Program Documentation

1. Personaje (Abstract Class)

Base class for all characters in the game (both players and enemies).
It defines common properties and methods shared across its derived classes.

Properties:

- **Nombre**: The name of the character.
- **Vida**: The current health of the character.
- **Nivel**: The level of the character.

Abstract Method:

- **Atacar()**:
  Calculates the attack power using two dice rolls and a bonus based on skill
  points. Must be implemented by derived classes.

Methods:

- **RecibirDanyo(int danyo)**:
  Reduces the character's health by the damage received, ensuring health does
  not drop below 0.
- **EstaVivo()**:
  Returns true if the character's health is above 0 otherwise, returns false.

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2. Jugador (Derived from Personaje)

Represents the playable characters in the game.

Additional Property:

- **PuntoHabilidad**:

  Tracks the points earned by the player after defeating enemies. These points are used to enhance the player's skills.

Methods:

- **Atacar()**:

  Overrides the Atacar method to calculate attack power for the player.
- **MejorarHabilidad(int puntos)**:

  Increases the player's skill points by the specified amount.
- **SubirNivel()**:

  Increases the player's level, improving their overall performance.

Subclasses:

- **Guerrero**:
  - Gains +2 attack points per turn.
  - Can block an incoming attack every 3 turns.
- **Mago**:
  - Gains +4 attack points per turn.
  - Can heal a portion of their health every 3 turns.
- **Arquero**:
  - Gains +3 attack points per turn.
  - Can perform a double attack every 3 turns.

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3. Enemigo (Derived from Personaje)

Represents the enemy characters in the game.

Methods:

- **Atacar()**:

  Overrides the Atacar method to calculate attack power for enemies.

- **RecibirDanyo(int danyo)**:
  Reduces the enemy's health, factoring in their resistance to damage.
  Resistance decreases with each attack.
- **RecuperarVida()**:
  Restores 2 health points every 3 turns (used by bosses).

Subclasses:

- **EnemigoBasico**:
  - A standard enemy with random stats.
- **EnemigoEspecial**:
  - Includes a random resistance to damage.
- **Boss**:
  - A powerful enemy with high resistance.
  - Can perform double attacks and regenerates health every 3 turns.

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4. Narrador (Utility Class)

Handles message display with delays to enhance the gameplay experience.

Methods:

- **MostrarMensaje(string mensaje)**:
  Displays a message in the console with a delay between lines for dramatic effect.
- **MostrarMensajePrincipio(string mensaje)**:
  Displays introductory messages with a shorter delay, ideal for ASCII art or fast text display.

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5. Program (Main Class)

The core of the game. Manages game initialization, gameplay logic, and the end-game summary.

Key Features:

- **Initialization**:
  - Creates lists of players and enemies.
  - Displays the game introduction using Iniciar().
  - Starts a stopwatch to track the total game time.
- **Game Loop**:
  - Alternates between player and enemy turns.
  - Players and enemies attack, and defeated characters are removed from their respective lists.
  - Players gain levels and skill points after defeating enemies.
  - Introduces random events with a 20% probability per turn.
- **End Game**:
  - Displays the winner (players or enemies).
  - Outputs game statistics, including total time taken and turns played.
  - Summarizes surviving players and enemies.

Methods:

- **Iniciar()**:
  Displays the game's introduction screen and clears the console for gameplay.
- **RandomEvent(Jugador jugador)**:
  Triggers random events with a 20% probability. Possible events include:
  - **Godly Doctor**: Adds bonus health points to the player.
  - **Trap Penalty**: Reduces the player's health points.
  - **Treasure Found**: Grants bonus skill points to the player.
- **MostrarResumen(List<Jugador> jugadores, List<Enemigo> enemigos)**:
  Displays a summary of the surviving players and enemies at the end of the game.
- **MostrarInformacion(Personaje personaje)**:
  Outputs details about a character, such as their name, level, health, and skill points (if applicable).
- **CalcularPuntos(Enemigo enemigo)**:
  Determines the skill points awarded to a player upon defeating an enemy:
  - **Boss**: 50 points

- ○ **EnemigoEspecial**: 20 points
- ○ **EnemigoBasico**: 10 points

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6. Game Flow

1. **Introduction**:
   - ○ Displays the ASCII art and introductory message.
   - ○ Initializes the lists of players and enemies.
2. **Gameplay**:
   - ○ Players and enemies take turns attacking.
   - ○ Random events may occur during the player's turn. (20% chance)
   - ○ Defeated characters are removed from their respective lists.
3. **End Game**:
   - ○ Displays the winner (players or enemies).
   - ○ Outputs statistics such as time taken and turns played.
   - ○ Provides a summary of surviving characters.