

Daywise_Assignment_day11_SpringDatajpa

Book.java

```
package com.example.library.entity;
```

```
import jakarta.persistence.*;
```

```
import lombok.Data;
```

```
import java.time.LocalDate;
```

```
@Data
```

```
@Entity
```

```
public class Book {
```

```
    @Id
```

```
    @GeneratedValue(strategy = GenerationType.IDENTITY)
```

```
    private Long id;
```

```
    private String title;
```

```
    private LocalDate publishDate;
```

```
    @ManyToOne
```

```
    @JoinColumn(name = "reader_id")
```

```
    private Reader reader;
```

```
    @ManyToOne
```

```
    @JoinColumn(name = "category_id")
```

```
    private Category category;
```

```
    @ManyToOne
```

```
    @JoinColumn(name = "author_id")
```

```
    private Author author;  
}
```

Reader.java

```
package com.example.library.entity;
```

```
import jakarta.persistence.*;
```

```
import lombok.Data;
```

```
import java.util.List;
```

```
@Data
```

```
@Entity
```

```
public class Reader {
```

```
    @Id
```

```
    @GeneratedValue(strategy = GenerationType.IDENTITY)
```

```
    private Long id;
```

```
    private String name;
```

```
    private String email;
```

```
    @OneToMany(mappedBy = "reader")
```

```
    private List<Book> borrowedBooks;
```

```
}
```

Author.java & Category.java

```
@Data
```

```
@Entity
```

```
public class Author {
```

```
    @Id
```

```
@GeneratedValue(strategy = GenerationType.IDENTITY)

private Long id;

private String name;


@OneToMany(mappedBy = "author")

private List<Book> books;

}
```

```
@Data

@Entity

public class Category {

    @Id

    @GeneratedValue(strategy = GenerationType.IDENTITY)

    private Long id;

    private String name;


    @OneToMany(mappedBy = "category")

    private List<Book> books;

}
```

BookRepository.java

```
package com.example.library.repository;


import com.example.library.entity.Book;

import org.springframework.data.jpa.repository.JpaRepository;


public interface BookRepository extends JpaRepository<Book, Long> {}
```

(LibraryController.java)

```
package com.example.library.controller;

import com.example.library.entity.*;
import com.example.library.repository.*;
import org.springframework.web.bind.annotation.*;

@RestController
@RequestMapping("/api")
public class LibraryController {

    private final BookRepository bookRepo;
    private final ReaderRepository readerRepo;
    private final AuthorRepository authorRepo;
    private final CategoryRepository categoryRepo;

    // Constructor injection

    // Add a Book
    @PostMapping("/books")
    public Book addBook(@RequestBody Book book) {
        return bookRepo.save(book);
    }

    // Get All Books
    @GetMapping("/books")
    public List<Book> getAllBooks() {
        return bookRepo.findAll();
    }
}
```

}

}