

Lab7: SPRING BOOT & JPA CRUD

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Time spent: 8 hours

Screenshots:

EXERCISE 5: ADVANCED SEARCH

The screenshot shows a web-based application interface for managing products. At the top, there is a search bar with fields for 'Name' (containing 'i'), 'Category' (set to 'All Categories'), 'Price' (set to '1'), and 'Quantity' (set to '1299'). To the right of these fields is a blue button labeled 'Advanced Search'. Below the search bar is a dropdown menu labeled 'All Categories ▾'. The main area displays a table of products with the following columns: ID, Code, Name, Price, Quantity, Category, and Actions. The table contains 11 rows of data. The 'Actions' column for each row features two buttons: a green one with a pencil icon and a red one with a trash bin icon.

ID	Code	Name	Price	Quantity	Category	Actions
2	P002	iPhone 15 Pro	\$999.99	25	Electronics	
3	P003	Office Chair	\$199.99	50	Furniture	
4	P004	Office Chair Ergonomic	\$199.99	50	Furniture	
8	P007	iphone 14	\$40.00	11	Electronics	
9	P008	iphone 14 pro	\$100.00	19	Electronics	
10	P009	iphone 13	\$30.00	4	Electronics	
11	P0010	iphone 13 pr	\$55.00	23	Electronics	
14	P0011	iphone 12 pro	\$45.00	12	Electronics	

Product Management

Name contains... All Categories ▾ 0 999999 Advanced Search

All Categories ▾

ID	Code	Name	Price	Quantity	Category	Actions	
1	P001	Laptop Dell XPS 13	\$1300.00	10	Electronics		
2	P002	iPhone 15 Pro	\$999.99	25	Electronics		
3	P003	Office Chair	\$199.99	50	Furniture		
4	P004	Office Chair Ergonomic	\$199.99	50	Furniture		
6	P006	RTX 5090	\$400.00	6	Other		
7	P005	RTX 4090	\$200.00	12	Other		
8	P007	iphone 14	\$40.00	11	Electronics		
9	P008	iphone 14 pro	\$100.00	19	Electronics		
10	P009	iphone 13	\$30.00	4	Electronics		
11	P0010	iphone 13 pr	\$55.00	23	Electronics		

1 2

Product Management

View Dashboard Add Product

Name contains... All Categories ▾ 0 999999 Advanced Search

All Categories ▾

ID	Code	Name	Price	Quantity	Category	Actions	
14	P0011	iphone 12 pro	\$45.00	12	Electronics		
20	P0014	BookA	\$32.00	12	Books		
21	P0015	foodA	\$32.00	12	Food		

EXERCISE 6: VALIDATION

Add New Product

Product Code *

Enter product code (e.g., P001)

Product code must be 3-20 characters

Product code must start with P followed by numbers

Product code is required

Product Name *

FoodB

Price (\$) *

12

Quantity *

433

Category *

Food

Description

Enter product description (optional)

 Save Product

 Cancel

Add New Product

Product Code *

P0017

Product Name *

Enter product name

Name must be 3-100 characters

Product name is required

Price (\$) *

12

Quantity *

433

Category *

Food

Description

Enter product description (optional)

 Save Product

 Cancel

+ Add New Product

Product Code *
P0017

Product Name *
FoodB

Price (\$) *
0.00
Price is required

Quantity *
433

Category *
Food

Description
Enter product description (optional)

Save Product Cancel

+ Add New Product

Product Code *
P0017

Product Name *
FoodB

Price (\$) *
12

Quantity *
0
Quantity is required

Category *
Food

Description
Enter product description (optional)

Save Product Cancel

+ Add New Product

Product Code *

Product Name *

Price (\$) *

Quantity *

Category *

Select category

Category is required

Description

Enter product description (optional)

Save Product Cancel

EXERCISE 7: SORTING & FILTERING

Product Management

View Dashboard + Add Product Search... ...

Name contains... Min Price Max Price Advanced Search

Food ...

ID	Code	Name	Price	Quantity	Category	Actions
21	P0015	foodA	\$32.00	12	Food	 !
24	P0017	FoodB	\$12.00	433	Food	 !

Product Management

[View Dashboard](#) [Add Product](#)

Name contains... Electronics [Advanced Search](#)

Search...

Electronics

ID	Code	Name	Price	Quantity	Category	Actions
1	P001	Laptop Dell XPS 13	\$1300.00	10	Electronics	
2	P002	iPhone 15 Pro	\$999.99	25	Electronics	
8	P007	iphone 14	\$40.00	11	Electronics	
9	P008	iphone 14 pro	\$100.00	19	Electronics	
10	P009	iphone 13	\$30.00	4	Electronics	
11	P0010	iphone 13 pr	\$55.00	23	Electronics	
14	P0011	iphone 12 pro	\$45.00	12	Electronics	

EXERCISE 8: STATISTICS DASHBOARD

Product Statistics Dashboard

[Back to Products](#)

Total Products
14

Total Inventory Value
\$73027.75

Average Price
\$260.43

Products by Category

Category	Count
Books	1
Electronics	7
Food	2
Furniture	2
Other	2

Low Stock Products (quantity < 10)

Code	Name	Quantity	Category
P006	RTX 5090	6 Low	Other
P009	iphone 13	4 Low	Electronics

Category	Count
Books	1
Electronics	7
Food	2
Furniture	2
Other	2

Low Stock Products (quantity < 10)

Code	Name	Quantity	Category
P006	RTX 5090	6 Low	Other
P009	iphone 13	4 Low	Electronics

Recent Products (last 5)

Code	Name	Category	Created At
P0017	FoodB	Food	2025-12-05 17:12
P0015	foodA	Food	2025-12-04 02:17
P0014	BookA	Books	2025-12-04 02:17
P0011	iphone 12 pro	Electronics	2025-12-03 01:03
P0010	iphone 13 pr	Electronics	2025-12-03 00:49