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package Chat;

public class Rocket {

private String stage;

private int fuel;

private int altitude;

private int speed;

public Rocket() {

stage = "Pre-Launch";

fuel = 100;

altitude = 0;

speed = 0;

}

// Getters and setters for the attributes

public String getStage() {

return stage;

}

public void setStage(String stage) {

this.stage = stage;

}

public int getFuel() {

return fuel;

}

public void setFuel(int fuel) {

this.fuel = fuel;

}

public int getAltitude() {

return altitude;

}

public void setAltitude(int altitude) {

this.altitude = altitude;

}

public int getSpeed() {

return speed;

}

public void setSpeed(int speed) {

this.speed = speed;

}

public void launchSequence() {

// ... existing code ...

// Simulate the mission

while (altitude < 200 && fuel > 0) {

// Update rocket status

altitude += speed;

fuel -= 10;

speed += 100;

// Display real-time updates

System.out.println("Stage: " + stage + ", Fuel: " + fuel + "%, Altitude: " + altitude + " km, Speed: " + speed + " km/h");

// Check for stage separation

if (altitude >= 100 && stage.equals("Stage 1")) {

stage = "Stage 2";

System.out.println("Stage 1 complete. Separating stage. Entering Stage 2.");

}

}

// Check mission outcome

if (altitude >= 200) {

System.out.println("Orbit achieved! Mission Successful.");

} else {

System.out.println("Mission Failed due to insufficient fuel.");

}

}

}