🚀 Portfolio-Worthy Project: SmartBank Console System

(Think of it like a mini real-world banking software, built with pure Java.)

This project will use everything:
✔ variables
✔ user input
✔ loops
✔ if/else
✔ arrays + arraylists
✔ OOP (classes, objects, constructors, inheritance, override, abstraction)
✔ methods + overloading
✔ random numbers
✔ string handling
✔ searching
✔ static
✔ 2D concepts
✔ everything from your list
All in one project.

And it's **realistic**, something you can show in your portfolio.

✨ Project Idea: SmartBank Java Console Application

A full banking simulation with:

1. User Account System

- Create a new account

- Login

- Store account details (name, age, email, password, balance)

2. Banking Features

- Deposit money

- Withdraw money

- Transfer money between accounts

- Check balance

- View transaction history

3. Admin Panel (Separate Login)

- View all customers

- Search customer by name or account number

- Delete customer

- Freeze customer account

4. Transaction History System

Every action logs a transaction:

- date

- time

- amount

- type (deposit/withdraw/transfer)
  Use **arrays or ArrayList** for this.

5. Classes You Will Build

This locks in your OOP skills:

Bank

Account

User

Admin

Transaction

6. OOP Concepts You Will Apply

- **inheritance:** Admin extends User

- **polymorphism:** override display() or authenticate()

- **abstraction:** Abstract class Account

- **encapsulation:** private fields + getters/setters

- **constructor overloading:** different ways to create an account

---

🧠 Why This Project Is Perfect

It forces you to use almost EVERYTHING you've learned:

Feature	Concepts Used
Create account	constructors, strings, user input
Login system	loops, if/else, string methods
Bank operations	methods, math, condition checks
Transfer money	arrays/ArrayList, searching
Transactions	OOP, arrays, loops
Admin system	inheritance, overriding, static
Security	if/else, loops, string checks
Menu navigation	loops, switch, methods
Error handling	while loops, conditions
Portfolio-ready design	classes, clean architecture

This is literally a **real-life simulation of banking logic**, without needing databases or Spring Boot.

🏆 Bonus: Portfolio Boost

You can present it like:

SmartBank – A Java-based banking simulation using OOP, data structures, and console UI.
Features include account creation, login, transactions, transfers, admin dashboard, and transaction logging.

Recruiters LOVE clean OOP projects.