

# A03

**Due Date:** Wednesday, February 8

**File(s) to be submitted:** GameRecorder.java

**Sample output**

## Win, Lose, Draw (Loops)

### Summary

Turn-based games requires a sum calculation of the points obtained by each player to determine who wins the game.

In this assignment, you will write a program that determines the winner at each round. Once every round has been scored, the program should display the number of rounds won by each player.

The project must be named A03, and the program named GameRecorder.

### Steps

1. Your program starts by identifying itself and you (its author).
2. It then asks the user the number of rounds played by each game player (e.g., 4).
3. Then, it will prompt and read the score obtained by each player (player 1 and 2) for each round.
  - 3.1. After reading scores for each round, the program *checks* them and if they are not valid, it asks user to enter valid scores.

The program must ensure that the scores considered for further analysis are valid.  
A score is valid if it is a non-negative number less than or equal to 1000.
  - 3.2. At the end of each round, the program determines whether a player wins or draws.
4. Your program needs to keep track of the number of round wins by each player and report it at the end (after a PAUSE actually!).

**Note:** you should introduce some variables to make your program clear.

**Hint:** Design your loops carefully considering the differences between while and for loops.

**Another Hint:** Don't forget using constants for naming values that won't change during the program!

**Yet Another Hint:** You might find it helpful to declare *boolean* variables to check the validity of each player's score.

## Grading Outline

- 70% -- Program performs as required.
- 30% -- Submitted material meets the standard requirements.

Make sure your program code is neat and orderly, and follows the conventions described in the rules for submissions and the style rules, available on Brightspace page for the course.

## Sample output

First sample:

```
Welcome to Game Recorder!
-----
by Somayeh Kafaie (A000000000)

How many rounds will each player play? 4↵

Round 1:
Enter the scores for Player1 and Player2: 250 200↵
***** Player 1 wins round 1 *****

Round 2:
Enter the scores for Player1 and Player2: 400 400↵
***** Round 2 is a draw *****

Round 3:
Enter the scores for Player1 and Player2: 300 100↵
***** Player 1 wins round 3 *****

Round 4:
Enter the scores for Player1 and Player2: 200 170↵
***** Player 1 wins round 4 *****

Press Enter to see the results ...↵

The final score is:
Player 1: 3
Player 2: 0
```

## Second sample:

```
Welcome to Game Recorder!
-----
by Somayeh Kafaie (A000000000)

How many rounds will each player play? 3↵

Round 1:
Enter the scores for Player1 and Player2: 2000 100↵
Scores must be non-negative numbers less than or equal to 1000
Enter the scores for Player1 and Player2: 200 100↵
***** Player 1 wins round 1 *****

Round 2:
Enter the scores for Player1 and Player2: 100 8000↵
Scores must be non-negative numbers less than or equal to 1000
Enter the scores for Player1 and Player2: 100 -8↵
Scores must be non-negative numbers less than or equal to 1000
Enter the scores for Player1 and Player2: -100 800↵
Scores must be non-negative numbers less than or equal to 1000
Enter the scores for Player1 and Player2: 100 800↵
***** Player 2 wins round 2 *****

Round 3:
Enter the scores for Player1 and Player2: 700 700↵
***** Round 3 is a draw *****

Press Enter to see the results ...↵

The final score is:
Player 1: 1
Player 2: 1
```