



Wizard Duel Game – Java OOPs Project (Day 2)



Project Title:

AI-Powered Wizard Duel Game (Java Console Application)



Project Description:

This is a simple Java console-based game where the player becomes a wizard and fights an opponent (computer AI).

The player chooses a type of wizard:

- Fire Mage 🔥
- Ice Mage ❄️
- Dark Mage 💀

Each type has unique spell powers and special abilities.

The game continues turn by turn until one wizard's **health reaches 0**.



Technologies Used:

- Java (JDK 17 or higher)
 - Console Input/Output using Scanner
 - Object-Oriented Programming (OOP) principles
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OOP Concepts Used:

1. **Class & Object** – Wizards and logic are modeled with classes.
 2. **Encapsulation** – Health & Mana are private and accessed through methods.
 3. **Inheritance** – All wizards inherit from the abstract `Wizard` class.
 4. **Abstraction** – Abstract methods like `castSpell()` are defined in `Wizard`.
 5. **Polymorphism** – Each wizard has a different spell casting style.
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How the Game Works:

1. The user enters their name.
2. Chooses a wizard type (Fire, Ice, Dark).

3. The computer creates an enemy wizard.
4. The game begins with turns:
 - **Cast Spell** – damages the opponent
 - **Defend** – restores mana
 - **Special Ability** – strong attack
5. Game continues until one wizard's **HP = 0**
6. Winner is declared on screen.

Folder Structure:

```
com.magicduel
├── Wizard.java           (abstract class)
├── FireMage.java        (wizard with fire power)
├── IceMage.java         (wizard with ice power)
├── DarkMage.java        (wizard with dark power)
├── DuelEngine.java      (handles battle logic)
└── Main.java            (starts the game)
```

Sample Output:

```
Welcome to AI-Powered Wizard Duel Game!
Enter your wizard name: Swapnil
Choose your class:
1. Fire Mage
2. Ice Mage
3. Dark Mage
> 1

Opponent: Morgath the Dark Mage

Duel Begins!
Swapnil [HP: 100, Mana: 100] vs Morgath [HP: 100, Mana: 100]

1. Cast Spell
2. Defend
3. Special Ability
> 1

Swapnil casts Fireball! Morgath loses 20 HP!
Morgath uses Dark Pulse! Swapnil loses 25 HP!

... and the battle continues...
```

Conclusion:

This project is a creative and fun way to apply Java and OOPs. It's more interesting than a basic calculator or employee manager. You can even extend this into:

- A GUI version (Java Swing)

- A Web version (Spring Boot)

Perfect fit for your **100 Days of Code journey** 

 **Created By: Swapnil**