

PRACTICE QUESTIONS

1.Spring JPA: Description Implement the JPQL statement to fetch the list of curtains whose price is greater than the given price and the list of curtains whose brand is equal to the given brand name.

The Curtain Model is as follows:

id: the unique id of the curtain (int)

brand: the brand name of the curtain (String)

material: the material used in curtain (String)

color: the color of the curtain (String)

price : the price of the curtain (int)

```
mysql> select * from curtain;
```

id	price	brand	color	material
1	100	A	Blue	cotton
2	150	B	Black	Blend of cottons and silk
3	200	C	White	silk
4	250	A	yellow	cotton

4 rows in set (0.00 sec)

File in which you need to write the code:

- src/main/java/com/example/curtainmodel/repository/CurtainRepository.java The task is to write the JPQL statement in the CurtainRepository file under the repository folder:

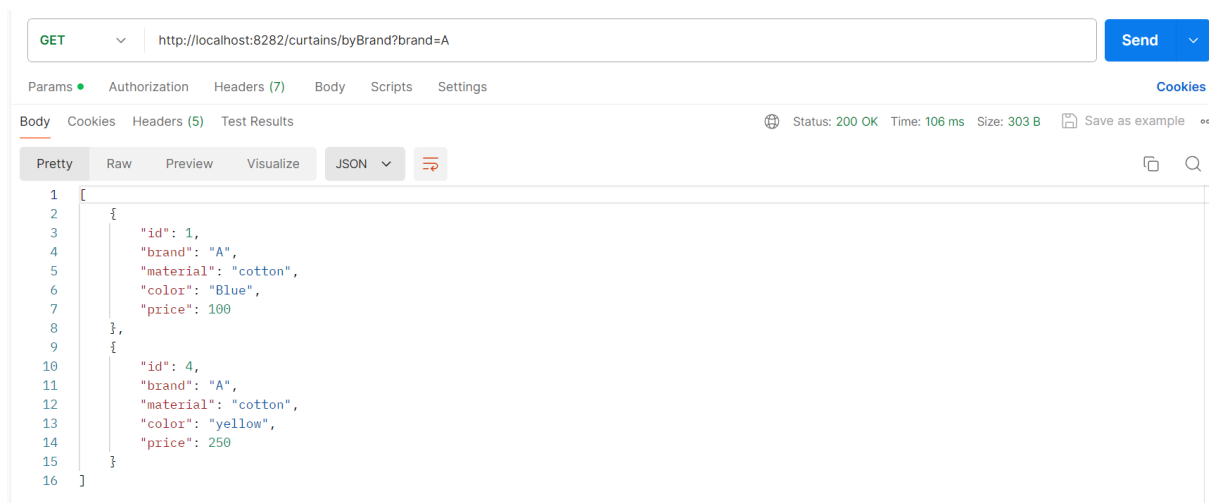
- **Task 1:** Create a function called "getIdByPrice" that returns a list of curtains with a price greater than the given price. You need to use query annotation to execute the function based on the GET query.

GET http://localhost:8282/curtains/byPrice?price=150

Status: 200 OK Time: 369 ms Size: 302 B

```
[{"id": 3, "brand": "C", "material": "silk", "color": "White", "price": 200}, {"id": 4, "brand": "A", "material": "cotton", "color": "yellow", "price": 250}]
```

- **Task 2:** Create a " getIdByBrand " function that returns the list of curtains with a brand equal to the given brand name. You need to use query annotation to execute the function based on the GET query.

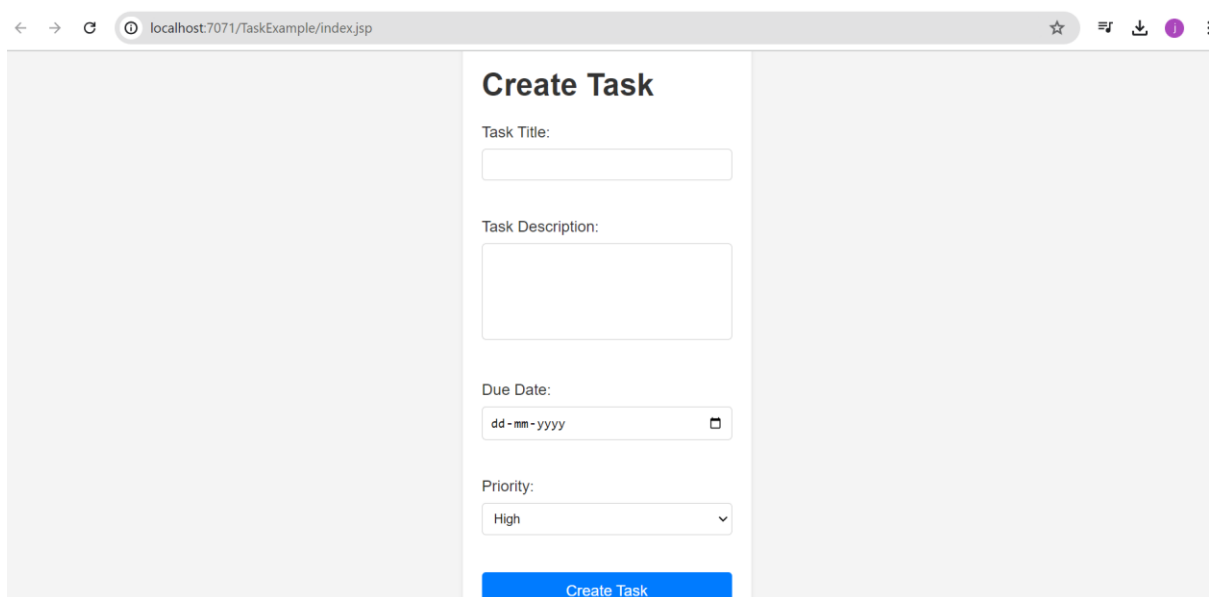


2. JSP Full Stack

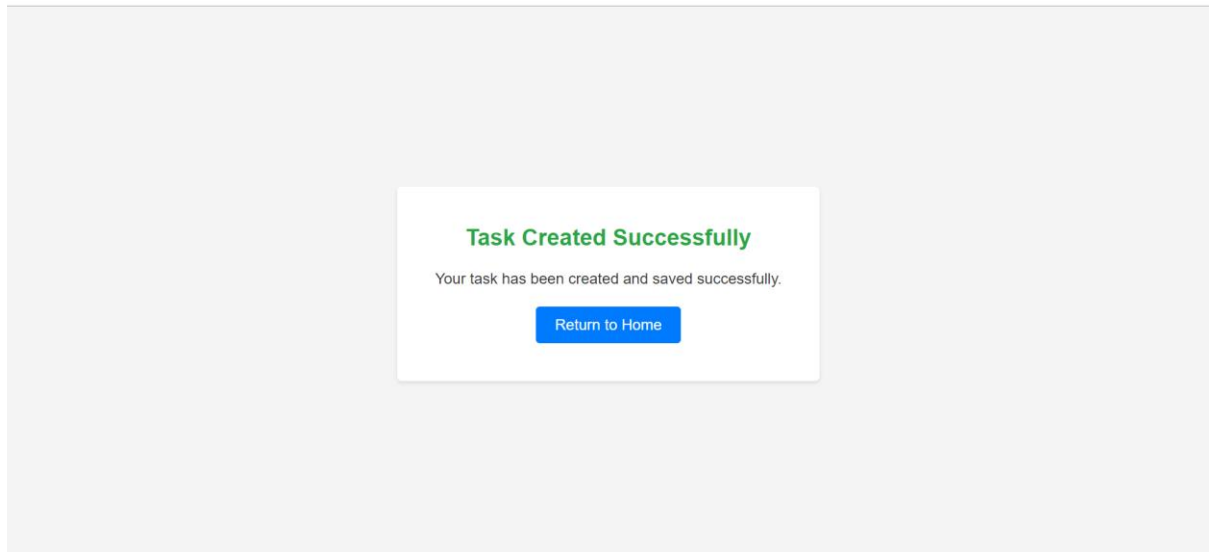
Problem Description JSP Pages

index.jsp: Create a task creation form with the following fields:

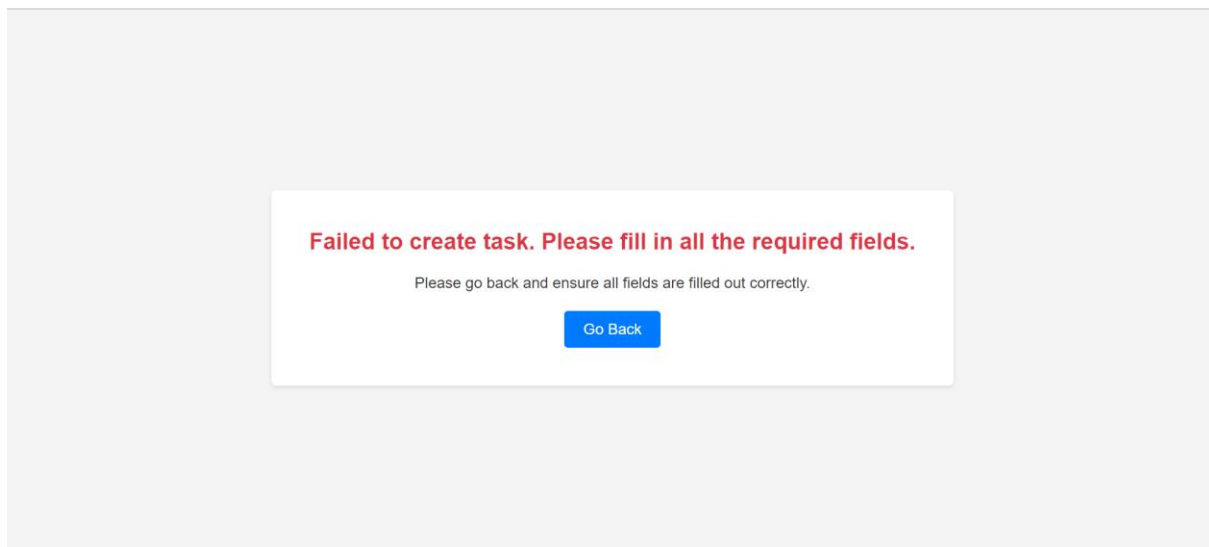
- Task Title (input type text)
- Task Description (textarea)
- Due Date (input type date)
- Priority (select dropdown with options: High, Medium, Low)
- Include a submit button with the value "Create Task" and id as "createTask"



success.jsp: If the task creation is successful, display a success message: "Task Created Successfully".



error.jsp: If there is an error during task creation (e.g., empty fields), display an error message: "Failed to create task. Please fill in all the required fields."



Task.java: Implement a Task class to represent task data with the following private fields:

- title
- description
- dueDate
- priority

Include appropriate constructors, getters, and setters.

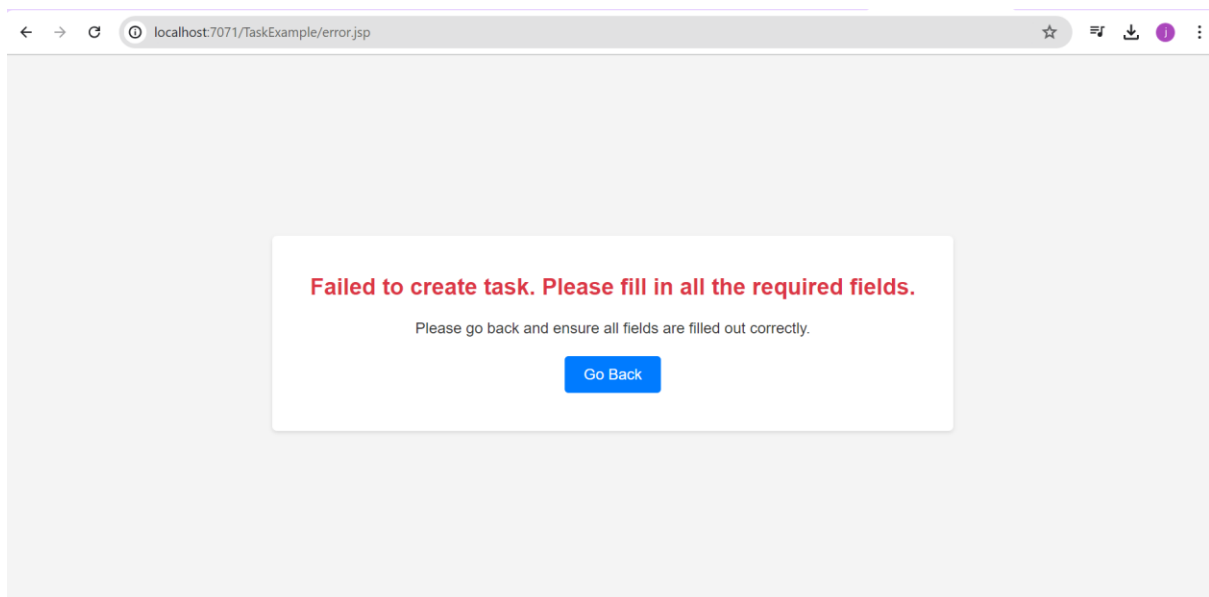
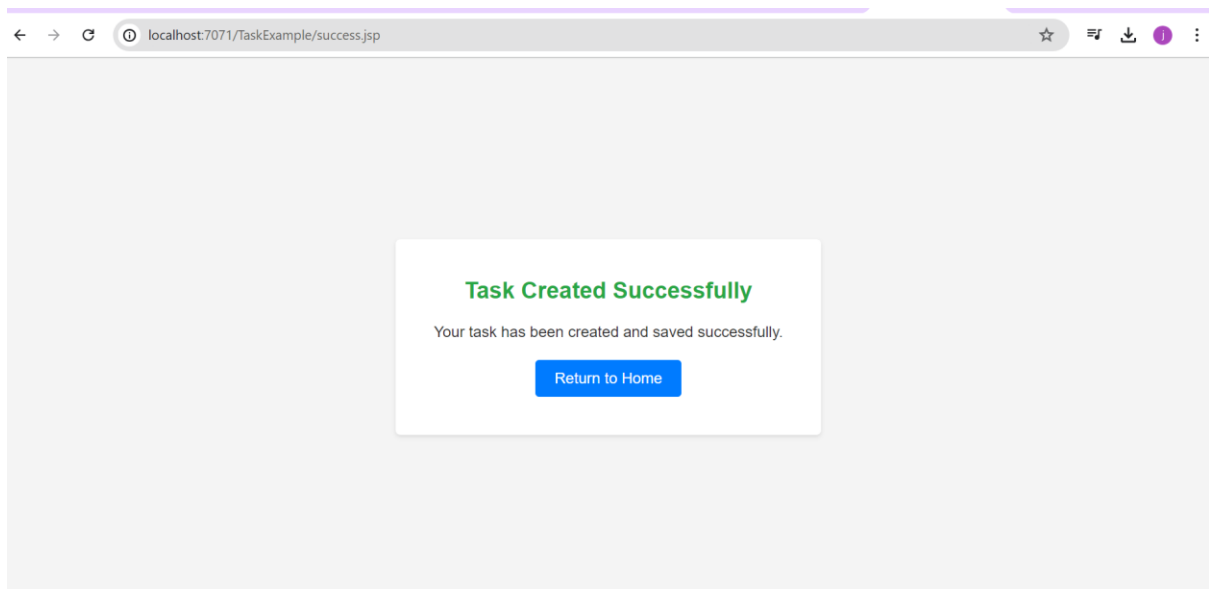
CreateTaskServlet.java: Implement a servlet to handle task creation.

- Retrieve parameters (title, description, dueDate, priority) from the request.

- Check if all parameters are not null and not empty.
- If the parameters are valid, create a new Task object, set it as a request attribute, and redirect the user to the success page {proxy_uri}/success.jsp.
- If parameters are invalid, redirect the user to the error page {proxy_uri}/error.jsp.

Note

- **Environment Variable Retrieval:** The servlet accesses an environment variable named "VSCODE_PROXY_URI" using System.getenv() method. This variable contains the URI of a proxy server, which is crucial for redirecting users to appropriate JSP pages.
- **Redirecting Users:** Depending on the authentication result, the servlet redirects users to either a success or error JSP page. The redirection URLs are constructed based on the proxy URI retrieved from the environment variable.



3. SpringBoot Full Stack:

- **SELECT BY ID**

Found record

GET http://localhost:8282/shipment/TRK001

Params Authorization Headers (7) Body Scripts Settings Cookies

Query Params

Key	Value	Description	...	Bulk Edit
Key	Value	Description		

Body Cookies Headers (5) Test Results Status: 200 OK Time: 20 ms Size: 265 B Save as example

Pretty Raw Preview Visualize JSON

```
1 {
2   "shipId": 2,
3   "trackNo": "TRK001",
4   "origin": "New York",
5   "destination": "Los Angeles",
6   "status": "In Transit"
7 }
```

Not found record

GET http://localhost:8282/shipment/TRK002

Params Authorization Headers (7) Body Scripts Settings Cookies

Query Params

Key	Value	Description	...	Bulk Edit
Key	Value	Description		

Body Cookies Headers (4) Test Results Status: 404 Not Found Time: 14 ms Size: 130 B Save as example

Pretty Raw Preview Visualize Text

```
1 
```

- **DELETE**

http://localhost:8282/shipment/1 Save Share

DELETE http://localhost:8282/shipment/1 Send

Params Authorization Headers (7) Body Scripts Settings Cookies

Query Params

Key	Value	Description	...	Bulk Edit
Key	Value	Description		

Body Cookies Headers (5) Test Results Status: 200 OK Time: 261 ms Size: 198 B Save as example

Pretty Raw Preview Visualize Text

```
1 The requested shipId-1 got deleted
```

Before Delete

```
mysql> select * from shipment;
+-----+-----+-----+-----+-----+
| ship_id | destination | origin   | status   | track_no |
+-----+-----+-----+-----+-----+
|      2  | Los Angeles | New York | In Transit | TRK001   |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

After Delete

```
mysql> select * from shipment;
Empty set (0.00 sec)
```

4. Java Coding

