Course Title: OBJECT-ORIENTED PROGRAMMING - LAB
Prepared by; Kaycee R. Mendez, LPT

Bueno, Theron Adrianne A.
2019-10752

CPE 0121.1 Object-Oriented Programming
Ms. Kaycee R. Mendez, LPT

Week 11 – Laboratory Exercise

Directions: Create a simple program that demonstrate the Java Programming Fundamentals.

(Bato-bato pick) Modify the Bato-bato pick program located in the recorded discussion of our previous lesson. Create a leaderboard for user and computer. The program will stop if the user or computer scores 3.

SAMPLE OUTPUT:

========== LETS PLAY BATO BATO PICK ==========

User's choice : Bato

Computer's choice : Gunting

User wins!

Leaderboard:

User : 1

Computer : 0

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========== LETS PLAY BATO BATO PICK ==========

User's choice : Papel

Computer's choice : Bato

User wins!

Leaderboard:

User : 2

Computer : 0

========== LETS PLAY BATO BATO PICK ==========

User's choice : Bato

Computer's choice : Bato

It's a tie!

Leaderboard:

User : 2

Computer : 0

========== LETS PLAY BATO BATO PICK ==========

User's choice : Papel

Computer's choice : Gunting

Computer wins!

Leaderboard:

User : 2

Computer : 1

========== LETS PLAY BATO BATO PICK ==========

User's choice : Gunting

Computer's choice : Papel

User wins!

Leaderboard:

User : 3

Computer : 1

========== USER WINS!!!!! ==========

========== CONGRATULATIONS ==========

Play again? [Y] – YES || [N] – NO : N

========== THANK YOU FOR PLAYING BATO BATO PICK ==========

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Algorithm

1. Input User's Choice and Computer's choice.

2. Check for the following conditions:

User	***Computer***	***Result***
Bato	Papel	Computer
Bato	Gunting	User
Bato	Bato	Draw
Gunting	Papel	User
Gunting	Bato	Computer
Gunting	Gunting	Draw
Papel	Gunting	Computer
Papel	Bato	User
Papel	Papel	Draw

3. Increment the variables ‘u’ (user), and ‘c’ (computer) every win. Then update the leaderboard accordingly.

4. If any of the players wins three games, break the loop, declare the winner, and ask the user if the program shall be terminated.

5. If yes, clear the scores and run the while loop again. Else, terminate the program.

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Code Snapshot

```java

/*
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Block 3 - OOP

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Directions: Create a simple program that demonstrate the Java Programming Fundamentals.
*/

import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;

class BatoPapelGunting {

    public static void main(String[] args) throws IOException {
        String user, comp;
        int u = 0, c = 0; // Score: 'u' for user, 'c' for computer
        int gameRunning = 1; // Used in loop at the end if the user want's to play again

        while (gameRunning > 0) {
            try {
                BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

                System.out.println("============ LETS PLAY \"BATO BATO PICK\"  ============");
                do {
                    System.out.print("\n\nUser\'s choice: ");
                    user = br.readLine();
                    System.out.print("Computer\'s choice: ");
                    comp = br.readLine();

                    if (user.equals("Bato") && comp.equals("Papel")) {
                        c++;
                        System.out.println("Computer wins!");
                    } else if (user.equals("Bato") && comp.equals("Gunting")) {
                        u++;
                        System.out.println("User wins!");
                    }
                    if (user.equals("Bato") && comp.equals("Bato")) {
                        System.out.println("It's a tie!");
                    } else if (user.equals("Gunting") && comp.equals("Papel")) {
                        u++;
                        System.out.println("User wins!");
                    } else if (user.equals("Gunting") && comp.equals("Bato")) {
                        c++;
                        System.out.println("Computer wins!");
                    } else if (user.equals("Gunting") && comp.equals("Gunting")) {
                        System.out.println("It's a tie!");
                    } else if (user.equals("Papel") && comp.equals("Gunting")) {
                        c++;
                        System.out.println("Computer wins!");
                    } else if (user.equals("Papel") && comp.equals("Bato")) {
                        u++;
                        System.out.println("User wins!");
                    } else if (user.equals("Papel") && comp.equals("Papel")) {
                        System.out.println("It's a tie!");
                    }

                    System.out.println("\n\nLeaderboard:");
                    System.out.println("User: " + u);
                    System.out.println("Computer: " + c);

                } while (u < 3 && c < 3);
                if (u == 3) {
                    System.out.println("\n\n============ User wins! ============\n\n");
                } else {
                    System.out.println("\n\n============ Computer wins! ============\n\n");
                }
                gameRunning = 0; // end the game

                System.out.println("Press [1] to play again and [0] to exit the program");
                int playAgain = br.read();
                if (playAgain == 49) { // 1 is 49 in ASCII
                    gameRunning = 1;
                    // Reset scores
                    u = 0;
                    c = 0;
                } else {
                    System.out.println("============ THANK YOU FOR PLAYING BATO BATO PICK! ============");
                    System.exit(0);
                }

            } catch (Exception e) {
                return;
            }
        }
    }
}
```

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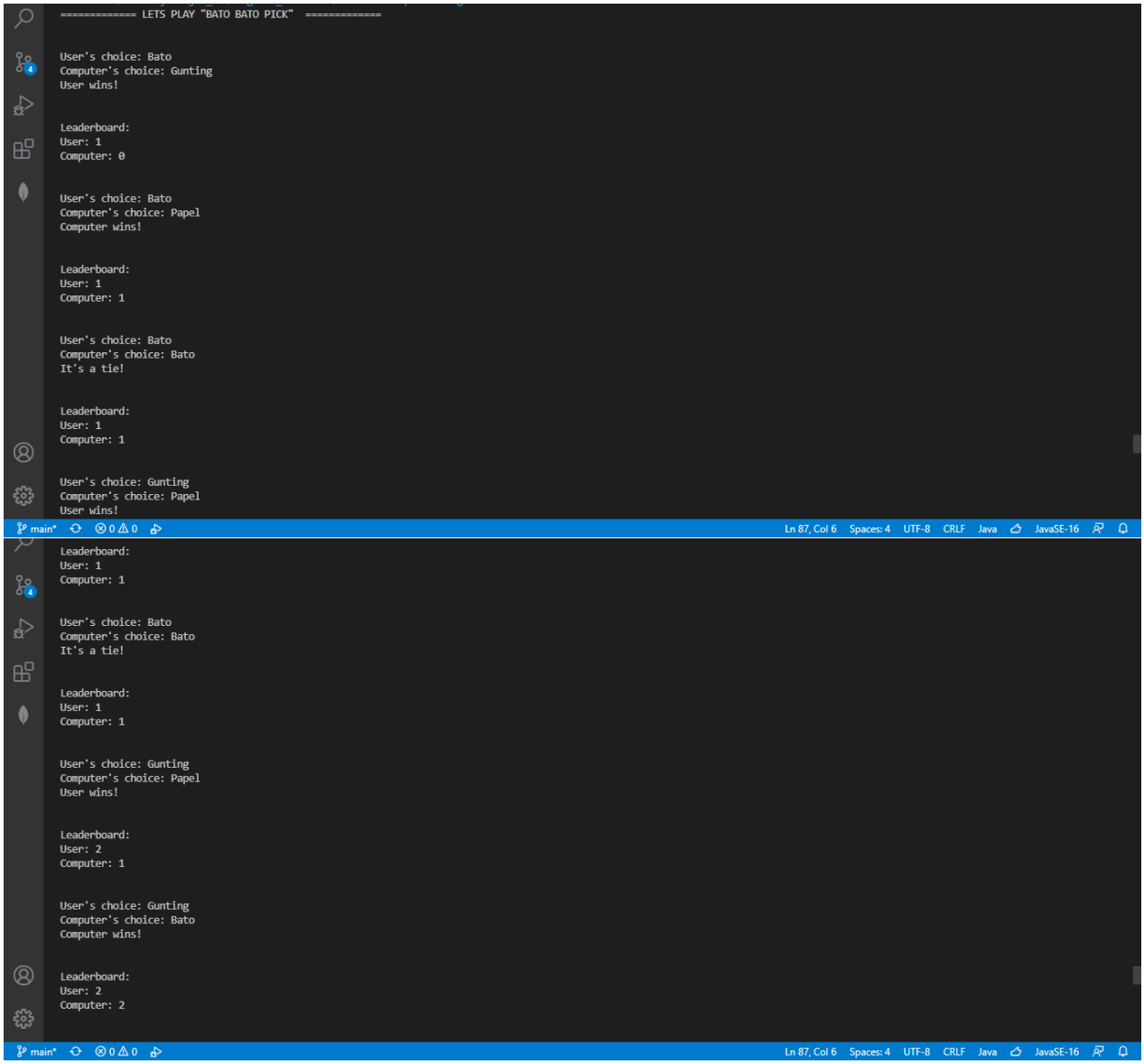
Output



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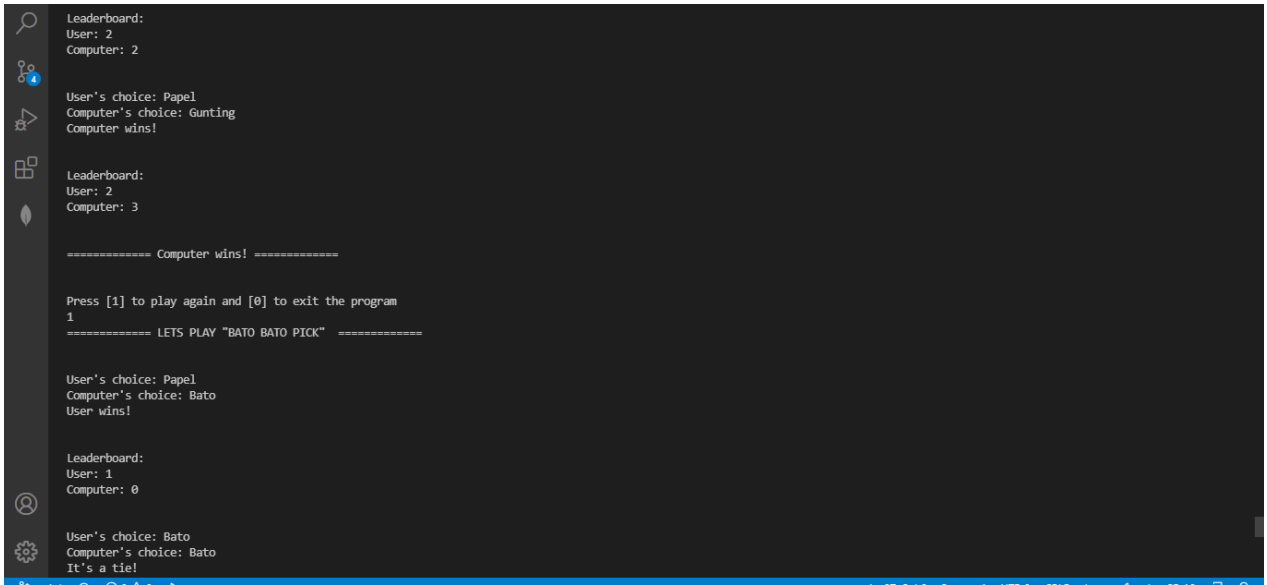

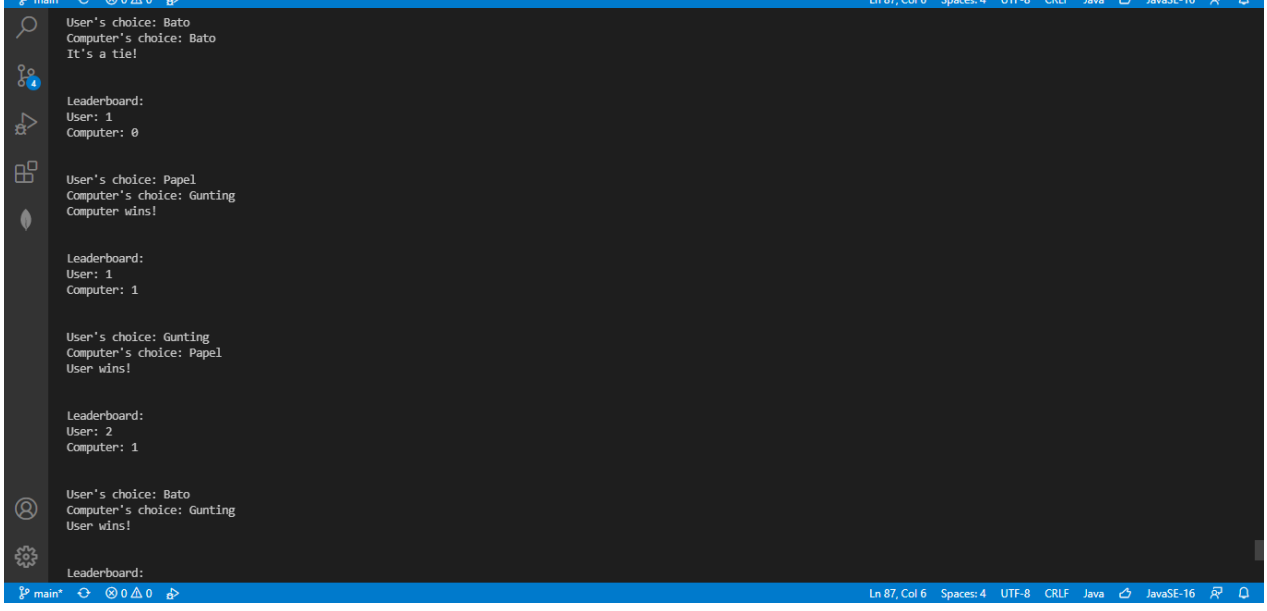

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```
Leaderboard:
User: 2
Computer: 1


User's choice: Bato
Computer's choice: Gunting
User wins!


Leaderboard:
User: 3
Computer: 1


============= User wins! =============


Press [1] to play again and [0] to exit the program
0
============= THANK YOU FOR PLAYING BATO BATO PICK! =============
```

Code:

```
/*
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ntals.
*/

import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;
```

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```
class BatoPapelGunting {

    public static void main(String[] args) throws IOException {
        String user, comp;
        int u = 0, c = 0; // Score: 'u' for user, 'c' for computer
        int gameRunning = 1; // Used in loop at the end if the user want's to pla
y again

        while (gameRunning > 0) {
            try {
                BufferedReader br = new BufferedReader(new InputStreamReader(Syst
em.in));

                System.out.println("============= LETS PLAY \"BATO BATO PICK\"  =
============");
                do {
                    System.out.print("\n\nUser\'s choice: ");
                    user = br.readLine();
                    System.out.print("Computer\'s choice: ");
                    comp = br.readLine();

                    if (user.equals("Bato") && comp.equals("Papel")) {
                        c++;
                        System.out.println("Computer wins!");
                    } else if (user.equals("Bato") && comp.equals("Gunting")) {
                        u++;
                        System.out.println("User wins!");
                    }
                    if (user.equals("Bato") && comp.equals("Bato")) {
                        System.out.println("It's a tie!");
                    } else if (user.equals("Gunting") && comp.equals("Papel")) {
                        u++;
                        System.out.println("User wins!");
                    } else if (user.equals("Gunting") && comp.equals("Bato")) {
                        c++;
                        System.out.println("Computer wins!");
```

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```
                    } else if (user.equals("Gunting") && comp.equals("Gunting"))
{
                        System.out.println("It's a tie!");
                    } else if (user.equals("Papel") && comp.equals("Gunting")) {
                        c++;
                        System.out.println("Computer wins!");
                    } else if (user.equals("Papel") && comp.equals("Bato")) {
                        u++;
                        System.out.println("User wins!");
                    } else if (user.equals("Papel") && comp.equals("Papel")) {
                        System.out.println("It's a tie!");
                    }

                    System.out.println("\n\nLeaderboard:");
                    System.out.println("User: " + u);
                    System.out.println("Computer: " + c);

                } while (u < 3 && c < 3);
                if (u == 3) {
                    System.out.println("\n\n============= User wins! ============
=\n\n");
                } else {
                    System.out.println("\n\n============= Computer wins! ========
=====\n\n");
                }
                gameRunning = 0; // end the game

                System.out.println("Press [1] to play again and [0] to exit the p
rogram");
                int playAgain = br.read();
                if (playAgain == 49) { // 1 is 49 in ASCII
                    gameRunning = 1;
                    // Reset scores
                    u = 0;
                    c = 0;
                } else {
```

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```
                    System.out.println("============= THANK YOU FOR PLAYING BATO
BATO PICK! =============");
                    System.exit(0);
                }

            } catch (Exception e) {
                return;
            }
        }
    }
}
```