Spring Data JPA Repositories with Services

UserRepository + UserService

```
// Repository
public interface UserRepository extends JpaRepository<User, Long> {
    Optional<User> findByEmail(String email);
}

// Service
@Service
public class UserService {
    @Autowired
    private UserRepository userRepository;

    public Optional<User> getUserByEmail(String email) {
        return userRepository.findByEmail(email);
    }

    public User saveUser(User user) {
        return userRepository.save(user);
    }
}
```

StudentRepository + StudentService

```
// Repository
public interface StudentRepository extends JpaRepository<Student, Long> {
    Optional<Student> findByUserId(Long userId);
}

// Service
@Service
public class StudentService {
    @Autowired
    private StudentRepository studentRepository;

    public Optional<Student> getByUserId(Long userId) {
        return studentRepository.findByUserId(userId);
    }

    public Student saveStudent(Student student) {
        return studentRepository.save(student);
    }
}
```

RecruiterRepository + RecruiterService

```
// Repository
```

```
public interface RecruiterRepository extends JpaRepository<Recruiter, Long> {
    Optional<Recruiter> findByCompanyName(String companyName);
}

// Service
@Service
public class RecruiterService {
    @Autowired
    private RecruiterRepository recruiterRepository;

    public Optional<Recruiter> getByCompanyName(String name) {
        return recruiterRepository.findByCompanyName(name);
    }

    public Recruiter saveRecruiter(Recruiter recruiter) {
        return recruiterRepository.save(recruiter);
    }
}
```

JobRepository + JobService

```
// Repository
public interface JobRepository extends JpaRepository<Job, Long> {
    List<Job> findByTitleContainingIgnoreCase(String title);
    List<Job> findByRecruiterId(Long recruiterId);
}

// Service
@Service
public class JobService {
    @Autowired
    private JobRepository jobRepository;

    public List<Job> searchByTitle(String title) {
        return jobRepository.findByTitleContainingIgnoreCase(title);
    }

    public List<Job> getJobsByRecruiter(Long recruiterId) {
        return jobRepository.findByRecruiterId(recruiterId);
    }

    public Job postJob(Job job) {
        return jobRepository.save(job);
    }
}
```

InternshipRepository + InternshipService

```
// Repository
public interface InternshipRepository extends JpaRepository<Internship, Long> {
    List<Internship> findByFieldContainingIgnoreCase(String field);
    List<Internship> findByRecruiterId(Long recruiterId);
}

// Service
@Service
public class InternshipService {
    @Autowired
    private InternshipRepository internshipRepository;

    public List<Internship> getByField(String field) {
        return internshipRepository.findByFieldContainingIgnoreCase(field);
    }

    public Internship saveInternship(Internship internship) {
        return internshipRepository.save(internship);
    }
}
```

ApplicationRepository + ApplicationService

```
// Repository
public interface ApplicationRepository extends JpaRepository<Application, Long> {
    List<Application> findByStudentId(Long studentId);
    List<Application> findByJobId(Long jobId);
}

// Service
@Service
public class ApplicationService {
    @Autowired
    private ApplicationRepository applicationRepository;

    public List<Application> getByStudentId(Long studentId) {
        return applicationRepository.findByStudentId(studentId);
    }

    public Application apply(Application application) {
        return applicationRepository.save(application);
    }
}
```

AdminRepository + AdminService

```
// Repository
public interface AdminRepository extends JpaRepository<Admin, Long> {
    Optional<Admin> findByUsername(String username);
}

// Service
@Service
public class AdminService {
    @Autowired
    private AdminRepository adminRepository;
    public Optional<Admin> getByUsername(String username) {
        return adminRepository.findByUsername(username);
    }

    public Admin saveAdmin(Admin admin) {
        return adminRepository.save(admin);
    }
}
```

NotificationRepository + NotificationService

```
// Repository
public interface NotificationRepository extends JpaRepository<Notification, Long> {
    List<Notification> findByUserId(Long userId);
}

// Service
@Service
public class NotificationService {
    @Autowired
    private NotificationRepository notificationRepository;

    public List<Notification> getByUserId(Long userId) {
        return notificationRepository.findByUserId(userId);
    }

    public Notification sendNotification(Notification notification) {
        return notificationRepository.save(notification);
    }
}
```