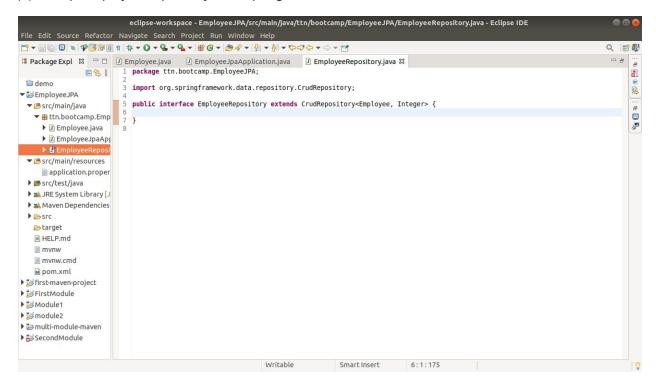
(1) Create an Employee Entity which contains following fields

Name, Id, Age, Location

```
eclipse-workspace - EmployeeJPA/src/main/java/ttn/bootcamp/EmployeeJPA/Employee.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Q 10 8
🔋 Package Expl 🕱 🗀 🔎 DemoApplication.java 🔃 Employee.java 🛱 🛂 *EmployeeRepository.java
                                                                                                                                                             - F
              E & 8
                          3⊖ import javax.persistence.Entity;
4 import javax.persistence.Id;
▼∰> demo [demo master 1
                                                                                                                                                             @
  > com.bootcamp.d 6 @Entity 7 public class Employee {
                                                                                                                                                             B 0 0
   Employee.java

EmployeeNotFot
                                @Id
private int id;
                                private String name;
private int age;
private String location;
     EmployeeReques 13
     EmployeeService 140 15
                                public String getName() {
   return name;
     Name.java
                                public void setName(String name) {
     User1.java
                         18
19
     ▶ QUser2.java
     Versioning.java
                                public int getId() {
   return id;
                         20⊝
   Com.bootcamp.der 21
   ▶ # UserPackage
                                public void setId(int id) {
    this.id = id;
  ▶ @src/main/resources
  ▶ # src/test/java
                                public int getAge() {
   return age;
  ▶ ■ JRE System Library [J 26<sup>©</sup> 27
  ► Maven Dependencies 28
                                public void setAge(int age) {
  > STC
  ▶ ⊜ target
   demo.iml
                                public String getLocation() {
                         32⊖
                         33
34
   W HELP.md
   ■ mvnw
                                public void setLocation(String location) {
   mvnw.cmd
                                    this.location = location;
                                                                               Smart Insert 9:8:135
```

(2) Set up EmployeeRepository with Spring Data JPA



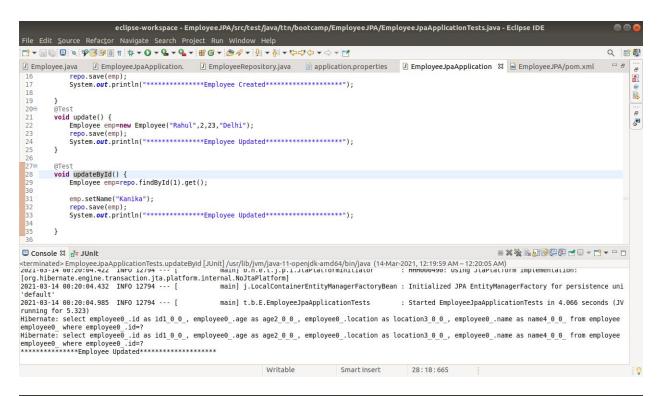
(3) Perform Create Operation on Entity using Spring Data JPA

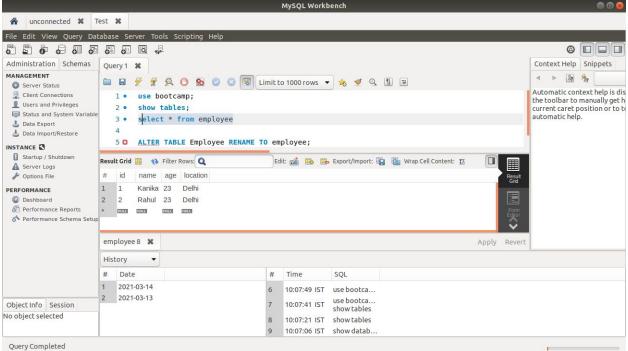
```
eclipse-workspace - EmployeeJPA/src/test/java/ttn/bootcamp/EmployeeJPA/EmployeeJpaApplicationTests.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Q 100 8

☑ Employee.java  ☑ EmployeeJpaApplication.  ☑ EmployeeRepository.jav  ☐ application.properties  ☑ *EmployeeJpaApplication  
☒  ☐ EmployeeJpaApplication  
☐ Empl
                                                                                                                                                                                                                                                                                                                                   8
          package ttn.bootcamp.EmployeeJPA;
                                                                                                                                                                                                                                                                                                                                   @
     3 import org.junit.jupiter.api.Test;
4 import org.springframework.beans.factory.annotation.Autowired;
5 import org.springframework.boot.test.context.SpringBootTest;
                                                                                                                                                                                                                                                                                                                               - 5
          class EmployeeJpaApplicationTests {
                  EmployeeRepository repo;
   13
14
15
                  void create() {
                          Employee emp=new Employee("Mukul",2,23,"Delhi");
   16
                           repo.save(emp):
   17
18
19
                          20
21 []
 ■ Console 🛭 🚮 JUnit
                                                                                                                                                                                                                                                             : HHH000490: Using JtaPlatform implementation:
 [org.hibernate.engine.transaction.jta.platform.internal.NoJtaPlatform]
2021-03-14 00:07:34.298 INFO 11294 --- [ main] j.LocalConta
                                                                                                         main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence uni
  'default
2021-03-14 00:07:34.869 INFO 11294 --- [
                                                                                                         main] t.b.E.EmployeeJpaApplicationTests
                                                                                                                                                                                                         : Started EmployeeJpaApplicationTests in 4.458 seconds (JV
Writable
                                                                                                                                                      Smart Insert 8:36:246
```

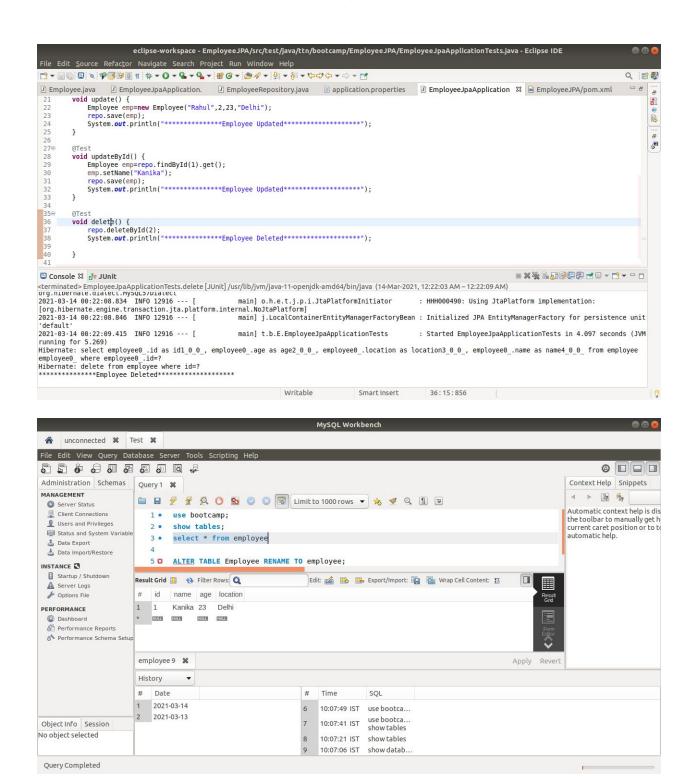
(4) Perform Update Operation on Entity using Spring Data JPA

```
eclipse-workspace - EmployeeJPA/src/test/java/ttn/bootcamp/EmployeeJPA/EmployeeJpaApplicationTests.java - Eclipse IDE
File Edit <u>S</u>ource Refac<u>t</u>or Navigate Search Project Run Window Help
 Q ##
 🗓 Employee.java 🗓 EmployeeJpaApplication. 🔯 EmployeeRepository.java 📵 application.properties 🗓 EmployeeJpaApplication 🛭 🗎 EmployeeJpaApplication
    8 class EmployeeJpaApplicationTests {
90 @Autowired
                                                                                                                                                                                                                                                                                                                                 EmployeeRepository repo;
                                                                                                                                                                                                                                                                                                                                 10
   11
120
                  void create() {
   13
14
15
16
17
18
19
                                                                                                                                                                                                                                                                                                                                 5
                          Employee emp=new Employee("Mukul",2,23,"Delhi");
                          209
21
22
23
24
25
26
27 }
                  void update() {
                          Employee emp=new Employee("Rahul",2,23,"Delhi");
                          repo.save(emp):
                          <terminated>EmployeeJpaApplicationTests.update [JUnit] / usr/lib/jvm/java-11-openjdk-amd64/bin/java (14-Mar-2021, 12:12:16 AM – 12:12:22 AM) בעבו-ט-וג שמוחן סוק.חוספרומנפ. והחוסטשלשט: שווח סוק.חוספרומנפ. והחוסטשלשט: שווח סוק.חוספרומנפ. והחוסטשלשט: שווח סוק.חוספרומנפ. והחוסטשלשט: שווח סוק.חוספרומנפ. ווארט וו
2021-03-14 00:12:21.694 INFO 12346 --- [
                                                                                                         main] o.h.e.t.j.p.i.JtaPlatformInitiator
                                                                                                                                                                                                       : HHH000490: Using JtaPlatform implementation:
[org.hibernate.engine.transaction.jta.platform.internal.NoJtaPlatform]
2021-03-14 00:12:21.706 INFO 12346 --- [ main] j.LocalConta
                                                                                                        main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit
 'default'
2021-03-14 00:12:22.242 INFO 12346 --- [
                                                                                                        main] t.b.E.EmployeeJpaApplicationTests
                                                                                                                                                                                                       : Started EmployeeJpaApplicationTests in 4.182 seconds (JVM
```

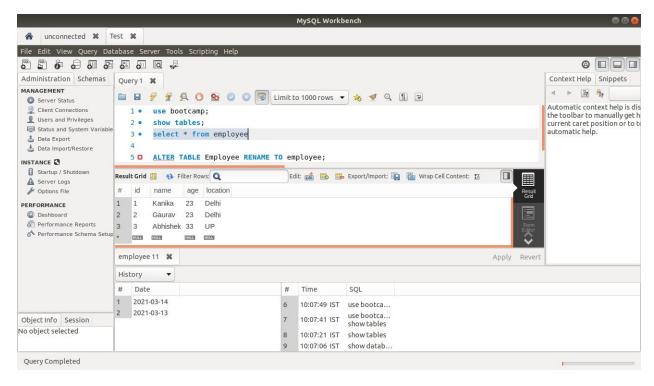


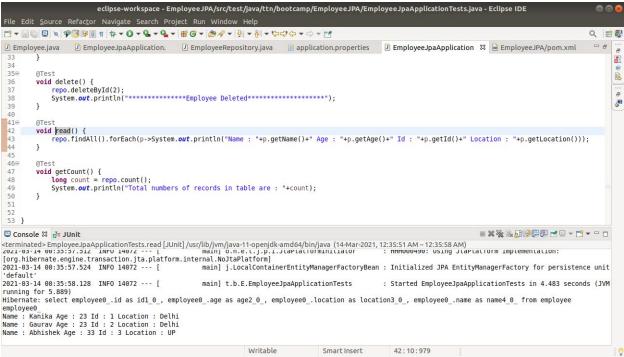


(5) Perform Delete Operation on Entity using Spring Data JPA



(5) Perform Read Operation on Entity using Spring Data JPA





(6) Get the total count of the number of Employees

```
eclipse-workspace - EmployeeJPA/src/test/java/ttn/bootcamp/EmployeeJPA/EmployeeJpaApplicationTests.java - Eclipse IDE
 File Edit <u>Source</u> Refac<u>t</u>or Navigate Search Project Run Window Help
 Q 🖺 👺

☑ EmployeeJpaApplication.
☑ EmployeeRepository.java
☑ EmployeeJpaApplication.
☑ EmployeeJpa
                                                                                                                                                                                                                                                                                                                                                                                              8
   33
34
35©
                                                                                                                                                                                                                                                                                                                                                                                              @
                      void delete() {
   36
37
38
39
40
41<sup>©</sup>
42
43
44
45
46<sup>©</sup>
47
48
49
50
51
52
53
}
                                                                                                                                                                                                                                                                                                                                                                                              void read() {
                               repo.findAll().forEach(p->System.out.println("Name : "+p.getName()+" Age : "+p.getAge()+" Id : "+p.getId()+" Location : "+p.getLocation()));
                      void getCount() {
                               long count = repo.count();
System.out.println("Total numbers of records in table are : "+count);
                                                                                                                                                                                                                                                                                                          ■ Console \( \mathbb{Z} \) Junit
www.i-ws-14 00:37:09.376 INFO 14294 --- [ main] o.h.e.t.j.p.i.JtaPlatformInitiator [org.hibernate.engine.transaction.jta.platform.internal.NoJtaPlatform] 2021-03-14 00:37:09.385 INFO 14294 --- [ main] j.LocalContainerEntityManagerFactors | default
                                                                                                                            main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit
| 2021-03-14 00:37:09.941 | INFO 14294 --- [ main] t.b.E
| running for 5.268)
| Hibernate: select count(*) as col 0 0 from employee employee0
                                                                                                                            main] t.b.E.EmployeeJpaApplicationTests
                                                                                                                                                                                                                                             : Started EmployeeJpaApplicationTests in 4.095 seconds (JVM
```

(7) Implement Pagination and Sorting on the bases of Employee Age

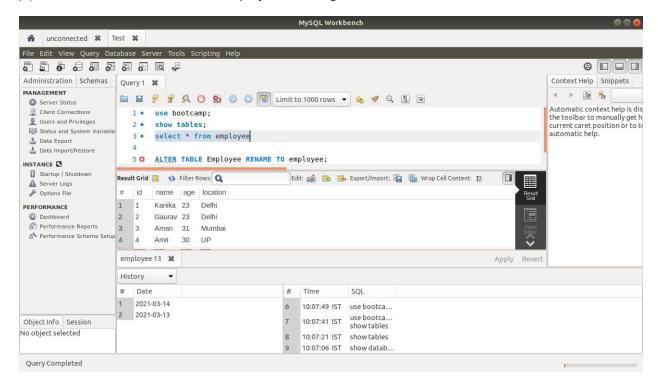
```
eclipse-workspace - EmployeeJPA/src/test/java/ttn/bootcamp/EmployeeJPA/EmployeeJpaApplicationTests.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window He
Q ##
 🗓 EmployeeJpaApplication. 💹 EmployeePpaApplication. 🔀 EmployeePpaApplication 🛭 📓 EmployeePpaApplication 🛱 📓 EmployeePpaApplication
                                                                                                                                                                                                                                                                                                                                                                                                                                              8
    50
51
52
                                                                                                                                                                                                                                                                                                                                                                                                                                              @
                        void getCount() {
   long count = repo.count();
   System.out.println("Total numbers of records in table are : "+count);
    53
54
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                                                                                                                                                                                                                                                                                                                                                                                                                                              8
  599
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                         void pagingAndSorting() {
                                   PageRequest pagerequest =PageRequest.of(0, 4, Sort.DEFAULT DIRECTION, "age");
                                    repo.findAllpagerequest).forEach(p->System.out.println("Name: "+p.getName()+" Age: "+p.getAge()+" Id: "+p.getId()+" Location: "+p.getLocation repo.findAllpagerequest).forEach(p->System.out.println("Name: "+p.getName()+" Age: "+p.getAge()+" Id: "+p.getId()+" Location: "+p.getLocation report for the println report for the
                                                                                                                                                                                                                                                                                                                                                ■ Console X Junit
<terminated>EmployeeJpaApplicationTests.pagingAndSorting [JUnit]/usr/lib/jym/java-11-openjdk-amd64/bin/java (14-Mar-2021, 1:22:03 AM – 1:22:10 AM)
zez1-es-14 e1:22:e9.e83 imru zzezz --- [ mainj j.cocatcontainerentitymanagerractoryeean : initiatized JPA entitymanagerractory for persistence unit
 2021-03-14 01:22:10.362 INFO 22052 --- [
                                                                                                                                           main] t.b.E.EmployeeJpaApplicationTests
                                                                                                                                                                                                                                                                           : Started EmployeeJpaApplicationTests in 4.69 seconds (JVM
 running for 6.132)
Hibernate: select employee0_id as id1_0_, employee0_age as age2_0_, employee0_location as location3_0_, employee0_name as name4_0_ from employee employee0_where employee0_age=?
Hibernate: select employee0_id as id1_0_, employee0_age as age2_0_, employee0_location as location3_0_, employee0_name as name4_0_ from employee employee0_age asc_limit?
```

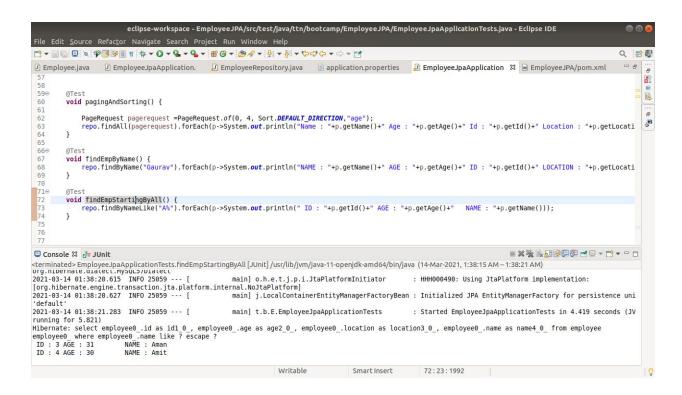
(8) Create and use finder to find Employee by Name

```
eclipse-workspace - EmployeeJPA/src/test/java/ttn/bootcamp/EmployeeJPA/EmployeeJpaApplicationTests.java - Eclipse IDE
File Edit <u>S</u>ource Refac<u>t</u>or Navigate Search Project Run Window Help
Q 10 8
🗓 Employee.java 📗 EmployeeJpaApplication. 🚨 EmployeeRepository.java 📄 application.properties 🚨 EmployeeJpaApplication 🛭 🗎 EmployeeJpaApplication
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            long count = repo.count();
System.out.println("Total numbers of records in table are : "+count);
                                                                                                                                                          5
        void pagingAndSorting() {
            PageRequest pagerequest =PageRequest.of(0, 4, Sort.DEFAULT DIRECTION, "age");
            repo.findAll(pagerequest).forEach(p->System.out.println("Name : "+p.getName()+" Age : "+p.getAge()+" Id : "+p.getId()+" Location : "+p.getLocati
 669
67
68
69
70
71
72
73 }
        void findEmpByName() {
            repo.findbyName("Gaurav").forEach(p->System.out.println("Name: "+p.getName()+" Age: "+p.getAge()+" Id: "+p.getId()+" Location: "+p.getLocati
                                                                                                                        2021-03-14 01:26:14.943 INFO 22790 --- [
                                                  main] o.h.e.t.j.p.i.JtaPlatformInitiator
                                                                                               : HHH000490: Using JtaPlatform implementation:
[org.hibernate.engine.transaction.jta.platform.internal.NoJtaPlatform]
2021-03-14 01:26:14.955 INFO 22790 --- [ main] j.LocalConta
                                                 main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence uni
'default'
2021-03-14 01:26:15.608 INFO 22790 --- [
                                                 main] t.b.E.EmployeeJpaApplicationTests
                                                                                               : Started EmployeeJpaApplicationTests in 4.27 seconds (JVM
Hibernate: select employee0_.id as id1_0_, employee0_.age as age2_0_, employee0_.location as location3_0_, employee0_.name as name4_0_ from employee employee0_.name=?

Name : Gaurav Age : 23 Id : 2 Location : Delhi
                                                              Writable Smart Insert 67: 21: 1802
```

(9) Create and use finder to find Employees starting with A character





(10) Create and use finder to find Employees Between the age of 28 to 32

```
eclipse-workspace - EmployeeJPA/src/test/java/ttn/bootcamp/EmployeeJPA/EmployeeJpaApplicationTests.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Q 🔡 🐯
🗓 EmployeeJpaApplication. 🚨 EmployeeRepository.java 📗 application.properties 🚨 EmployeeJpaApplication 🛭 🗎 EmployeeJpaApplication
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                   void findEmpBvName() {
                            repo.findByName("Gaurav").forEach(p->System.out.println("NAME: "+p.getName()+" AGE: "+p.getAge()+" ID: "+p.getId()+" LOCATION: "+p.getLocati
                                                                                                                                                                                                                                                                                                                                                         8
                   void findEmpStartingByAll() {
    repo.findByNameLike("A%").forEach(p->System.out.println(" ID : "+p.getId()+" AGE : "+p.getAge()+" NAME : "+p.getName()));
                  }
                   void findEmpByAgeBetween() {
    repo.findByAgeBetween(28, 32).forEach(p->System.out.println(" ID : "+p.getId()+" AGE : "+p.getAge()+" NAME : "+p.getName()));
 ☐ Console ☎ 🗗 JUnit
                                                                                                                                                                                                                                                                             terminated> EmployeeJpaApplicationTests.findEmpByAgeBetween [JUnit] / usr/lib/jvm/java-11-openjdk-amd64/bin/java (14-Mar-2021, 1:46:36 AM - 1:46:44 AM)
urg.nipernate.diatect.mysquszupatect
2021-03-14 01:46:43.256 INFO 26525 --- [ main] o.h.e.t.j.p.i.JtaPlatformInitiator : HHH000490: Using JtaPlatform imple
2021-03-14 01:46:43:256 INFO 26525 --- [ main] o.h.e.t.j.p.i.JtaPlatformInitiator [org.hibernate.engine.transaction.jta.platform.internal.NoJtaPlatform]
                                                                                                                                                                                                                     : HHH000490: Using JtaPlatform implementation:
2021-03-14 01:46:43.276 INFO 26525 --- [
                                                                                                                \verb|main| j.LocalContainerEntityManagerFactoryBean: Initialized JPA EntityManagerFactory for persistence unit the property of 
'default'
2021-03-14 01:46:44.059 INFO 26525 --- [
                                                                                                                main] t.b.E.EmployeeJpaApplicationTests
                                                                                                                                                                                                                      : Started EmployeeJpaApplicationTests in 5.754 seconds (JVM
Writable Smart Insert 80:68:2255
```