

Number Guessing Game Documentation

Player.java

- **getName():** Retrieve the player's name.
- **setName(String name):** Set the player's name.
- **getGamesPlayed():** Get the number of games played by the player.
- **getTotalMoves():** Get the total number of moves made by the player.
- **incrementGamesPlayed():** Increase the number of games played by the player.
- **incrementTotalMoves(int moves):** Increase the total moves made by the player.

GamePlayer.java

- This class implements the Player interface.

GuessNumber.java

- **startNewGame():** Start a new game.
- **makeGuess(guess):** Make a guess in the game.
- **isGameOver():** Check if the game is over.
- **getWinner():** Get the winner of the game.
- **getGuessResult(guess):** Get the result of a guess (e.g., "The number is larger," "The number is smaller").

PlayerRepository.java

- Manages players and their data.
- Methods:
 - **createPlayer(name):** Create a new player.
 - **getPlayer(name):** Get a player by name.
 - **savePlayersToFile():** Save player data to a text file.

GameController.java

- Handles HTTP requests and game interactions.
- **Endpoints:**
 - **/player:** Create a player and get player information.
 - **/game:** Create a game and make moves in the game.

Class Interactions

- Player and GamePlayer handle player-related data and statistics.
- GuessNumber manages the game logic.
- PlayerRepository manages player data and file I/O.
- GameController handles HTTP requests, interacts with PlayerRepository, and controls game flow.

API Endpoints

Base URL: <http://localhost:8080>

Player API

- **Create a Player**
 - **URL:** POST /player
 - **Parameters:** name (string) - The name of the player.
 - **Demo Call:** curl -X POST "http://localhost:8080/player?name=JhonMartin"
- **Get Player Information**
 - **URL:** GET /player
 - **Parameters:** name (string) - The name of the player.
 - **Demo Call:** curl "http://localhost:8080/player?name=JhonMartin"

Game API

- **Create a Game**
 - **URL:** POST /game
 - **Parameters:** playerName (string) - The name of the player who starts the game.
 - **Demo Call:** curl -X POST "http://localhost:8080/game?playerName=JhonMartin"
- **Make a Move in the Game**
 - **URL:** PUT /game
 - **Parameters:** move (int) - The number guessed by the player (0-99).
 - **Demo Calls:**

- **curl -X PUT "http://localhost:8080/game?move=53"**
 - **curl -X PUT "http://localhost:8080/game?move=82"**
 - **curl -X PUT "http://localhost:8080/game?move=6"**
- **Get Game Moves**
 - **URL:** GET /game/moves
 - **Demo Call:** curl "http://localhost:8080/game/moves"
- **Player Information After the Game**
 - **URL:** GET /player
 - **Parameters:** name (string) - The name of the player.
 - **Demo Call:** curl "http://localhost:8080/player?name=JhonMartin"

Notes

- When checking endpoints in Thunder Client, ensure that the Java application is running, and replace localhost:8080 with the actual base URL.
- Enjoy playing the Number Guessing Game!