit code 0
```

## 5. Entity Materia

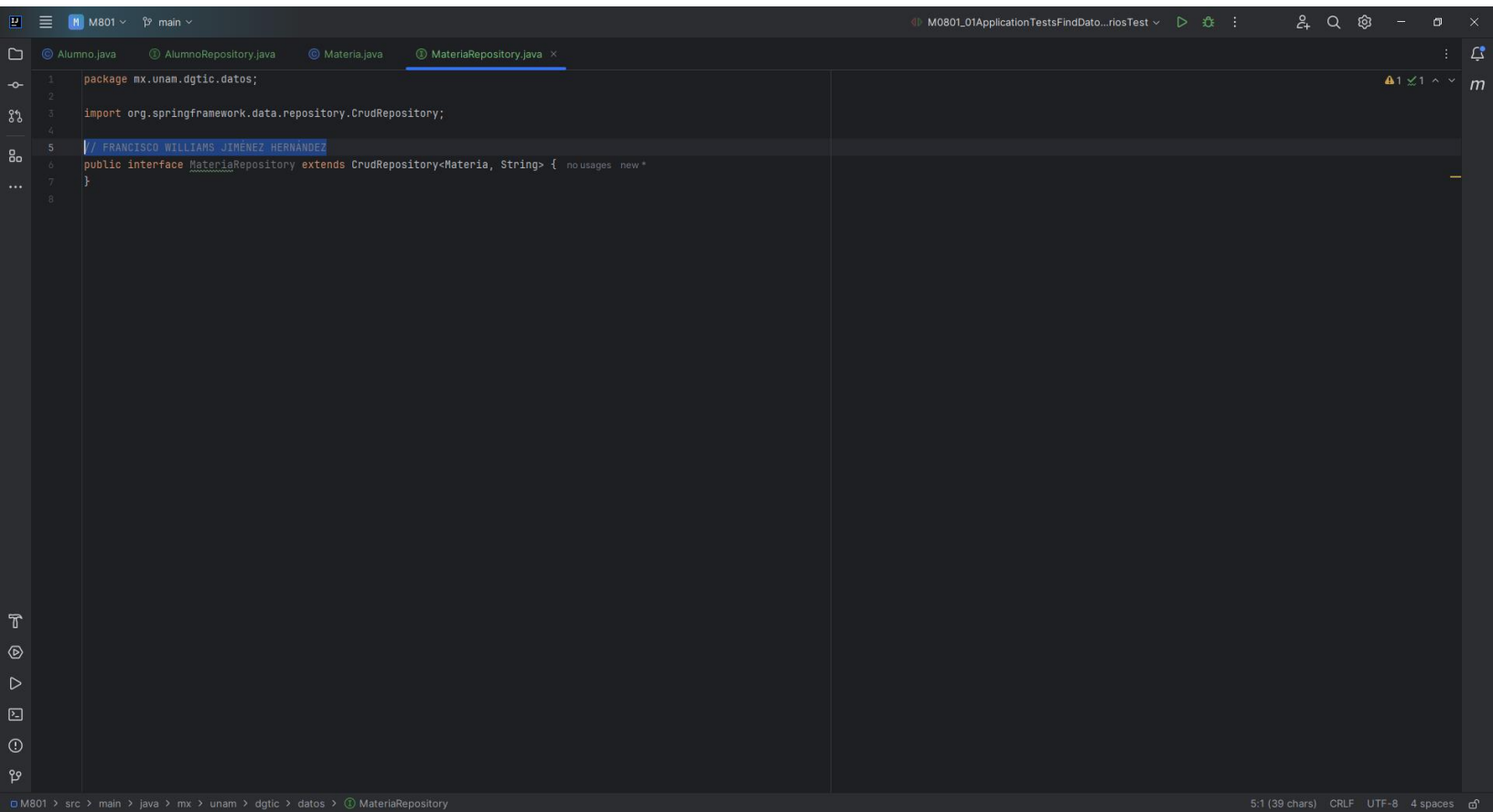


The screenshot shows an IDE with three tabs: Alumno.java, AlumnoRepository.java, and Materia.java. The Materia.java tab is active, displaying the following Java code:

```
1 package mx.unam.dgtic.datos;
2
3 import jakarta.persistence.Column;
4 import jakarta.persistence.Entity;
5 import jakarta.persistence.Id;
6
7 import java.util.Objects;
8
9 // FRANCISCO WILLIAMS JIMÉNEZ HERNÁNDEZ
10 @Entity 2 usages new *
11 public class Materia {
12
13     @Id 5 usages
14     @Column(name = "clave_materia")
15     private String claveMateria;
16     private String materia; 4 usages
17     private Integer credits; 4 usages
18     private Integer horas; 4 usages
19
20     public Materia() { no usages new *
21     }
22
23     public Materia(String claveMateria) { no usages new *
24     |     this.claveMateria = claveMateria;
25     |
26     |
27     public Materia(String claveMateria, String materia, Integer credits, Integer horas) { no usages new *
28     |     this.claveMateria = claveMateria;
29     |     this.materia = materia;
30     |     this.credits = credits;
31     |     this.horas = horas;
32     |
33     |
34     public String getClaveMateria() { 3 usages new *
35     |     return claveMateria;
36     |
37     |
38     public void setClaveMateria(String claveMateria) { no usages new *
39     |     this.claveMateria = claveMateria;
40     |
41     |
42     public Integer getHoras() { 3 usages new *
```

The bottom status bar shows the file path: M801 > src > main > java > mx > unam > dgtic > datos > Materia.

## 6. MateriaRepository



```
1 package mx.unam.dgtic.datos;
2
3 import org.springframework.data.repository.CrudRepository;
4
5 // FRANCISCO WILLIAMS JIMÉNEZ HERNÁNDEZ
6 public interface MateriaRepository extends CrudRepository<Materia, String> { no usages new *
7 }
8
```

M0801\_01ApplicationTestsFindData...riosTest

M0801 > src > main > java > mx > unam > dgtic > datos > MateriaRepository

5:1 (39 chars) CRLF UTF-8 4 spaces

## 7. Listar todas las materias

```
Project M0801 main
Run M0801_01ApplicationTestsFindDatos.buscarTodasMater...
Tests passed: 1 of 1 test - 1sec 160ms

:: Spring Boot :: (v3.3.4)

2024-09-20T21:05:18.611-05:00 INFO 5916 --- [M800] [ main] m.u.d.M0801_01ApplicationTestsFindDatos : Starting M0801_01ApplicationTestsFindDatos using Java 17.0.2 with PID 5916 (started by Alumno in C:\Users\
2024-09-20T21:05:18.611-05:00 INFO 5916 --- [M800] [ main] m.u.d.M0801_01ApplicationTestsFindDatos : No active profile set, falling back to 1 default profile: "default"
2024-09-20T21:05:19.533-05:00 INFO 5916 --- [M800] [ main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
2024-09-20T21:05:19.611-05:00 INFO 5916 --- [M800] [ main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 62 ms. Found 2 JPA repository interfaces.
2024-09-20T21:05:20.330-05:00 INFO 5916 --- [M800] [ main] o.hibernate.jpa.internal.util.LogHelper : HHH0000204: Processing PersistenceUnitInfo [name: default]
2024-09-20T21:05:20.408-05:00 INFO 5916 --- [M800] [ main] org.hibernate.Version : HHH0000412: Hibernate ORM core version 6.5.3.Final
2024-09-20T21:05:20.471-05:00 INFO 5916 --- [M800] [ main] o.h.c.internal.RegionFactoryInitiator : HHH000026: Second-level cache disabled
2024-09-20T21:05:21.002-05:00 INFO 5916 --- [M800] [ main] o.s.o.j.p.SpringPersistenceUnitInfo : No LoadTimeWeaver setup: ignoring JPA class transformer
2024-09-20T21:05:21.096-05:00 WARN 5916 --- [M800] [ main] org.hibernate.orm.deprecation : HHH90000025: MySQLDialect does not need to be specified explicitly using 'hibernate.dialect' (remove the
2024-09-20T21:05:22.190-05:00 INFO 5916 --- [M800] [ main] o.h.e.t.j.p.i.JtaPlatformInitiator : HHH0000489: No JTA platform available (set 'hibernate.transaction.jta.platform' to enable JTA platform int
2024-09-20T21:05:22.190-05:00 INFO 5916 --- [M800] [ main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2024-09-20T21:05:22.424-05:00 WARN 5916 --- [M800] [ main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view r
2024-09-20T21:05:23.205-05:00 INFO 5916 --- [M800] [ main] m.u.d.M0801_01ApplicationTestsFindDatos : Started M0801_01ApplicationTestsFindDatos in 4.954 seconds (process running for 6.308)

OpenJDK 64-Bit Server VM warning: Sharing is only supported for boot loader classes because bootstrap classpath has been appended

FRANCISCO WILLIAMS JIMÉNEZ HERNÁNDEZ
Buscar todas las materias
Existen 10 materias en la tabla.
Lista de materias
Materia{claveMateria='BI0101', materia='Biología General', credits=4, horas=50}
Materia{claveMateria='FI0101', materia='Física General', credits=4, horas=50}
Materia{claveMateria='HI0101', materia='Historia Universal', credits=3, horas=40}
Materia{claveMateria='LI0101', materia='Literatura Clásica', credits=3, horas=40}
Materia{claveMateria='MA0101', materia='Matemáticas Básicas', credits=5, horas=60}
Materia{claveMateria='MA0102', materia='Álgebra Lineal', credits=5, horas=60}
Materia{claveMateria='PR06101', materia='Programación I', credits=6, horas=80}
Materia{claveMateria='PR06102', materia='Programación II', credits=6, horas=80}
Materia{claveMateria='QU0101', materia='Química General', credits=4, horas=50}
Materia{claveMateria='QU0102', materia='Química Orgánica', credits=4, horas=50}
2024-09-20T21:05:24.408-05:00 INFO 5916 --- [M800] [ionShutdownHook] j.LocalContainerEntityManagerFactoryBean : Closing JPA EntityManagerFactory for persistence unit 'default'

Process finished with exit code 0
```