package com.example.employeemanagementsystem;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import org.springframework.data.jpa.repository.config.EnableJpaAuditing;

@SpringBootApplication

@EnableJpaAuditing // Enable JPA Auditing

public class EmployeeManagementSystemApplication {

public static void main(String[] args) {

SpringApplication.run(EmployeeManagementSystemApplication.class, args);

}

}

package com.example.employeemanagementsystem.audit;

import jakarta.persistence.EntityListeners;

import jakarta.persistence.MappedSuperclass;

import org.springframework.data.annotation.CreatedDate;

import org.springframework.data.annotation.LastModifiedDate;

import org.springframework.data.jpa.domain.support.AuditingEntityListener;

import java.time.LocalDateTime;

@MappedSuperclass

@EntityListeners(AuditingEntityListener.class)

public abstract class Auditable {

@CreatedDate

private LocalDateTime createdDate;

@LastModifiedDate

private LocalDateTime lastModifiedDate;

// Getters and Setters

public LocalDateTime getCreatedDate() {

return createdDate;

}

public void setCreatedDate(LocalDateTime createdDate) {

this.createdDate = createdDate;

}

public LocalDateTime getLastModifiedDate() {

return lastModifiedDate;

}

public void setLastModifiedDate(LocalDateTime lastModifiedDate) {

this.lastModifiedDate = lastModifiedDate;

}

}

package com.example.employeemanagementsystem;

import com.example.employeemanagementsystem.audit.Auditable;

import jakarta.persistence.\*;

@Entity

@Table(name = "employees")

public class Employee extends Auditable {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Long id;

@Column(nullable = false)

private String name;

@Column(nullable = false, unique = true)

private String email;

@ManyToOne(fetch = FetchType.LAZY)

@JoinColumn(name = "department\_id")

private Department department;

// Getters and Setters

// ...

}

package com.example.employeemanagementsystem;

import com.example.employeemanagementsystem.audit.Auditable;

import jakarta.persistence.\*;

import java.util.List;

@Entity

@Table(name = "departments")

public class Department extends Auditable {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Long id;

@Column(nullable = false, unique = true)

private String name;

@OneToMany(mappedBy = "department", cascade = CascadeType.ALL, orphanRemoval = true)

private List<Employee> employees;

// Getters and Setters

// ...

}

package com.example.employeemanagementsystem.audit;

import org.springframework.data.domain.AuditorAware;

import org.springframework.stereotype.Component;

import java.util.Optional;

@Component

public class AuditorAwareImpl implements AuditorAware<String> {

@Override

public Optional<String> getCurrentAuditor() {

// For simplicity, returning a static user.

// In real applications, retrieve the logged-in user from the security context.

return Optional.of("system\_user");

}

}

package com.example.employeemanagementsystem.audit;

import org.springframework.data.annotation.CreatedBy;

import org.springframework.data.annotation.LastModifiedBy;

import jakarta.persistence.MappedSuperclass;

@MappedSuperclass

public abstract class Auditable {

@CreatedBy

private String createdBy;

@LastModifiedBy

private String lastModifiedBy;

@CreatedDate

private LocalDateTime createdDate;

@LastModifiedDate

private LocalDateTime lastModifiedDate;

// Getters and Setters

// ...

}