# 10 - Search By Keyword

The following approach uses Spring Data JPA to create a repository with methods that search specific fields of the JobPost entity for the presence of the keyword.

### 1. Search Endpoint in JobRestController:

A new GET endpoint /jobPosts/keyword/{keyword} is added to the JobRestController to enable keyword-based searches.

```
@GetMapping("jobPosts/keyword/{keyword}")
public List<JobPost> searchByKeyword(@PathVariable("keyword") String keyword){
   return service.search(keyword);
}
```

- @PathVariable("keyword") String keyword: Captures the keyword from the URL path.
- The controller calls service.search(keyword), which performs the keyword search in the JobPost repository.

### 2. Custom Query in JobRepo Interface:

Spring Data JPA enables automatic query generation through methods based on naming conventions, referred to as Domain-Specific Language (DSL).

```
@Repository
public interface JobRepo extends JpaRepository<JobPost, Integer> {

      List<JobPost> findByPostProfileContainingOrPostDescContaining(String postProfile,
      String postDesc);

}
```

- the findByPostProfileContainingOrPostDescContaining method is defined to retrieve JobPost records where either the postProfile or postDesc field contains the specified keyword.
- The Containing keyword indicates that the search should check for partial matches within the specified fields.

### 3. Service Layer Method search():

It ensures that any JobPost records with the specified keyword in either field are returned to the controller.

```
public List<JobPost> search(String keyword) {
   return repo.findByPostProfileContainingOrPostDescContaining(keyword, keyword);
}
```

- The search() method in JobService calls repo.findByPostProfileContainingOrPostDescContaining(keyword, keyword), passing the keyword to both postProfile and postDesc fields to find matches.

### 👉 Summary of Workflow:

- A request is sent to the endpoint /jobPosts/keyword/{keyword}, passing a keyword as a path variable.
- The JobRestController invokes the JobService's search() method, which in turn calls the custom findByPostProfileContainingOrPostDescContaining method in JobRepo.
- The repository method performs a search for JobPost records containing the keyword in either postProfile or postDesc, returning matching results.

**Code Link :**
https://github.com/navinreddy20/spring6-course/tree/c6690e4f2c70d8f530d70623f13d14ff0ffd7e7d/9%20Spring%20DataJPA/9.10%20Search%20By%20Keyword/spring-boot-rest