

# Enhanced Guesser Game - Java Project

```
import java.util.*;

class Guesser {
    private int guessNumber;

    public void guessNumber(int min, int max) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Guesser, enter a number between " + min + " and " + max + ":
");
        guessNumber = sc.nextInt();
    }

    public int getGuessNumber() {
        return guessNumber;
    }
}

class Player {
    private String name;
    private int guessedNumber;

    public Player(String name) {
        this.name = name;
    }

    public void makeGuess(int min, int max) {
        Scanner sc = new Scanner(System.in);
        System.out.print(name + ", enter your guess (" + min + " - " + max + "): ");
        guessedNumber = sc.nextInt();
    }

    public int getGuessedNumber() {
        return guessedNumber;
    }

    public String getName() {
        return name;
    }
}

class Umpire {
    private int guesserNumber;
    private Map<String, Integer> scores = new HashMap<>();

    public void collectNumberFromGuesser(Guesser guesser) {
        guesserNumber = guesser.getGuessNumber();
    }

    public void collectGuessesFromPlayers(List<Player> players, int min, int max) {
        for (Player player : players) {
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        player.makeGuess(min, max);
    }
}

public void compareAndDeclareResults(List<Player> players) {
    List<Player> winners = new ArrayList<>();
    for (Player player : players) {
        if (player.getGuessedNumber() == guesserNumber) {
            winners.add(player);
            scores.put(player.getName(), scores.getOrDefault(player.getName(), 0) +
1);
        }
    }

    if (winners.isEmpty()) {
        System.out.println("No one guessed correctly. The correct number was: " +
guesserNumber);
    } else {
        System.out.println("Winners: " +
winners.stream().map(Player::getName).toList());
    }
}

public void displayScores() {
    System.out.println("\n--- Scoreboard ---");
    scores.forEach((player, score) -> System.out.println(player + ": " + score + "
points"));
}
}

public class GuesserGame {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        Umpire umpire = new Umpire();
        Guesser guesser = new Guesser();

        System.out.println("Welcome to the Enhanced Guesser Game!");
        System.out.print("Enter number of players: ");
        int numPlayers = sc.nextInt();
        sc.nextLine();

        List<Player> players = new ArrayList<>();
        for (int i = 1; i <= numPlayers; i++) {
            System.out.print("Enter Player " + i + " name: ");
            players.add(new Player(sc.nextLine()));
        }

        int rounds = 3;
        int min = 1, max = 10;

        for (int round = 1; round <= rounds; round++) {
            System.out.println("\nRound " + round);
            guesser.guessNumber(min, max);
            umpire.collectNumberFromGuesser(guesser);

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        umpire.collectGuessesFromPlayers(players, min, max);
        umpire.compareAndDeclareResults(players);
    }

    umpire.displayScores();
    System.out.println("\nGame Over. Thanks for playing!");
}
}
```