



PAMANTASAN NG LUNGSOD NG MAYNILA
COLLEGE OF ENGINEERING AND TECHNOLOGY
COMPUTER ENGINEERING DEPARTMENT



Course Title: OBJECT-ORIENTED PROGRAMMING - LAB

Prepared by; Kaycee R. Mendez, LPT

**Bueno, Theron Adrienne 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!



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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:

<i>User</i>	<i>Computer</i>	<i>Result</i>
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

```
1
2 /*
3 Bueno, Theron Adrianne A.
4 Block 3 - OOP
5
6 Week 11 - Laboratory Exercise
7 Directions: Create a simple program that demonstrate the Java Programming Fundamentals.
8 */
9
10 import java.io.BufferedReader;
11 import java.io.IOException;
12 import java.io.InputStreamReader;
13
14 class BatoPapelGunting {
15
16     public static void main(String[] args) throws IOException {
17         String user, comp;
18         int u = 0, c = 0; // Score: 'u' for user, 'c' for computer
19         int gameRunning = 1; // Used in loop at the end if the user want's to play again
20
21         while (gameRunning > 0) {
22             try {
23                 BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
24
25                 System.out.println("===== LETS PLAY \"BATO BATO PICK\" =====");
26                 do {
27                     System.out.print("\n\nUser's choice: ");
28                     user = br.readLine();
29                     System.out.print("Computer's choice: ");
30                     comp = br.readLine();
31
32                     if (user.equals("Bato") && comp.equals("Papel")) {
33                         c++;
34                         System.out.println("Computer wins!");
35                     } else if (user.equals("Bato") && comp.equals("Gunting")) {
36                         u++;
37                         System.out.println("User wins!");
38                     }
39                     if (user.equals("Bato") && comp.equals("Bato")) {
40                         System.out.println("It's a tie!");
41                     } else if (user.equals("Gunting") && comp.equals("Papel")) {
42                         u++;
43                         System.out.println("User wins!");
44                     } else if (user.equals("Gunting") && comp.equals("Bato")) {
45                         c++;
46                         System.out.println("Computer wins!");
47                     } else if (user.equals("Gunting") && comp.equals("Gunting")) {
48                         System.out.println("It's a tie!");
49                     } else if (user.equals("Papel") && comp.equals("Gunting")) {
50                         c++;
51                         System.out.println("Computer wins!");
52                     } else if (user.equals("Papel") && comp.equals("Bato")) {
53                         u++;
54                         System.out.println("User wins!");
55                     } else if (user.equals("Papel") && comp.equals("Papel")) {
56                         System.out.println("It's a tie!");
57                     }
58
59                     System.out.println("\n\nLeaderboard:");
60                     System.out.println("User: " + u);
61                     System.out.println("Computer: " + c);
62
63                 } while (u < 3 && c < 3);
64                 if (u == 3) {
65                     System.out.println("\n\n===== User wins! =====\n\n");
66                 } else {
67                     System.out.println("\n\n===== Computer wins! =====\n\n");
68                 }
69                 gameRunning = 0; // end the game
70
71                 System.out.println("Press [1] to play again and [0] to exit the program");
72                 int playAgain = br.read();
73                 if (playAgain == 49) { // 1 is 49 in ASCII
74                     gameRunning = 1;
75                     // Reset scores
76                     u = 0;
77                     c = 0;
78                 } else {
79                     System.out.println("===== THANK YOU FOR PLAYING BATO BATO PICK! =====");
80                     System.out.println("=====");
81                     System.exit(0);
82                 }
83             } catch (Exception e) {
84                 return;
85             }
86         }
87     }
88 }
```



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Output

```
===== LETS PLAY "BATO BATO PICK" =====
User's choice: Bato
Computer's choice: Gunting
User wins!

Leaderboard:
User: 1
Computer: 0

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

Leaderboard:
User: 1
Computer: 1

User's choice: Bato
Computer's choice: Bato
It's a tie!

Leaderboard:
User: 1
Computer: 1

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

Leaderboard:
User: 1
Computer: 1

User's choice: Bato
Computer's choice: Bato
It's a tie!

Leaderboard:
User: 1
Computer: 1

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

Leaderboard:
User: 2
Computer: 1

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

Leaderboard:
User: 2
Computer: 2
```



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```
Leaderboard:
User: 2
Computer: 2

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

Leaderboard:
User: 2
Computer: 3

===== Computer wins! =====

Press [1] to play again and [0] to exit the program
1
===== LETS PLAY "BATO BATO PICK" =====

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

Leaderboard:
User: 1
Computer: 0

User's choice: Bato
Computer's choice: Bato
It's a tie!

main*  Ln 87, Col 6  Spaces: 4  UTF-8  CRLF  Java  JavaSE-16

User's choice: Bato
Computer's choice: Bato
It's a tie!

Leaderboard:
User: 1
Computer: 0

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

Leaderboard:
User: 1
Computer: 1

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

Leaderboard:
User: 2
Computer: 1

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

Leaderboard:
```



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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:

```
/*
Bueno, Theron Adrienne A.
Block 3 - OOP

Week 11 - Laboratory Exercise
Directions: Create a simple program that demonstrate the Java Programming Fundamentals.
*/

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!");  
                    }  
                } while (gameRunning > 0);  
            } catch (Exception e) {}  
        }  
    }  
}
```



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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;  
    }  
}  
}
```