1. Kode Program

- **Class Character :**

```java
public abstract class Character {
    private String name;
    private int health;
    private int attackPower;

    public Character(String name, int health, int attackPower) {
        this.name = name;
        this.health = health;
        this.attackPower = attackPower;
    }

    public String getName() {
        return name;
    }

    public int getHealth() {
        return health;
    }

    public int getAttackPower() {
        return attackPower;
    }

    public void setHealth(int health) {
        this.health = health;
    }

    public void takeDamage(int damage) {
        health -= damage;
        if (health < 0) health = 0;
        System.out.println(name + " took " + damage + " damage! Health: " + health);
    }

    public boolean isAlive() {
        return health > 0;
    }

    public abstract void attack(Character target);
}
```

- **Class Player :**

```java
public class Player extends Character {
    private int level;

    public Player(String name, int health, int attackPower, int level) {
        super(name, health, attackPower);
        this.level = level;
    }

    @Override
    public void attack(Character target) {
        int damage = getAttackPower() + level;
        System.out.println(getName() + " attacks! Damage: " + damage);
        target.takeDamage(damage);
    }

    public void heal() {
        int healAmount = 20;
        setHealth(getHealth() + healAmount);
        System.out.println(getName() + " heals for " + healAmount + " HP! Health: "
+ getHealth());
    }
}
```

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- **Class Monster :**

```java
public class Monster extends Character {
    private String type;

    public Monster(String name, int health, int attackPower, String type) {
        super(name, health, attackPower);
        this.type = type;
    }

    public String getType() {
        return type;
    }

    @Override
    public void attack(Character target) {
        int damage = (int)(Math.random() * 10) + 5;

        System.out.println(getName() + " (" + type + ") attacks! Damage: " +
damage);
        target.takeDamage(damage);
    }
}
```

- **Class BossMonster :**

```java
public class BossMonster extends Monster {

    public BossMonster(String name, int health, int attackPower, String type) {
        super(name, health, attackPower, type);
    }

    @Override
    public void attack(Character target) {
        int baseDamage = (int)(Math.random() * 10) + 5;
        int specialDamage = baseDamage * 2;

        System.out.println(getName() + " uses special attack! Damage: " +
specialDamage);
        target.takeDamage(specialDamage);
    }
}
```

- **Class GameTest :**

```java
public class GameTest {
    public static void main(String[] args) {
        System.out.println("=== MONSTER BATTLE GAME ===\n");

        Player player = new Player("Faiq Nabil", 150, 30, 8);
        Monster goblin = new Monster("Goblin", 60, 10, "Goblin");
        BossMonster dragon = new BossMonster("Dragon Boss", 120, 25, "Dragon");

        System.out.println("Characters:");
        System.out.println("- " + player.getName() + " (HP: " + player.getHealth() +
")");
        System.out.println("- " + goblin.getName() + " (HP: " + goblin.getHealth() +
")");
        System.out.println("- " + dragon.getName() + " (HP: " + dragon.getHealth() +
")");
        System.out.println("\n--- Battle 1: Faiq Nabil vs Goblin ---");
        while (player.isAlive() && goblin.isAlive()) {
            player.attack(goblin);
            if (goblin.isAlive()) {
                goblin.attack(player);
            }
        }

        if (player.isAlive()) {
            System.out.println("Result: " + player.getName() + " wins!\n");

            System.out.println("--- Healing Phase ---");
            player.heal();

            System.out.println("\n--- Boss Battle: Faiq Nabil vs Dragon ---");
            while (player.isAlive() && dragon.isAlive()) {
                player.attack(dragon);
                if (dragon.isAlive()) {
                    dragon.attack(player);
                }

                if (player.getHealth() < 40 && player.isAlive()) {
                    System.out.println(">> " + player.getName() + " uses strategic
healing!");

                    player.heal();
                }
            }

            if (player.isAlive()) {
                System.out.println("Result: " + player.getName() + " defeats the
boss!");
            } else {
                System.out.println("Result: " + dragon.getName() + " wins!");
            }
        } else {
            System.out.println("Result: " + goblin.getName() + " wins!");
        }

        System.out.println("\n--- Polymorphism Demo ---");
        Character[] characters = {player, goblin, dragon};
        Player dummy = new Player("Target", 50, 10, 1);

        System.out.println("All characters attack dummy target (showing
polymorphism):");
        for (Character c : characters) {
            if (c.isAlive()) {
                c.attack(dummy);
            }
        }

        System.out.println("\nGame Over!");
    }
}
```

2. Hasil Running

```
[Running] cd "d:\PrakPBO\Kuis-1\" && javac GameTest.java && java GameTest
=== MONSTER BATTLE GAME ===

Characters:
- Faiq Nabil (HP: 150)
- Goblin (HP: 60)
- Dragon Boss (HP: 120)

--- Battle 1: Faiq Nabil vs Goblin ---
Faiq Nabil attacks! Damage: 38
Goblin took 38 damage! Health: 22
Goblin (Goblin) attacks! Damage: 12
Faiq Nabil took 12 damage! Health: 138
Faiq Nabil attacks! Damage: 38
Goblin took 38 damage! Health: 0
Result: Faiq Nabil wins!

--- Healing Phase ---
Faiq Nabil heals for 20 HP! Health: 158

--- Boss Battle: Faiq Nabil vs Dragon ---
Faiq Nabil attacks! Damage: 38
Dragon Boss took 38 damage! Health: 82
Dragon Boss uses special attack! Damage: 12
Faiq Nabil took 12 damage! Health: 146
Faiq Nabil attacks! Damage: 38
Dragon Boss took 38 damage! Health: 44
Dragon Boss uses special attack! Damage: 24
Faiq Nabil took 24 damage! Health: 122
Faiq Nabil attacks! Damage: 38
Dragon Boss took 38 damage! Health: 6
Dragon Boss uses special attack! Damage: 20
Faiq Nabil took 20 damage! Health: 102
Faiq Nabil attacks! Damage: 38
Dragon Boss took 38 damage! Health: 0
Result: Faiq Nabil defeats the boss!

--- Polymorphism Demo ---
All characters attack dummy target (showing polymorphism):
Faiq Nabil attacks! Damage: 38
Target took 38 damage! Health: 12

Game Over!

[Done] exited with code=0 in 2.579 seconds
```