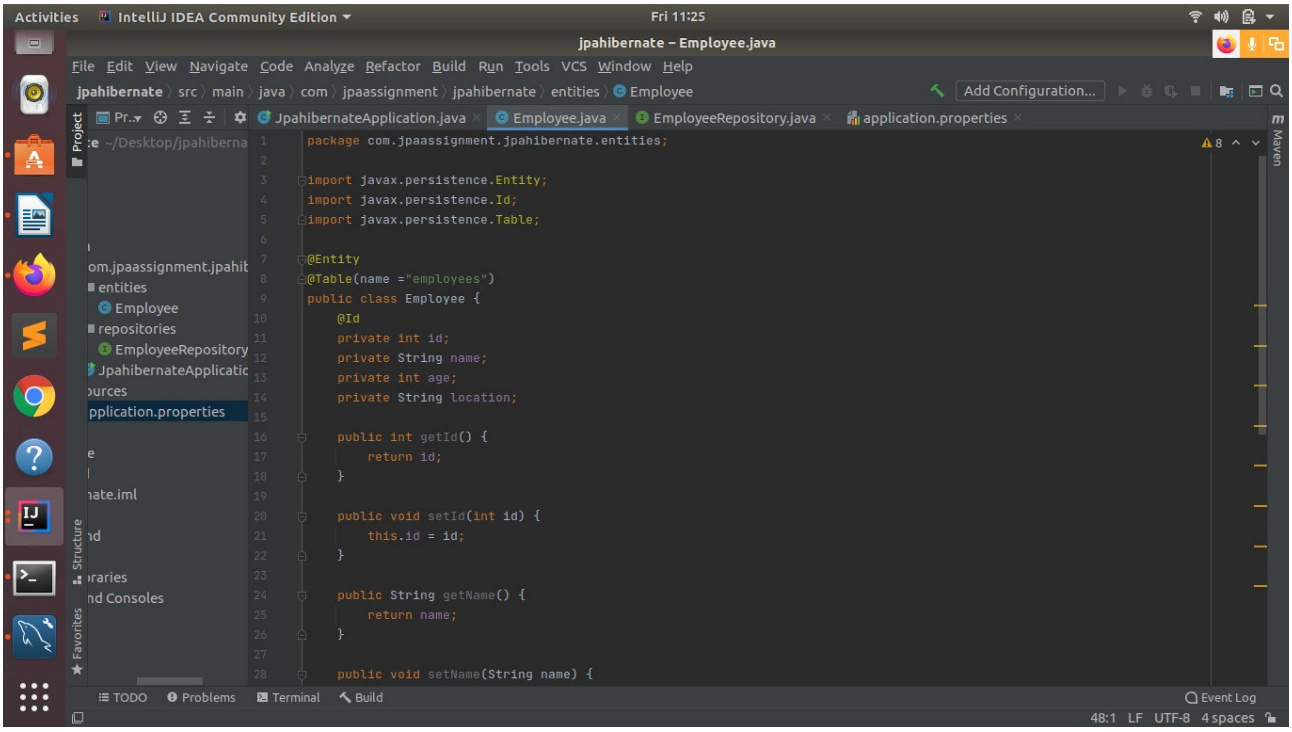
Q1.Create an Employee Entity which contains following fields
Name

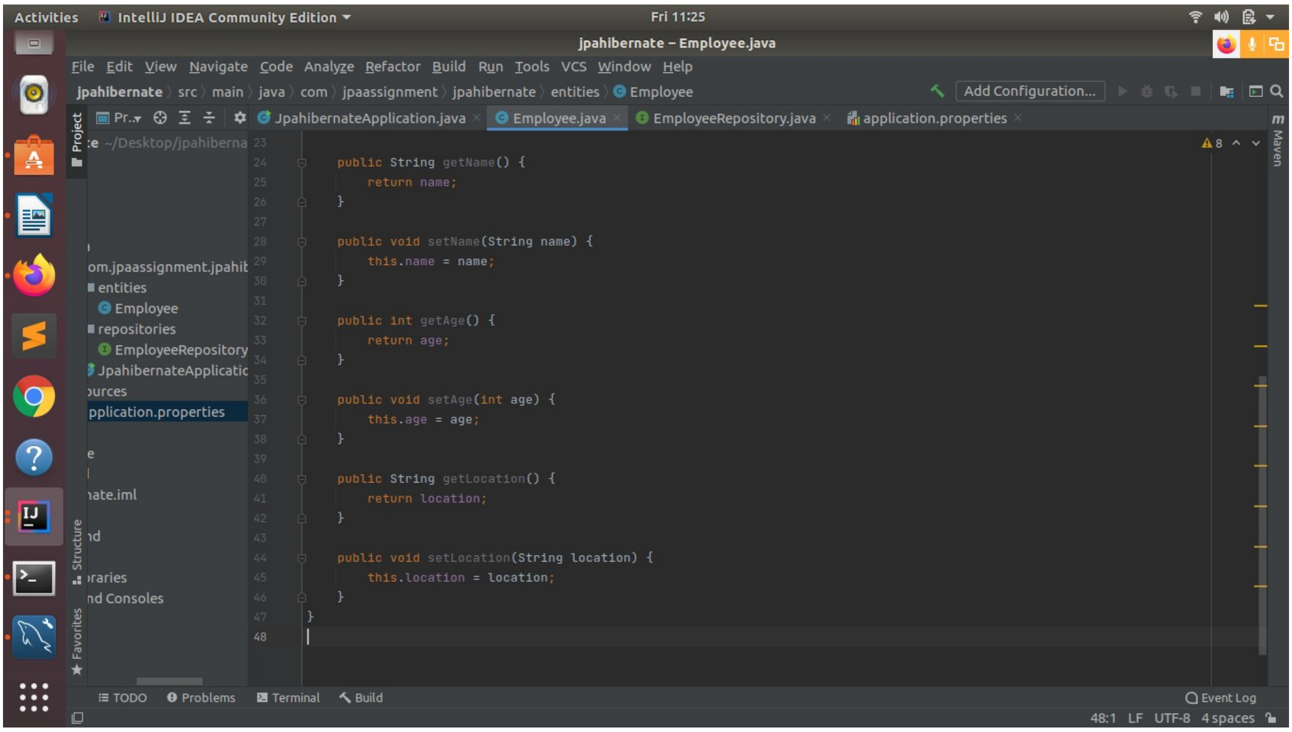
Id

Age

Location

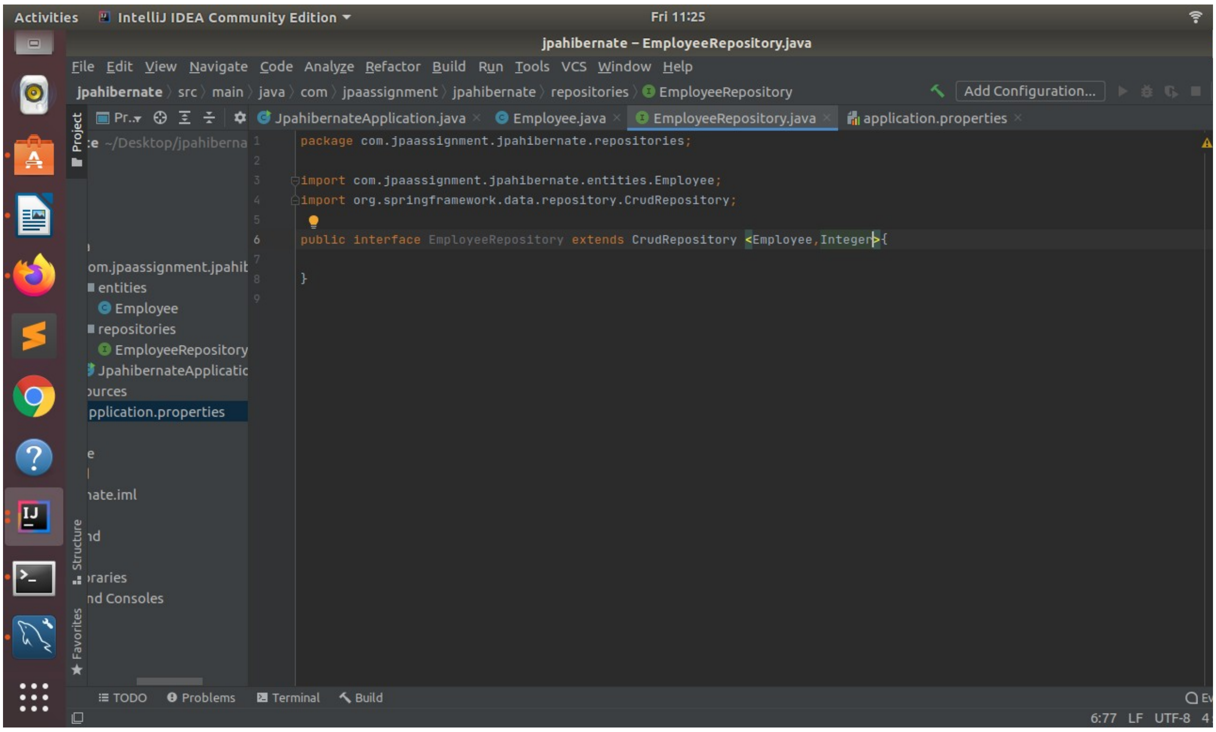


```
package com.jpaassignment.jpahibernate.entities;

import javax.persistence.Entity;
import javax.persistence.Id;
import javax.persistence.Table;

@Entity
@Table(name ="employees")
public class Employee {
    @Id
    private int id;
    private String name;
    private int age;
    private String location;

    public int getId() {
        return id;
    }

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

    public String getName() {
        return name;
    }

    public void setName(String name) {
```


Activities
IntelliJ IDEA Community Edition
Fri 11:25
jpahibernate – Employee.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
jpahibernate src main java com jpaassignment jpahibernate entities Employee
Add Configuration...
JpahibernateApplication.java
Employee.java
EmployeeRepository.java
application.properties
TODO
Problems
Terminal
Build
Event Log
48:1 LF UTF-8 4 spaces

```

    public String getName() {
        return name;
    }

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

    public int getAge() {
        return age;
    }

    public void setAge(int age) {
        this.age = age;
    }

    public String getLocation() {
        return location;
    }

    public void setLocation(String location) {
        this.location = location;
    }
}

```

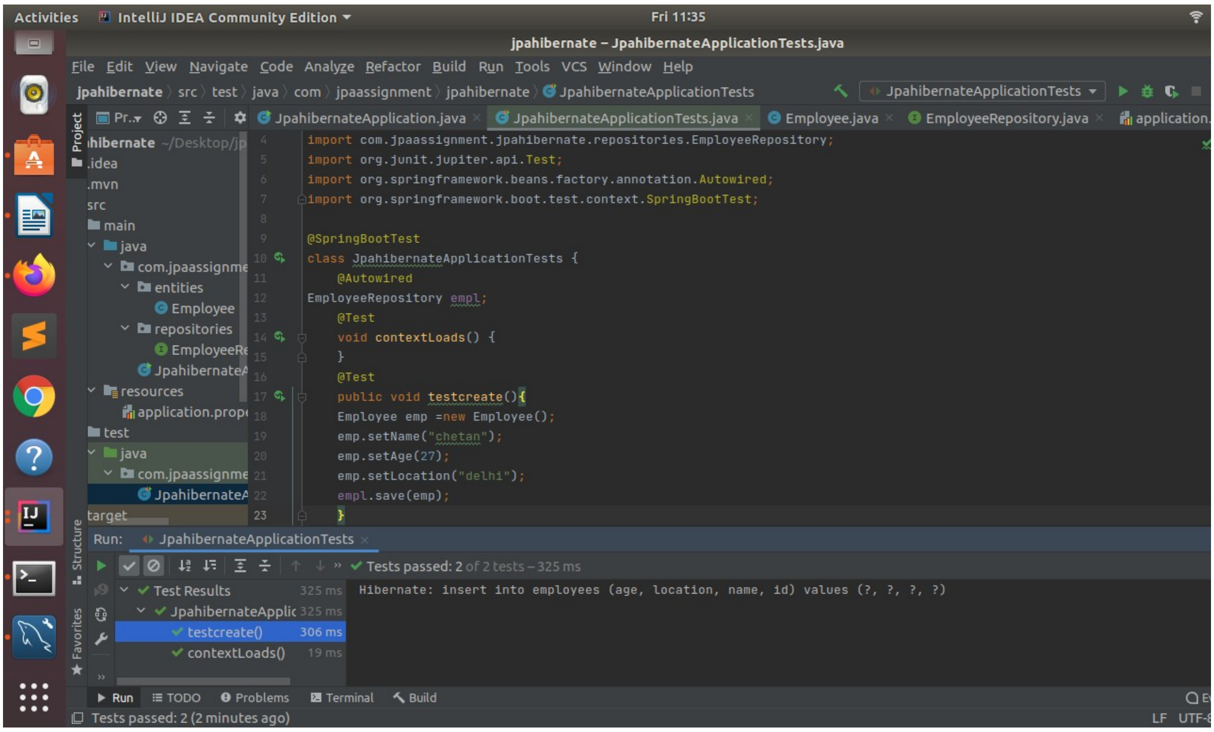
Q2.Set up EmployeeRepository with Spring Data JPA.



Activities
IntelliJ IDEA Community Edition
Fri 11:25
jpahibernate – EmployeeRepository.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
jpahibernate 〉 src 〉 main 〉 java 〉 com 〉 jpaassignment 〉 jpahibernate 〉 repositories 〉 EmployeeRepository
Add Configuration...
JpahibernateApplication.java
Employee.java
EmployeeRepository.java
application.properties
Project
Structure
Favorites
TODO
Problems
Terminal
Build
6:77 LF UTF-8

```
package com.jpaassignment.jpahibernate.repositories;

import com.jpaassignment.jpahibernate.entities.Employee;
import org.springframework.data.repository.CrudRepository;

public interface EmployeeRepository extends CrudRepository <Employee,Integer>{

}
```

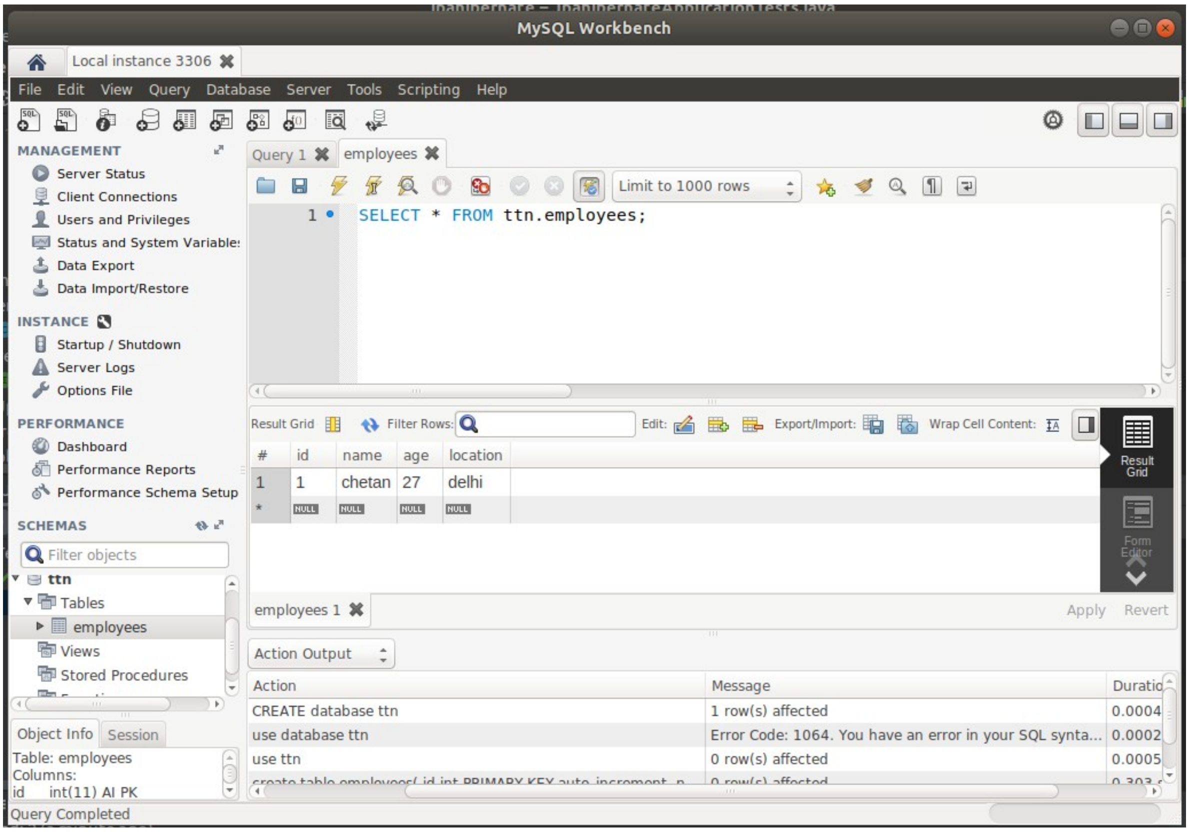
Q3.Perform Create Operation on Entity using Spring Data JPA.


Activities
IntelliJ IDEA Community Edition
Fri 11:35
jpahibernate – JpahibernateApplicationTests.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
jpahibernate › src › test › java › com › jpaassignment › jpahibernate › JpahibernateApplicationTests
JpahibernateApplication.java
JpahibernateApplicationTests.java
Employee.java
EmployeeRepository.java
application.
jpahibernate ~/Desktop/jp
.idea
.mvn
src
main
java
com.jpaassignme
entities
Employee
repositories
EmployeeRe
JpahibernateA
resources
application.prope
test
java
com.jpaassignme
JpahibernateA
target
Run: JpahibernateApplicationTests
Run
TODO
Problems
Terminal
Build
LF UTF-8

```java
import com.jpaassignment.jpahibernate.repositories.EmployeeRepository;
import org.junit.jupiter.api.Test;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.test.context.SpringBootTest;

@SpringBootTest
class JpahibernateApplicationTests {
    @Autowired
EmployeeRepository empl;
    @Test
    void contextLoads() {
    }
    @Test
    public void testcreate(){
    Employee emp =new Employee();
    emp.setName("chetan");
    emp.setAge(27);
    emp.setLocation("delhi");
    empl.save(emp);
    }
```

```
Tests passed: 2 of 2 tests – 325 ms
Test Results                     325 ms
  JpahibernateApplic             325 ms
    testcreate()                 306 ms
    contextLoads()                19 ms

Hibernate: insert into employees (age, location, name, id) values (?, ?, ?, ?)
```

Tests passed: 2 (2 minutes ago)



```sql
SELECT * FROM ttn.employees;
```

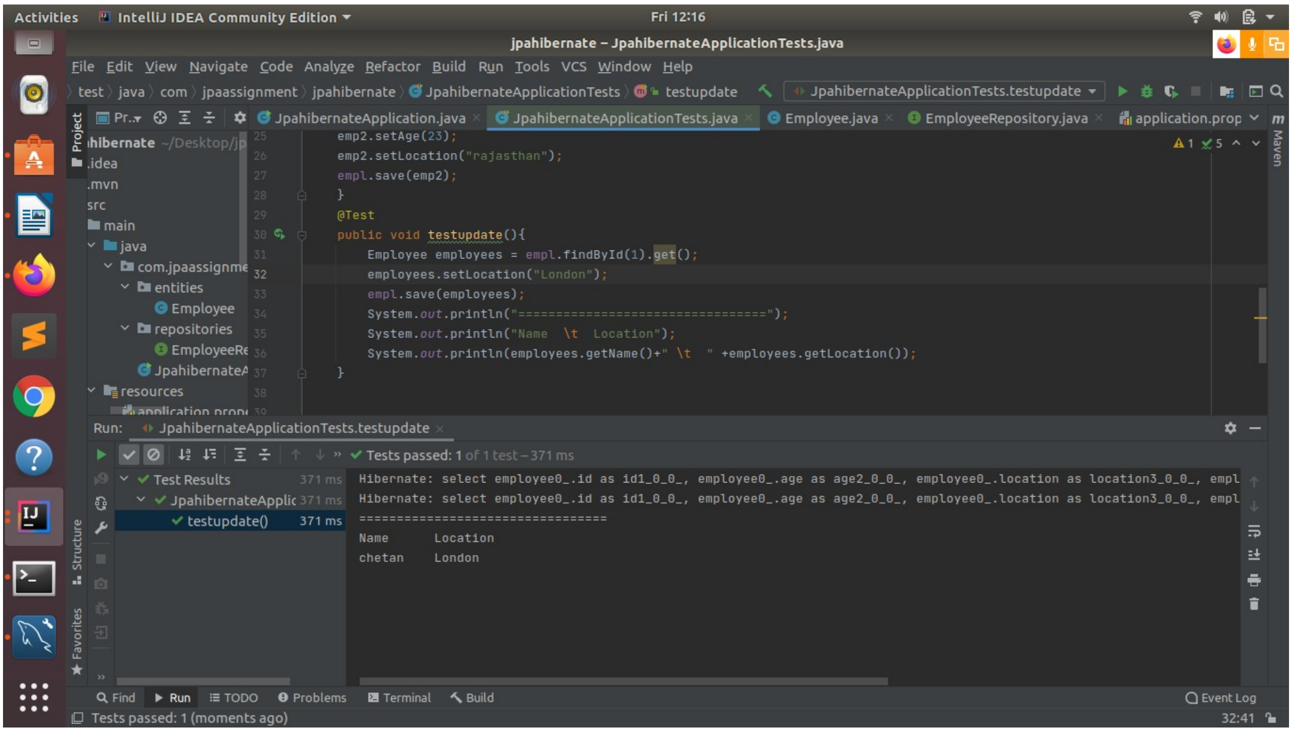
#	id	name	age	location
1	1	chetan	27	delhi
*	NULL	NULL	NULL	NULL

Action	Message	Duration
CREATE database ttn	1 row(s) affected	0.0004
use database ttn	Error Code: 1064. You have an error in your SQL synta...	0.0002
use ttn	0 row(s) affected	0.0005
create table employees(id int PRIMARY KEY auto_increment, n	0 row(s) affected	0.303 s

Table: employees
Columns:
id   int(11) AI PK

Query Completed

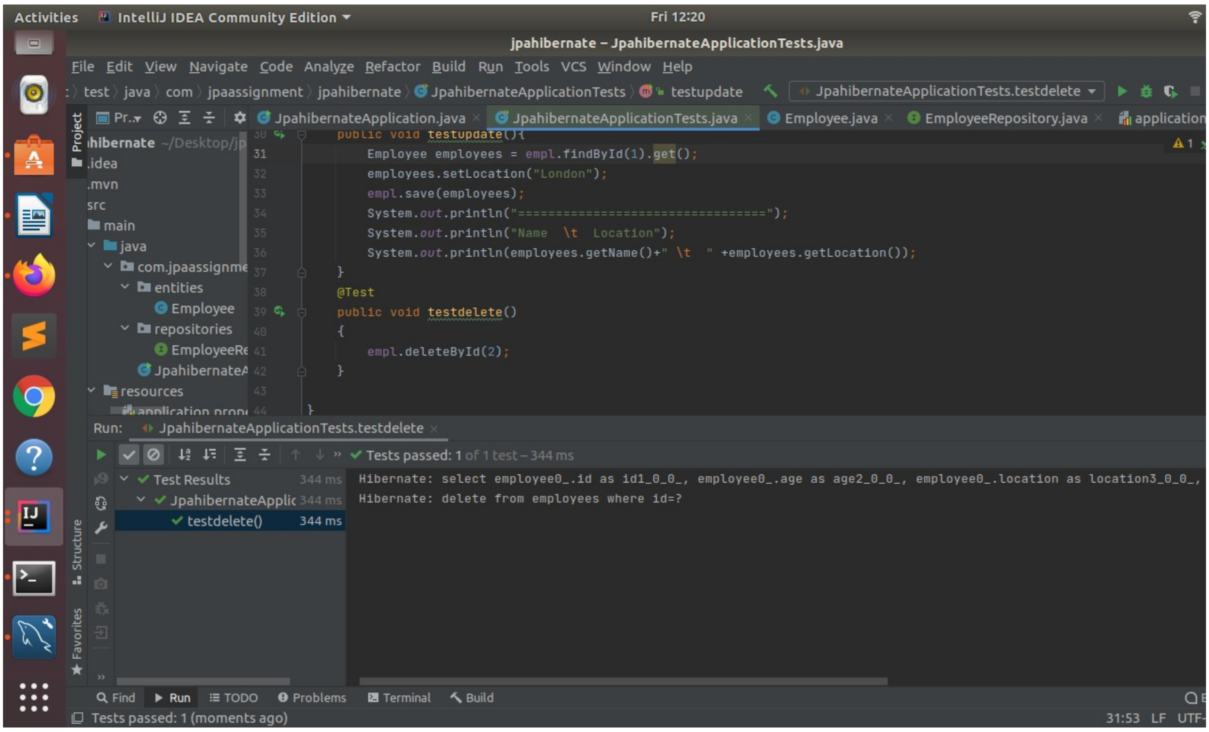
Q4.Perform Update Operation on Entity using Spring Data JPA.


Activities
IntelliJ IDEA Community Edition
Fri 12:16
jpahibernate – JpahibernateApplicationTests.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
test 〉 java 〉 com 〉 jpaassignment 〉 jpahibernate 〉 JpahibernateApplicationTests 〉 testupdate
JpahibernateApplicationTests.testupdate
JpahibernateApplication.java
JpahibernateApplicationTests.java
Employee.java
EmployeeRepository.java
application.prop
Project
hibernate ~/Desktop/jp
.idea
.mvn
src
main
java
com.jpaassignme
entities
Employee
repositories
EmployeeRe
JpahibernateA
resources
application.prope
Run: JpahibernateApplicationTests.testupdate
Tests passed: 1 of 1 test – 371 ms
Test Results 371 ms
JpahibernateApplic 371 ms
testupdate() 371 ms
Find
Run
TODO
Problems
Terminal
Build
Event Log
Tests passed: 1 (moments ago)
32:41
Structure
Favorites
Maven

```java
        emp2.setAge(23);
        emp2.setLocation("rajasthan");
        empl.save(emp2);
    }
    @Test
    public void testupdate(){
        Employee employees = empl.findById(1).get();
        employees.setLocation("London");
        empl.save(employees);
        System.out.println("=================================");
        System.out.println("Name  \t  Location");
        System.out.println(employees.getName()+" \t  " +employees.getLocation());
    }
```

```
Hibernate: select employee0_.id as id1_0_0_, employee0_.age as age2_0_0_, employee0_.location as location3_0_0_, empl
Hibernate: select employee0_.id as id1_0_0_, employee0_.age as age2_0_0_, employee0_.location as location3_0_0_, empl
=================================
Name      Location
chetan    London
```

Q5.Perform Delete Operation on Entity using Spring Data JPA.



jpahibernate – JpahibernateApplicationTests.java

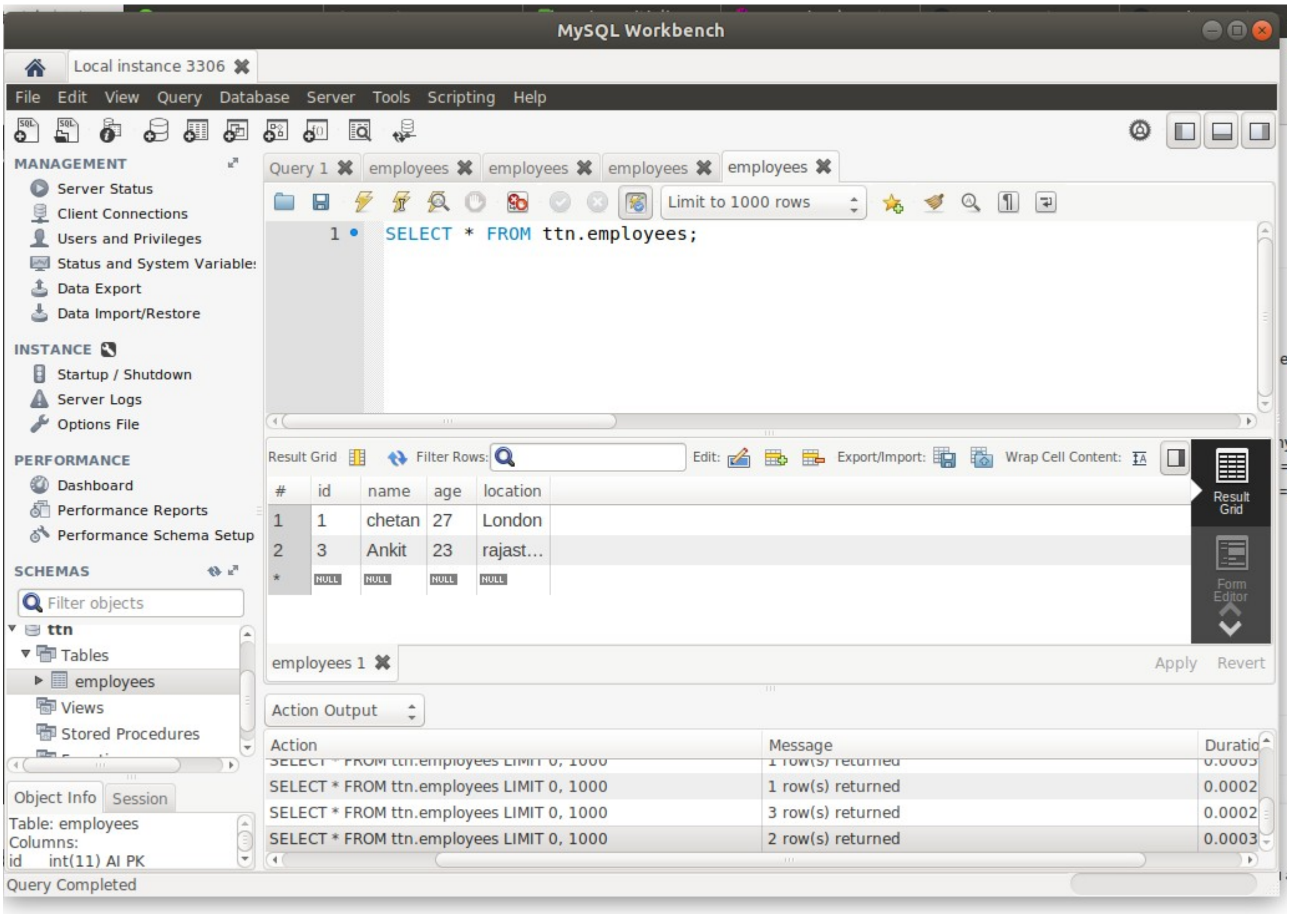
```java
public void testupdate(){
    Employee employees = empl.findById(1).get();
    employees.setLocation("London");
    empl.save(employees);
    System.out.println("================================");
    System.out.println("Name  \t  Location");
    System.out.println(employees.getName()+" \t  " +employees.getLocation());
}
@Test
public void testdelete()
{
    empl.deleteById(2);
}

}
```

Run: JpahibernateApplicationTests.testdelete

✓ Tests passed: 1 of 1 test – 344 ms

```
Hibernate: select employee0_.id as id1_0_0_, employee0_.age as age2_0_0_, employee0_.location as location3_0_0_,
Hibernate: delete from employees where id=?
```

Tests passed: 1 (moments ago)



```sql
SELECT * FROM ttn.employees;
```

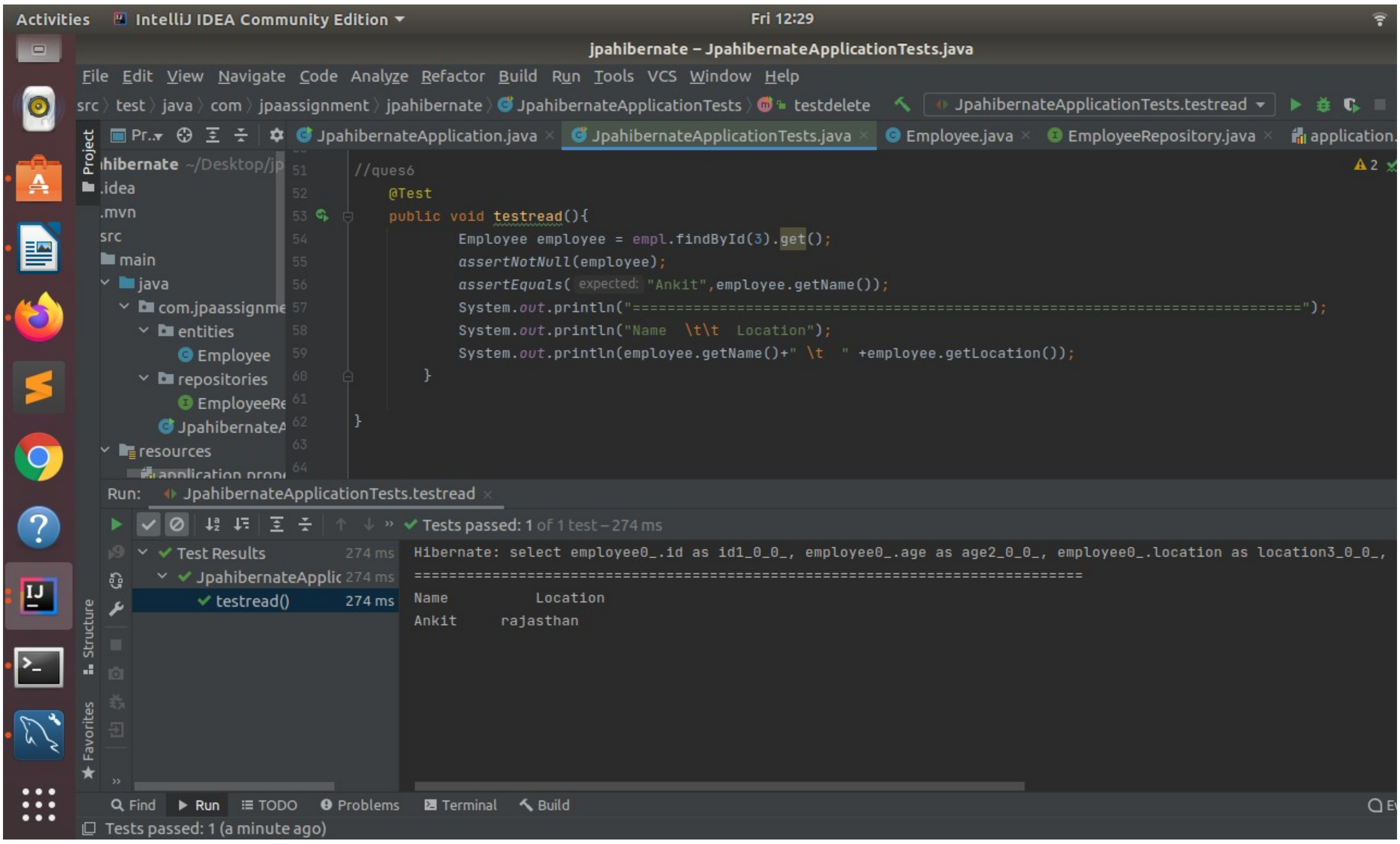
#	id	name	age	location
1	1	chetan	27	London
2	3	Ankit	23	rajast...
*	NULL	NULL	NULL	NULL

Action	Message	Duratio
SELECT * FROM ttn.employees LIMIT 0, 1000	1 row(s) returned	0.0003
SELECT * FROM ttn.employees LIMIT 0, 1000	1 row(s) returned	0.0002
SELECT * FROM ttn.employees LIMIT 0, 1000	3 row(s) returned	0.0002
SELECT * FROM ttn.employees LIMIT 0, 1000	2 row(s) returned	0.0003

Table: employees
Columns:
id int(11) AI PK

Query Completed

Q6.Perform Read Operation on Entity using Spring Data JPA.



Activities
IntelliJ IDEA Community Edition
Fri 12:29
jpahibernate – JpahibernateApplicationTests.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
src 〉 test 〉 java 〉 com 〉 jpaassignment 〉 jpahibernate 〉 JpahibernateApplicationTests 〉 testdelete
JpahibernateApplicationTests.testread
JpahibernateApplication.java
JpahibernateApplicationTests.java
Employee.java
EmployeeRepository.java
application.
jpahibernate ~/Desktop/jp
.idea
.mvn
src
main
java
com.jpaassignme
entities
Employee
repositories
EmployeeRe
JpahibernateA
resources
application.prop
Run: JpahibernateApplicationTests.testread
Test Results 274 ms
JpahibernateApplic 274 ms
testread() 274 ms
Find
Run
TODO
Problems
Terminal
Build

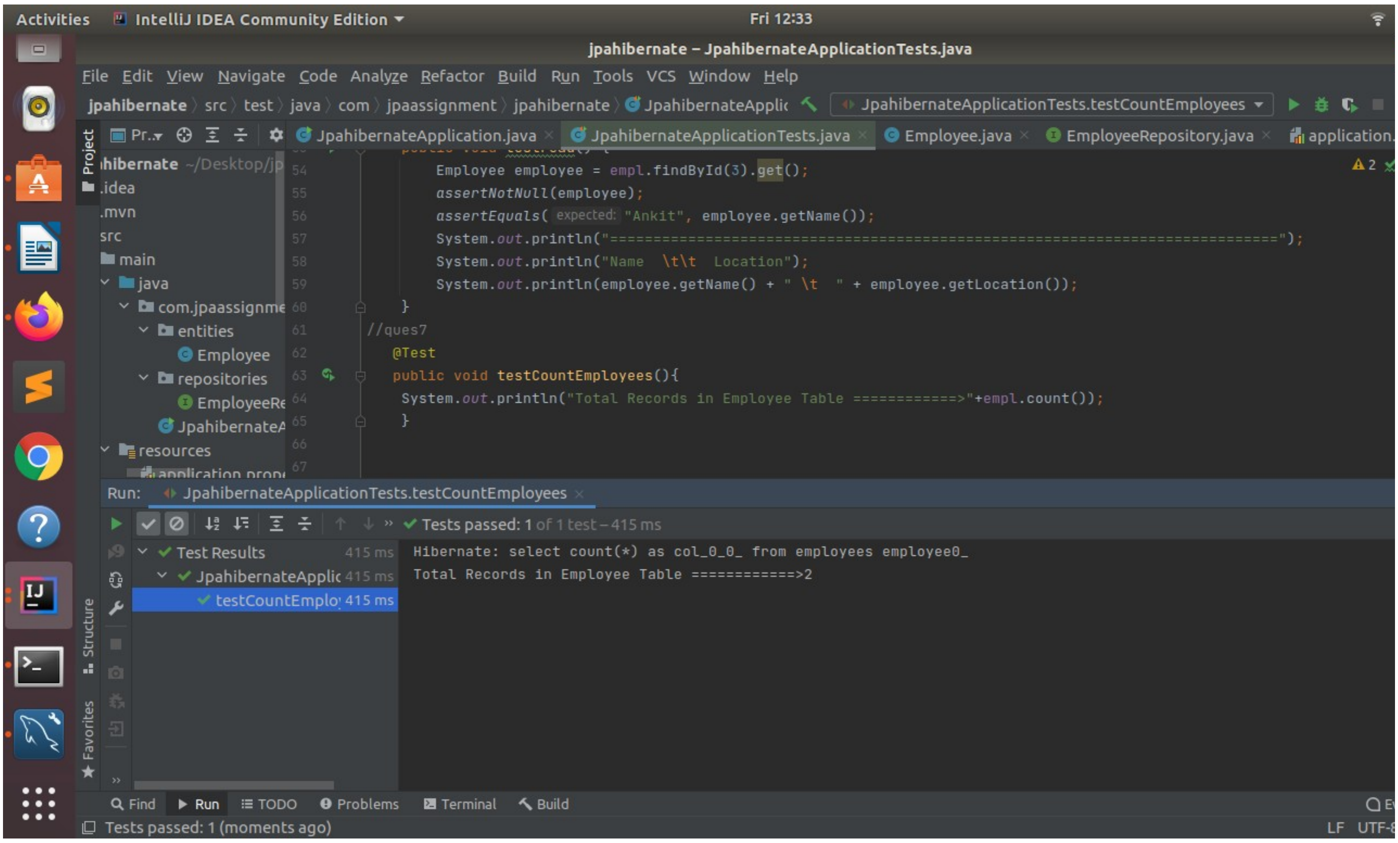
```java
//ques6
    @Test
    public void testread(){
            Employee employee = empl.findById(3).get();
            assertNotNull(employee);
            assertEquals( expected: "Ankit",employee.getName());
            System.out.println("================================================================================");
            System.out.println("Name  \t\t  Location");
            System.out.println(employee.getName()+" \t  " +employee.getLocation());
        }

}
```

✓ Tests passed: 1 of 1 test – 274 ms

```
Hibernate: select employee0_.id as id1_0_0_, employee0_.age as age2_0_0_, employee0_.location as location3_0_0_,
==============================================================================
Name          Location
Ankit     rajasthan
```

Tests passed: 1 (a minute ago)

Q7.Get the total count of the number of Employees.

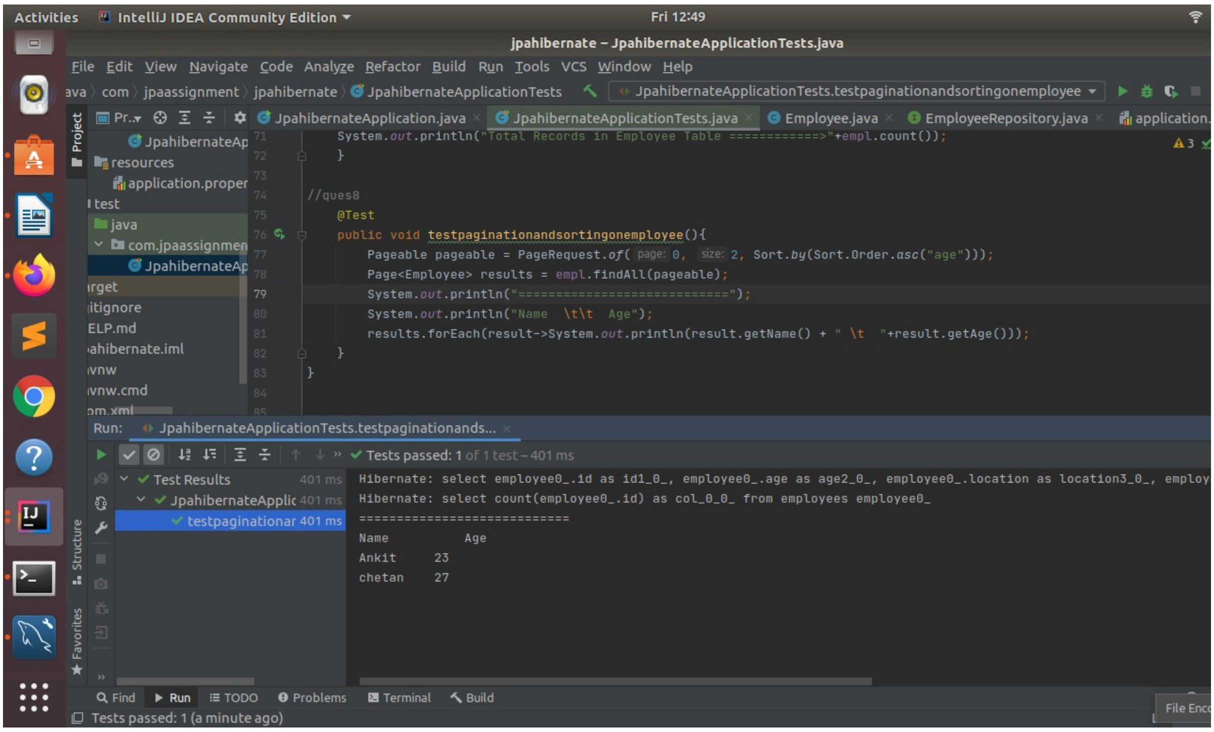


```
        Employee employee = empl.findById(3).get();
        assertNotNull(employee);
        assertEquals( expected: "Ankit", employee.getName());
        System.out.println("============================================================================");
        System.out.println("Name  \t\t  Location");
        System.out.println(employee.getName() + " \t  " + employee.getLocation());
    }
//ques7
   @Test
   public void testCountEmployees(){
    System.out.println("Total Records in Employee Table ============>"+empl.count());
    }
```

```
Hibernate: select count(*) as col_0_0_ from employees employee0_
Total Records in Employee Table ============>2
```

Activities
IntelliJ IDEA Community Edition
Fri 12:33
jpahibernate – JpahibernateApplicationTests.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
jpahibernate src test java com jpaassignment jpahibernate JpahibernateApplic
JpahibernateApplicationTests.testCountEmployees
JpahibernateApplication.java
JpahibernateApplicationTests.java
Employee.java
EmployeeRepository.java
application.
jhibernate ~/Desktop/jp
.idea
.mvn
src
main
java
com.jpaassignme
entities
Employee
repositories
EmployeeRe
JpahibernateA
resources
application.prope
Run: JpahibernateApplicationTests.testCountEmployees
Tests passed: 1 of 1 test – 415 ms
Test Results 415 ms
JpahibernateApplic 415 ms
testCountEmplo 415 ms
Find
Run
TODO
Problems
Terminal
Build
Tests passed: 1 (moments ago)
LF UTF-8

Q8.Implement Pagination and Sorting on the bases of Employee Age.


Activities
IntelliJ IDEA Community Edition
Fri 12:49
jpahibernate – JpahibernateApplicationTests.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
ava 〉 com 〉 jpaassignment 〉 jpahibernate 〉 JpahibernateApplicationTests
JpahibernateApplicationTests.testpaginationandsortingonemployee
JpahibernateApplication.java
JpahibernateApplicationTests.java
Employee.java
EmployeeRepository.java
application.
Project
JpahibernateAp
resources
application.proper
test
java
com.jpaassignmen
JpahibernateAp
arget
itignore
ELP.md
ahibernate.iml
vnw
vnw.cmd
om.xml
Structure
Favorites
Run:
JpahibernateApplicationTests.testpaginationands...
Test Results 401 ms
JpahibernateApplic 401 ms
testpaginationar 401 ms
Find
Run
TODO
Problems
Terminal
Build
File Enco

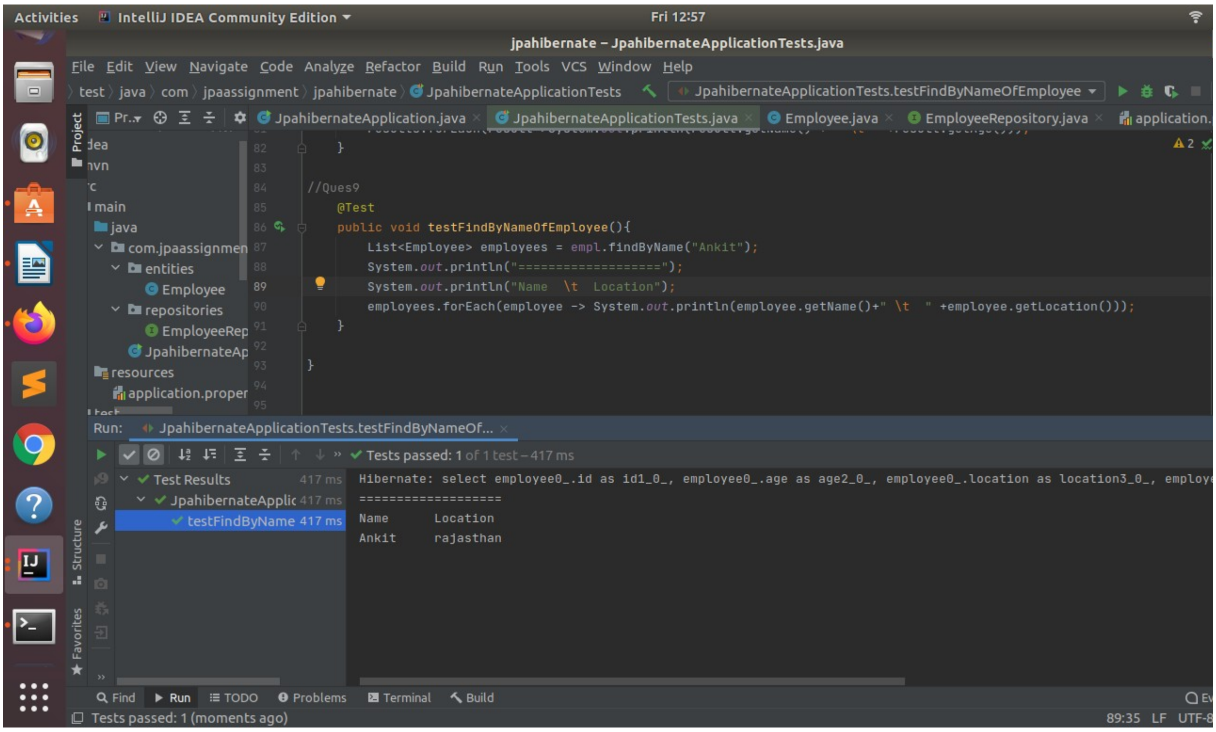
```
        System.out.println("Total Records in Employee Table ============>"+empl.count());
    }

//ques8
    @Test
    public void testpaginationandsortingonemployee(){
        Pageable pageable = PageRequest.of( page: 0,  size: 2, Sort.by(Sort.Order.asc("age")));
        Page<Employee> results = empl.findAll(pageable);
        System.out.println("============================");
        System.out.println("Name  \t\t  Age");
        results.forEach(result->System.out.println(result.getName() + " \t  "+result.getAge()));
    }
}
```

Tests passed: 1 of 1 test – 401 ms

```
Hibernate: select employee0_.id as id1_0_, employee0_.age as age2_0_, employee0_.location as location3_0_, employ
Hibernate: select count(employee0_.id) as col_0_0_ from employees employee0_
============================
Name          Age
Ankit     23
chetan    27
```

Tests passed: 1 (a minute ago)

Q9.Create and use finder to find Employee by Name.



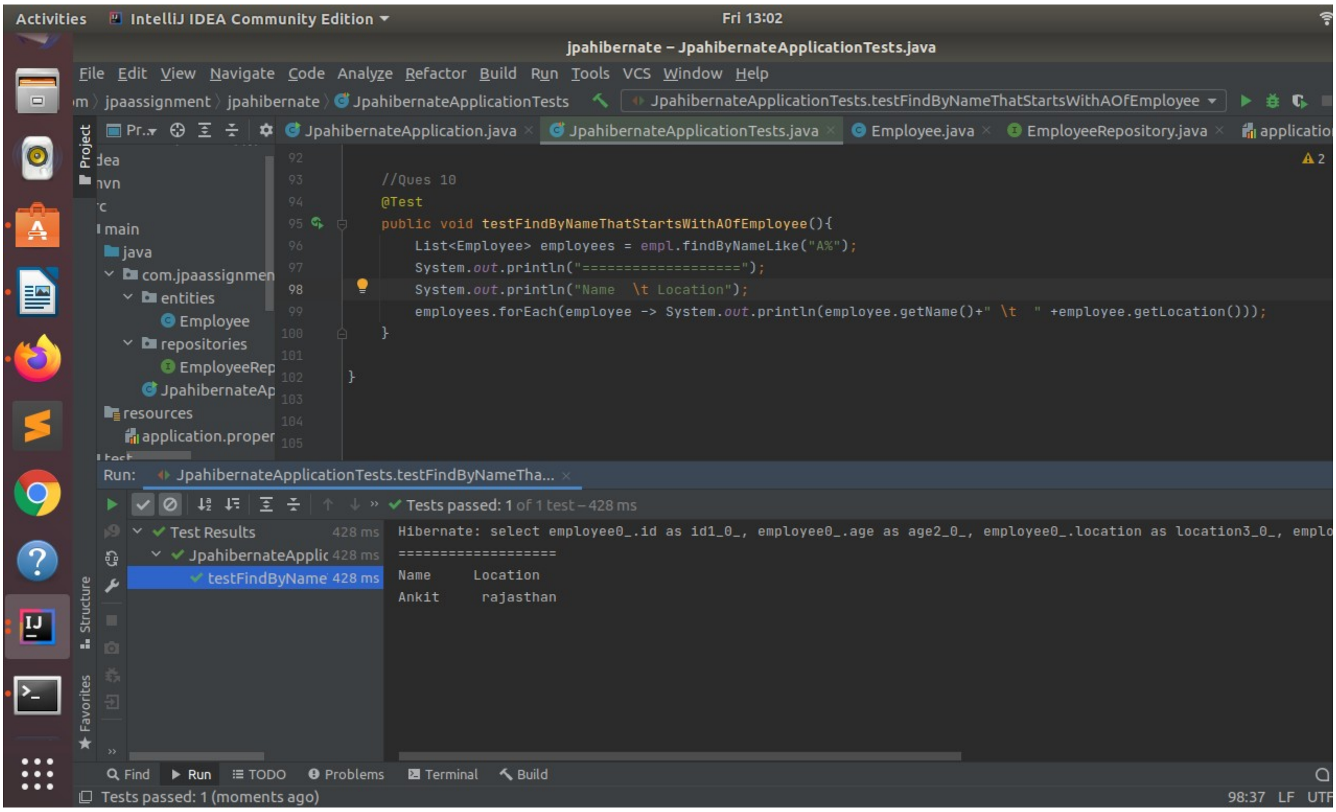
```java
    }

//Ques9
    @Test
    public void testFindByNameOfEmployee(){
        List<Employee> employees = empl.findByName("Ankit");
        System.out.println("===================");
        System.out.println("Name  \t  Location");
        employees.forEach(employee -> System.out.println(employee.getName()+" \t  " +employee.getLocation()));
    }

}
```

Tests passed: 1 of 1 test – 417 ms

```
Hibernate: select employee0_.id as id1_0_, employee0_.age as age2_0_, employee0_.location as location3_0_, employe
===================
Name      Location
Ankit     rajasthan
```

Tests passed: 1 (moments ago)

Q10.Create and use finder to find Employees starting with A character.



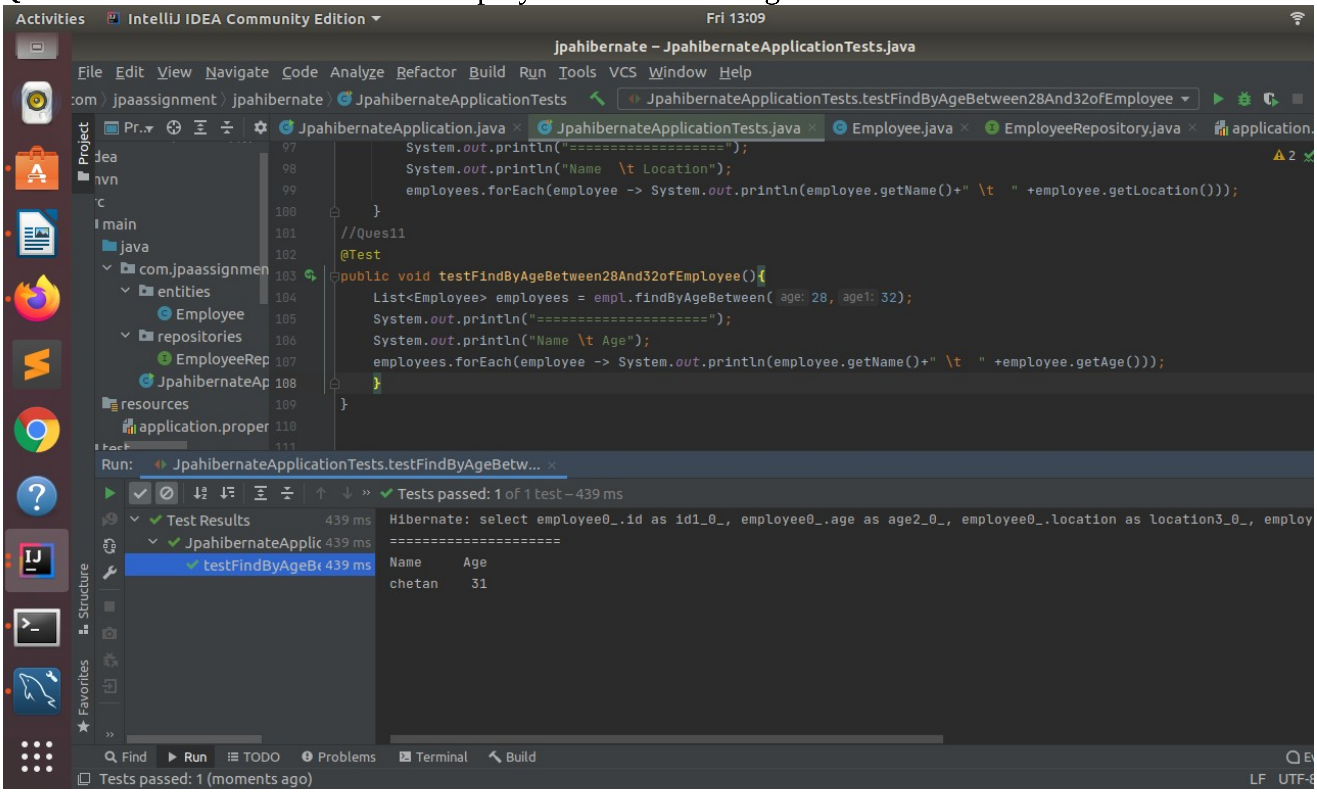
```
    //Ques 10
    @Test
    public void testFindByNameThatStartsWithAOfEmployee(){
        List<Employee> employees = empl.findByNameLike("A%");
        System.out.println("==================");
        System.out.println("Name  \t Location");
        employees.forEach(employee -> System.out.println(employee.getName()+" \t  " +employee.getLocation()));
    }

}
```

Tests passed: 1 of 1 test – 428 ms

```
Hibernate: select employee0_.id as id1_0_, employee0_.age as age2_0_, employee0_.location as location3_0_, emplo
==================
Name     Location
Ankit     rajasthan
```

Activities
IntelliJ IDEA Community Edition
Fri 13:02
jpahibernate – JpahibernateApplicationTests.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
jpaassignment jpahibernate JpahibernateApplicationTests
JpahibernateApplicationTests.testFindByNameThatStartsWithAOfEmployee
JpahibernateApplication.java
JpahibernateApplicationTests.java
Employee.java
EmployeeRepository.java
main
java
com.jpaassignmen
entities
Employee
repositories
EmployeeRep
JpahibernateAp
resources
application.proper
Run:
Test Results 428 ms
JpahibernateApplic 428 ms
testFindByName 428 ms
Find
Run
TODO
Problems
Terminal
Build
Tests passed: 1 (moments ago)
98:37 LF UTF

Q11.Create and use finder to find Employees Between the age of 28 to 32.



Activities
IntelliJ IDEA Community Edition
Fri 13:09
jpahibernate – JpahibernateApplicationTests.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
com 〉 jpaassignment 〉 jpahibernate 〉 JpahibernateApplicationTests
JpahibernateApplicationTests.testFindByAgeBetween28And32ofEmployee
JpahibernateApplication.java
JpahibernateApplicationTests.java
Employee.java
EmployeeRepository.java
application.
Project
idea
mvn
main
java
com.jpaassignmen
entities
Employee
repositories
EmployeeRep
JpahibernateAp
resources
application.proper
Run:
JpahibernateApplicationTests.testFindByAgeBetw...
Test Results 439 ms
JpahibernateApplic 439 ms
testFindByAgeBe 439 ms
Structure
Favorites
Find
Run
TODO
Problems
Terminal
Build
LF UTF-8

```java
            System.out.println("==================");
            System.out.println("Name  \t Location");
            employees.forEach(employee -> System.out.println(employee.getName()+" \t  " +employee.getLocation()));
        }
    //Ques11
    @Test
    public void testFindByAgeBetween28And32ofEmployee(){
        List<Employee> employees = empl.findByAgeBetween( age: 28, age1: 32);
        System.out.println("====================");
        System.out.println("Name \t Age");
        employees.forEach(employee -> System.out.println(employee.getName()+" \t  " +employee.getAge()));
    }
}
```

Tests passed: 1 of 1 test – 439 ms

```
Hibernate: select employee0_.id as id1_0_, employee0_.age as age2_0_, employee0_.location as location3_0_, employ
====================
Name      Age
chetan     31
```

Tests passed: 1 (moments ago)