



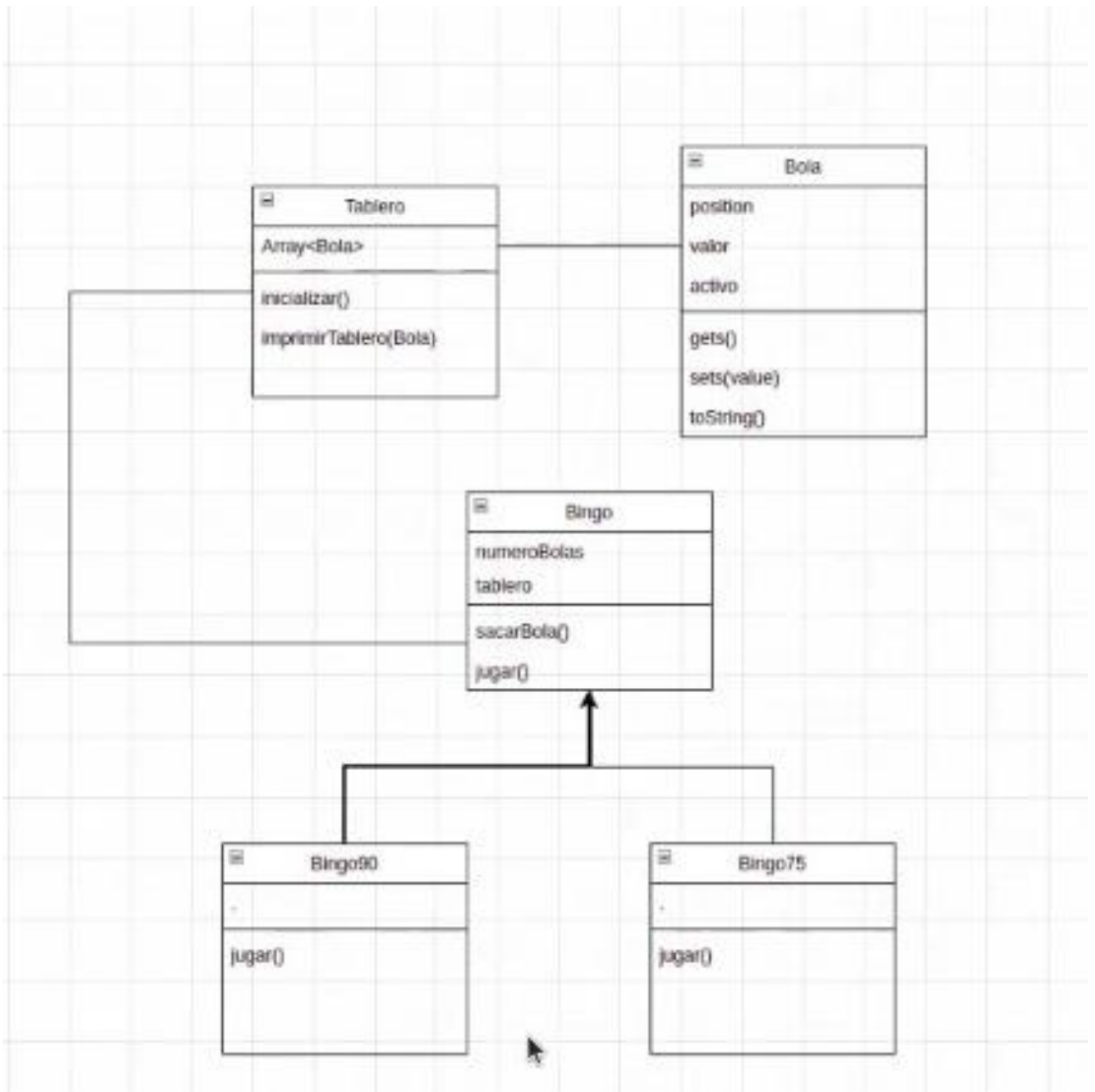
**Nombre:** Eddie Leonardo Ajoy Li

**Materia:** Objetos y abstracción de datos

**Docente:** Ing. Luis Quishpi. MSc.

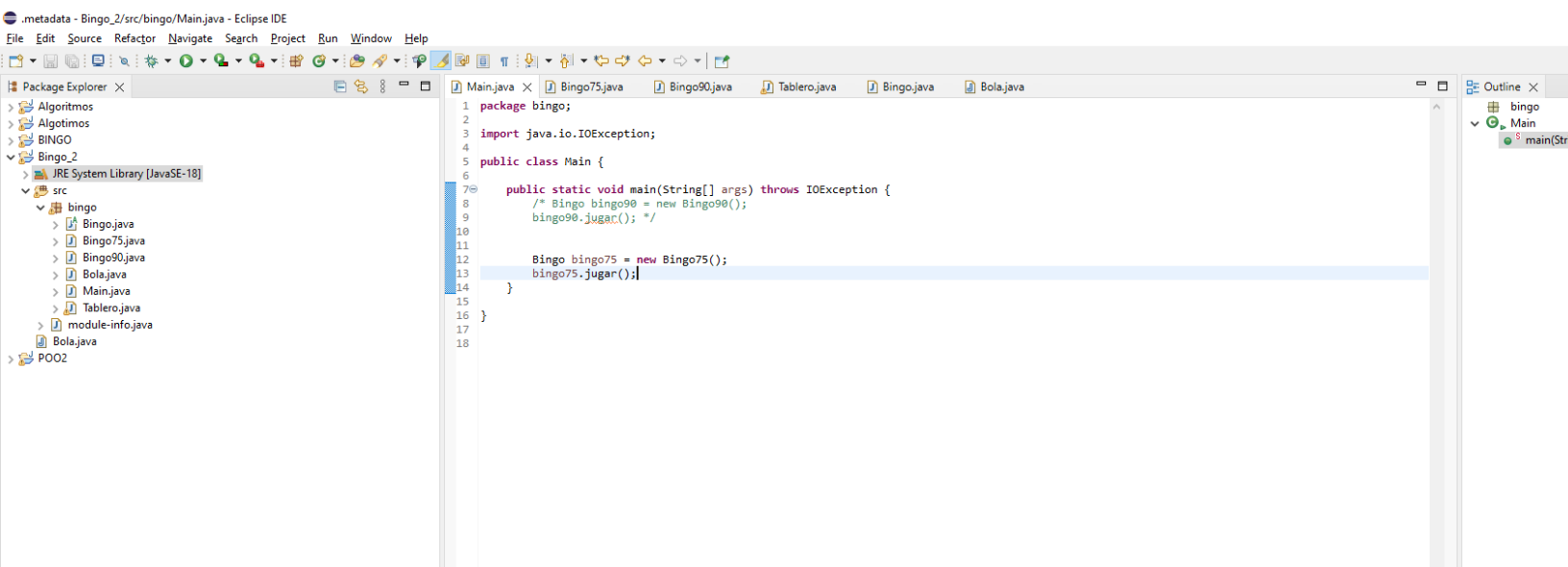
**Fecha:** 02/12/2022

Diagrama de clases:



Link del git hub: <https://github.com/Julius266/Bingo1.1>

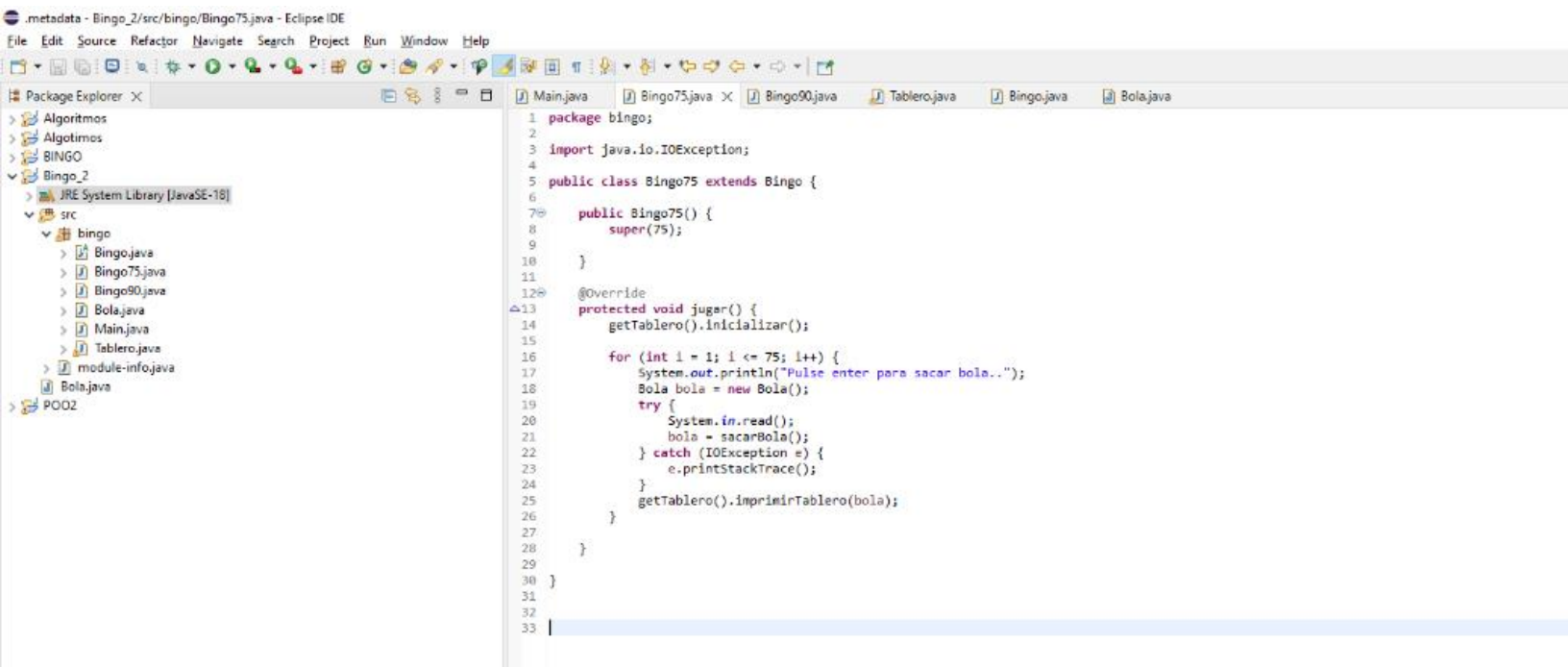
## Capturas de la ejecución del programa:



The screenshot shows the Eclipse IDE interface. The Package Explorer on the left displays the project structure: 'Bingo\_2' contains 'src' which has a 'bingo' package. Inside 'bingo', there are files 'Bingo.java', 'Bingo75.java', 'Bingo90.java', 'Bola.java', 'Main.java', 'Tablero.java', 'module-info.java', and 'Bola.java'. The Main Editor shows 'Main.java' with the following code:

```
1 package bingo;
2
3 import java.io.IOException;
4
5 public class Main {
6
7     public static void main(String[] args) throws IOException {
8         /* Bingo bingo90 = new Bingo90();
9         bingo90.jugar(); */
10
11
12         Bingo bingo75 = new Bingo75();
13         bingo75.jugar();
14     }
15
16 }
17
18
```

The Outline view on the right shows the 'bingo' package containing 'Main' and 'main(Str'.



The screenshot shows the Eclipse IDE interface with 'Bingo75.java' open in the Main Editor. The Package Explorer on the left is the same as the previous screenshot. The Main Editor shows the following code:

```
1 package bingo;
2
3 import java.io.IOException;
4
5 public class Bingo75 extends Bingo {
6
7     public Bingo75() {
8         super(75);
9     }
10
11
12     @Override
13     protected void jugar() {
14         getTablero().inicializar();
15
16         for (int i = 1; i <= 75; i++) {
17             System.out.println("Pulse enter para sacar bola..");
18             Bola bola = new Bola();
19             try {
20                 System.in.read();
21                 bola = sacarBola();
22             } catch (IOException e) {
23                 e.printStackTrace();
24             }
25             getTablero().imprimirTablero(bola);
26         }
27     }
28
29 }
30
31
32
33
```

```
1 package bingo;
2
3 import java.io.IOException;
4
5 public class Bingo90 extends Bingo {
6
7     public Bingo90() {
8         super(90);
9     }
10
11     @Override
12     protected void jugar() {
13         getTablero().inicializar();
14
15         for (int i = 1; i <= 90; i++) {
16             System.out.println("Pulse enter para sacar bola..");
17             Bola bola = new Bola();
18             try {
19                 System.in.read();
20                 bola = sacarBola();
21             } catch (IOException e) {
22                 e.printStackTrace();
23             }
24             getTablero().imprimirTablero(bola);
25         }
26     }
27 }
28
29
30 }
```

```
1 package bingo;
2
3 import java.util.Scanner;
4
5 public class Tablero {
6
7     private ArrayList<Bola> tablero;
8     int x;
9     boolean band = true;
10     public Tablero() {
11         this.tablero = new ArrayList<Bola>();
12     }
13
14     public void inicializar() {
15         Scanner sc = new Scanner(System.in);
16         System.out.print("ingrese los numeros de la tabla: ");
17         x = sc.nextInt();
18         System.out.println("Inicializando bingo de " + x + "PELOTAS");
19         int valorBola = 1;
20
21         if (x == 90) {
22             for (int i = 0; i < 9; i++) {
23                 for (int j = 0; j < 10; j++) {
24                     tablero.add(new Bola(valorBola - 1, valorBola + "", false));
25                     System.out.print(getBola(valorBola - 1) + "\t");
26                     valorBola++;
27                 }
28                 System.out.println("\n");
29             }
30         }
31         else if (x == 75) {
32             for (int i = 0; i < 5; i++) {
33                 for (int j = 0; j < 15; j++) {
34                     tablero.add(new Bola(valorBola - 1, valorBola + "", false));
35                     System.out.print(getBola(valorBola - 1) + "\t");
36                     valorBola++;
37                 }
38                 System.out.println("\n");
39             }
40         }
41         else {
42             System.out.println("Opcion Incorrecta");
43         }
44     }
45
46     public void imprimirTablero(Bola bola) {
47         bola.setValor("(" + bola.getValor() + ")");
48         tablero.set(bola.getPosition(), bola);
49         int valorBola = 1;
50
51         if (x == 90) {
52             for (int i = 0; i < 9; i++) {
53                 for (int j = 0; j < 10; j++) {
54                     System.out.print(getBola(valorBola - 1) + "\t");
55                 }
56             }
57         }
58     }
59 }
60
61 }
```

.metadada - Bingo\_2/src/bingo/Bingo.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help



Package Explorer X

- Algoritmos
- Algoritmos
- BINGO
- Bingo\_2
  - JRE System Library [JavaSE-10]
  - src
    - bingo
      - Bingo.java
      - Bingo75.java
      - Bingo90.java
      - Bola.java
      - Main.java
      - Tablero.java
      - module-info.java
    - Bola.java
  - POO2

Main.java Bingo75.java Bingo90.java Tablero.java Bingo.java Bola.java

```
1 package bingo;
2
3 import java.util.Random;
4
5 public abstract class Bingo {
6     private int numeroBolas;
7     private Tablero tablero;
8
9     public Bingo(int numeroBolas) {
10         this.numeroBolas = numeroBolas;
11         setTablero(new Tablero());
12     }
13
14     public Bola sacarBola() {
15         Random random = new Random();
16         int value = (random.nextInt(numeroBolas - 1 + 1) + 1);
17         return new Bola(value - 1, value + "", true);
18     }
19
20     protected abstract void jugar();
21
22     public int getNumeroBolas() {
23         return numeroBolas;
24     }
25
26     public void setNumeroBolas(int numeroBolas) {
27         this.numeroBolas = numeroBolas;
28     }
29
30     public Tablero getTablero() {
31         return tablero;
32     }
33
34     public void setTablero(Tablero tablero) {
35         this.tablero = tablero;
36     }
37
38 }
39
40
```

.metadada - Bingo\_2/Bola.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help



Package Explorer X

- Algoritmos
- Algoritmos
- BINGO
- Bingo\_2
  - JRE System Library [JavaSE-10]
  - src
    - bingo
      - Bingo.java
      - Bingo75.java
      - Bingo90.java
      - Bola.java
      - Main.java
      - Tablero.java
      - module-info.java
    - Bola.java
  - POO2

Main.java Bingo75.java Bingo90.java Tablero.java Bingo.java Bola.java

```
1 package bingo;
2
3 public class Bola {
4
5     private int position;
6     private String valor;
7     private boolean activo;
8
9     public Bola() {
10         this.activo = false;
11     }
12
13     public Bola(int position, String valor, boolean activo) {
14         super();
15         this.position = position;
16         this.valor = valor;
17         this.activo = activo;
18     }
19
20     public String getValor() {
21         return valor;
22     }
23
24     public void setValor(String valor) {
25         this.valor = valor;
26     }
27
28     public boolean isActive() {
29         return activo;
30     }
31
32     public void setActive(boolean activo) {
33         this.activo = activo;
34     }
35
36     public int getPosition() {
37         return position;
38     }
39
40     public void setPosition(int position) {
41         this.position = position;
42     }
43
44     @Override
45     public String toString() {
46         // String retorno = "Bola [Valor: " + valor + ", Activo: " + activo + "]";
47         return valor;
48     }
49
50 }
51
52
```



```
Problems @ Javadoc Declaration Console X
<terminated> Main (2) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (2 dic 2022, 23:54:21 - 23:5
Pulse enter para sacar bola...
[1] [2] [3] [4] [5]
[6] [7] [8] [9] [10]
[11] [12] [13] [14] [15]
[16] [17] [18] [19] [20]
[21] [22] [23] [24] [25]
[26] [27] [28] [29] [30]
[31] [32] [33] [34] [35]
[36] [37] [38] [39] [40]
[41] [42] [43] [44] [45]
[46] [47] [48] [49] [50]
[51] [52] [53] [54] [55]
[56] [57] [58] [59] [60]
[61] [62] [63] [64] [65]
[66] [67] [68] [69] [70]
[71] [72] [73] [74] [75]
Pulse enter para sacar bola...
```

```
Problems @ Javadoc Declaration Console X
Main (2) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (2 dic 2022, 23:33:06) [pid: 11824]
Ingrese los numeros de la tabla: 90
```

```
Problems @ Javadoc Declaration Console X
<terminated> Main (2) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (2 dic 2022, 23:50:12 - 23:5
Pulse enter para sacar bola...
[1] [2] [3] [4] [5] [6] [7] [8] [9] [10]
[11] [12] [13] [14] [15] [16] [17] [18] [19] [20]
[21] [22] [23] [24] [25] [26] [27] [28] [29] [30]
[31] [32] [33] [34] [35] [36] [37] [38] [39] [40]
[41] [42] [43] [44] [45] [46] [47] [48] [49] [50]
[51] [52] [53] [54] [55] [56] [57] [58] [59] [60]
[61] [62] [63] [64] [65] [66] [67] [68] [69] [70]
[71] [72] [73] [74] [75] [76] [77] [78] [79] [80]
[81] [82] [83] [84] [85] [86] [87] [88] [89] [90]
Pulse enter para sacar bola...
```