# Login & Registration System (Spring Boot+Spring Security+ PostgreSQL)

## Overview

This project demonstrates a simple Login and Registration System using Spring Boot (v3.3.4),Thymeleaf, and PostgreSQL.

Users can register, log in, and access protected pages such as the `/admin` route (available only for admin user)

## Tech Stack

-Backend:Spring Boot 3.3.4

- Frontend: Thymeleaf

- Database:PostgreSQL

- Security:Spring Security

- ORM:Spring Data JPA

It's a **Spring Boot + Spring Security + Thymeleaf application** that uses:

**Session-based authentication** (the default in Spring Security),

**Password encryption** using BCryptPasswordEncoder,

**Role-based access** control (ROLE_USER and ROLE_ADMIN),

And **audit logging** for login/logout activities.

**What happens right now**

When you log in:

Spring Security creates a session cookie (JSESSIONID).

Your login state is stored on the server, not as a token.

When you visit /admin, Spring checks your session and roles before granting access.

**Database Schema Explanation**

SQL Shell (psql)

```
authdb=# \dt
          List of relations
 Schema |      Name       | Type  |  Owner
--------+-----------------+-------+----------
 public | audit_logs      | table | postgres
 public | login_attempts  | table | postgres
 public | roles           | table | postgres
 public | user_roles      | table | postgres
 public | users           | table | postgres
(5 rows)

authdb=# select * from users;
 id | account_non_locked |         created_at         | enabled | lock_time |                          password                          | username
----+--------------------+----------------------------+---------+-----------+------------------------------------------------------------+----------
  1 | t                  | 2025-11-06 17:15:54.699634 | t       |           | $2a$10$xX4eAnUkuJCPCXgbin4ek.fewZD45kjyEjGHEYDJmQJxykk/gmX16 | user
  2 | t                  | 2025-11-06 17:20:18.266262 | t       |           | $2a$10$DxuZkJOtBqwApmfUjXeOXufrfONVBs0LrvrrCF06Jkr7UzkHM.EtW | admin
  3 | t                  | 2025-11-07 10:27:47.420216 | t       |           | $2a$10$VsJcsf2Kz8gpUMVr1QItyOlx37CIv/7m2BfqJapPPzh0TVlXhXcji | mamatha
  4 | t                  | 2025-11-07 10:44:19.898153 | t       |           | $2a$10$07bVdCuNeiZcbjWYJSvfSeawJlHwt0m2x8za5SCYNxY8l.NuCgNDK | bhavya
  5 | t                  | 2025-11-07 11:11:05.723999 | t       |           | $2a$10$u5AiB8p6jH0Sl09xdXUMB.koLysjJSY4q7IaP4bqa/1fp.kIT11xW | pushpa
  6 | t                  | 2025-11-07 11:15:42.208704 | t       |           | $2a$10$PPVlHtyJ6gw/LZdg6/7dRuiY0sDs5x6oegZd6TLQOrQWwaxD1HptG | suda
  7 | t                  | 2025-11-07 12:11:32.637672 | t       |           | $2a$10$L0dwdafiPX.0bhetWy8QA.5H0dkfS/Bin.cheaGx/N4OdiJwJFmIq | ganu
  8 | t                  | 2025-11-07 12:41:21.458277 | t       |           | $2a$10$ZHpixL.B9cbn6aW3dRwHIuwVvpYC0OEq7m1ndPeUFgF.2TrmTgHni | anju
  9 | t                  | 2025-11-07 12:56:48.491618 | t       |           | $2a$10$CxIajiu/7jzc51m54mR3d.ODD3tDgDDu9ugBdV4VCG2yt5rNaeqpG | saniya
(9 rows)

authdb=# select * from roles;
    name
------------
 ROLE_USER
 ROLE_ADMIN
(2 rows)

authdb=# select * from user_roles;
 user_id | role_name
---------+------------
       1 | ROLE_USER
       2 | ROLE_USER
```

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 user_id | role_name
---------+------------
       1 | ROLE_USER
       2 | ROLE_USER
       3 | ROLE_USER
       4 | ROLE_USER
       5 | ROLE_USER
       6 | ROLE_USER
       2 | ROLE_ADMIN
       7 | ROLE_USER
       8 | ROLE_USER
       9 | ROLE_USER
(10 rows)

Search

3:05 PM
11/7/2025