

Java For Intermediate

ACTIVITY 5

1. Buatlah program applet animasi bola berikut ini : **(Bobot 20)**

Horizontal

Source code: Line 1 – 50 (**Bola.java**)

```
import java.applet.*;
import java.awt.*;
import java.awt.event.*;

/**
 *
 * @author Shidqi Adiatma
 */
public class Bola extends Applet implements Runnable {

    int x, arahX;
    int y, arahY;

    public void init(){
        x = 50;
        y = 50;

        arahX = 2;
        arahY = 2;

        Thread t = new Thread(this);
        t.start();
    }

    public void paint(Graphics g){
        g.setColor(Color.blue);
```

```

        g.drawRect(5,5,240,240);

        g.setColor(Color.red);

        g.fillOval(x, y , 20, 20);
    }

    public void run(){
        while (true){
            try{
                cekBola(0);

                Thread.sleep(5);

                repaint();

            } catch (Exception e){}
        }
    }

    public void cekBola(int arah){
        if (arah == 1){
            if(y > 225 || y < 5){
                arahY = -arahY;
            }

            x = 50;

            y = y + arahY;
        }else if (arah == 0){
            if (x > 225 || x < 5){
                arahX = -arahX;
            }

            y = 50;

            x = x + arahX;
        }else {
            if (x > 225 || y < 5) {
                arahX = -arahX;

                arahY = -arahY;
            }
        }
    }

```

```

    x = x + arahX;

    y = y + arahY;

}

}

}

```

```

Bola.java
1  import java.applet.*;
2  import java.awt.*;
3  import java.awt.event.*;
4  /**
5   *
6   * @author Shidqi Adiatma
7   */
8  public class Bola extends Applet implements Runnable {
9
10     int x, arahX;
11     int y, arahY;
12
13     public void init(){
14         x = 50;
15         y = 50;
16
17         arahX = 2;
18         arahY = 2;
19
20         Thread t = new Thread(this);
21         t.start();
22     }
23
24     public void paint(Graphics g){
25         g.setColor(Color.blue);
26
27         g.drawRect(x, y, width: 240, height: 240);
28         g.setColor(Color.red);
29         g.fillOval(x, y, width: 20, height: 20);
30     }
31     public void run(){
32         while (true){
33             try{
34                 cekBola(arah: 0);
35                 Thread.sleep(millis: 5);
36                 repaint();
37             } catch (Exception e){}
38         }
39     }
40     public void cekBola(int arah){
41         if (arah == 1){
42             if(y > 225 || y < 5){
43                 arahY = -arahY;
44             }
45             x = 50;
46             y = y + arahY;
47         }else if (arah == 0){
48             if (x > 225 || x < 5){
49                 arahX = -arahX;
50             }
51             y = 50;

```

Source code: Line 51 – 61(Bola.java) dan Bola.html

```

Bola.java
51     x = x + arahX;
52 }else {
53     if (x > 225 || y < 5) {
54         arahX = -arahX;
55         arahY = -arahY;
56     }
57     x = x + arahX;
58     y = y + arahY;
59 }
60 }
61 }
62 }

Bola.html
1 <html>
2 <body>
3 <applet code="Bola.class" width="300" height="300">
4 </applet>
5 </body>
6 </html>
7

```

PROBLEMS

- bolajava 2
 - The import java.awt.event is never used Java(268435844) [3, 8]
 - The type Applet has been deprecated since version 9 and marked for removal Java(16778626) [8, 27]

Ini ga tau kenapa di terminalnya muncul problems, tapi bisa dirun

Jdk lamanya baru saya download dan instal, sebelumnya saya pake jdk 17.

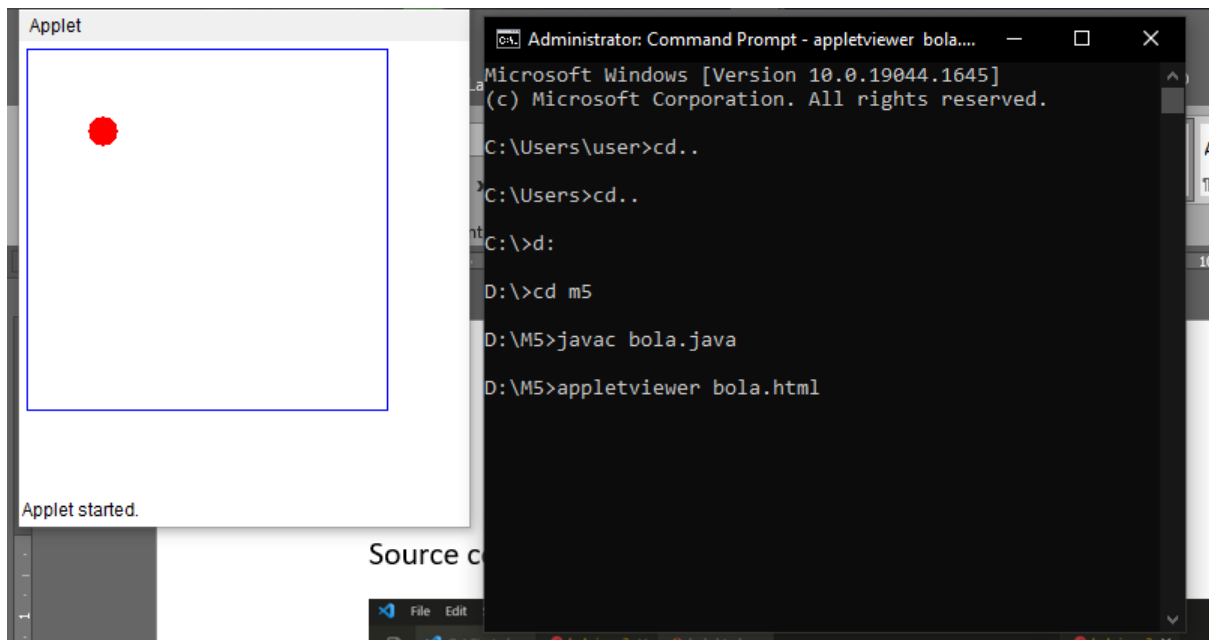
```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19044.1645]
(c) Microsoft Corporation. All rights reserved.

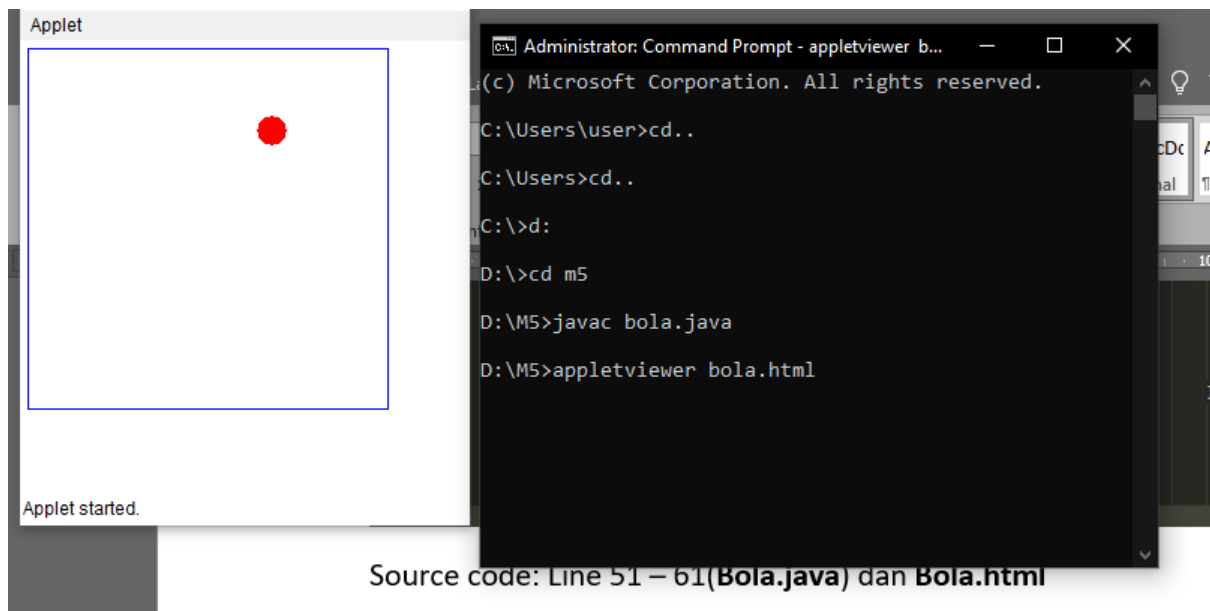
C:\Users\user>java -version
java version "1.8.0_221"
Java(TM) SE Runtime Environment (build 1.8.0_221-b11)
Java HotSpot(TM) 64-Bit Server VM (build 25.221-b11, mixed mode)

C:\Users\user>javac -version
javac 1.8.0_221

C:\Users\user>
```

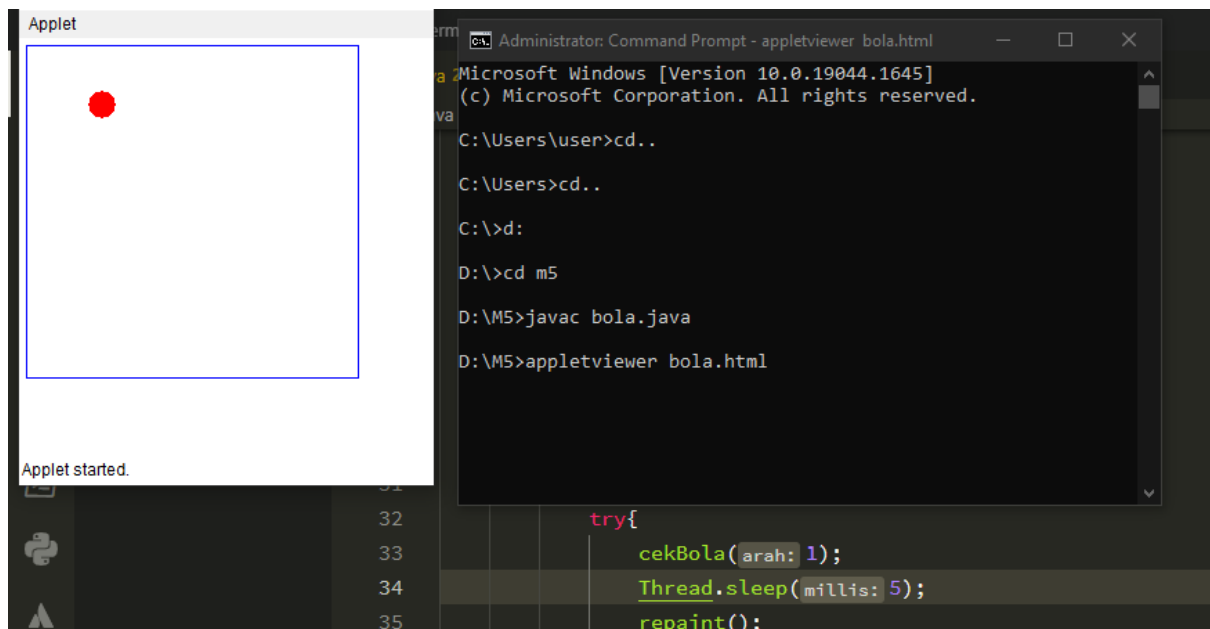
Output: Horizontal (**Bergerak ke kiri dan ke kanan**) → cekBola(0)

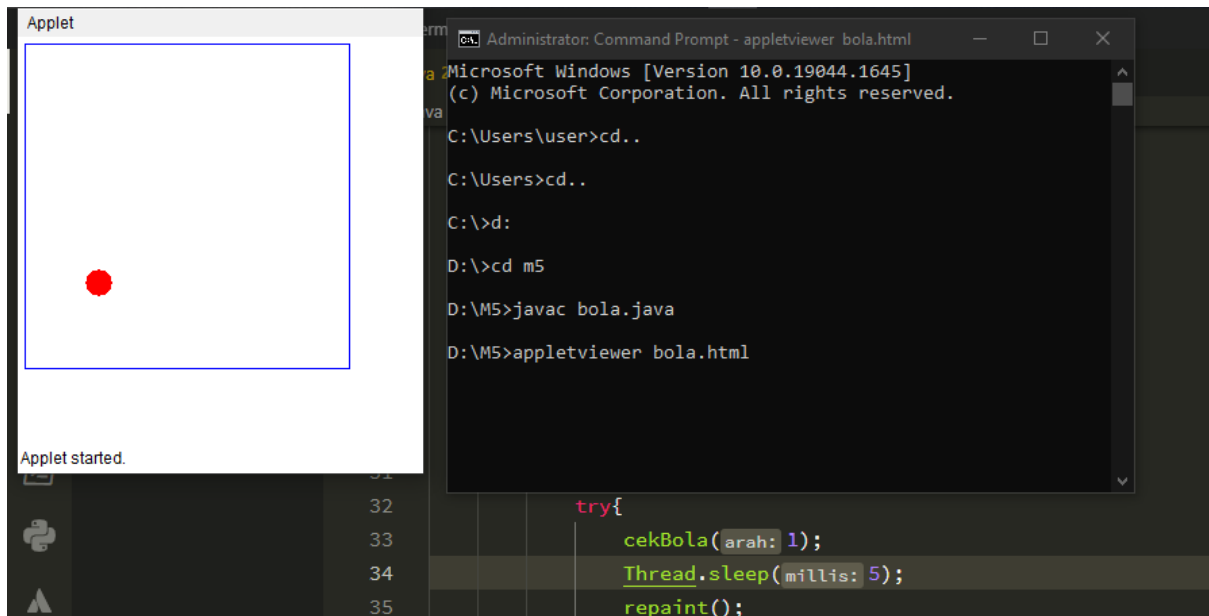




2. Vertikal (Bobot 20)

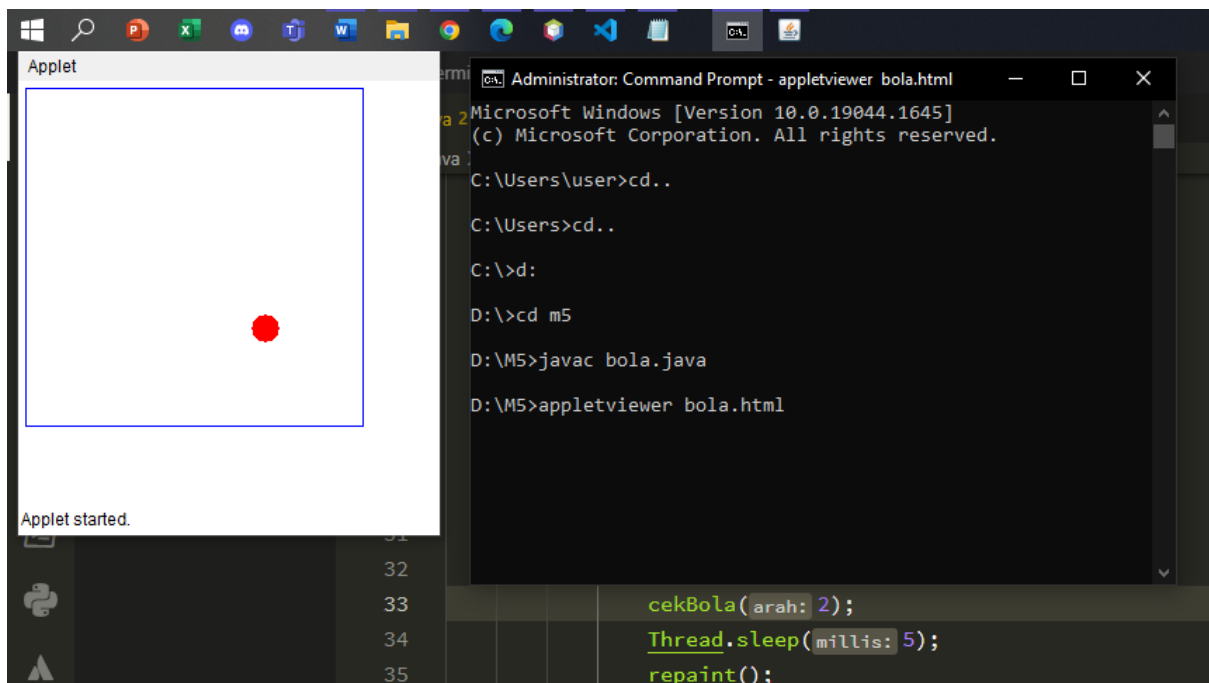
Output: Vertikal (**Bergerak ke atas dan ke bawah**) → cekBola(1)

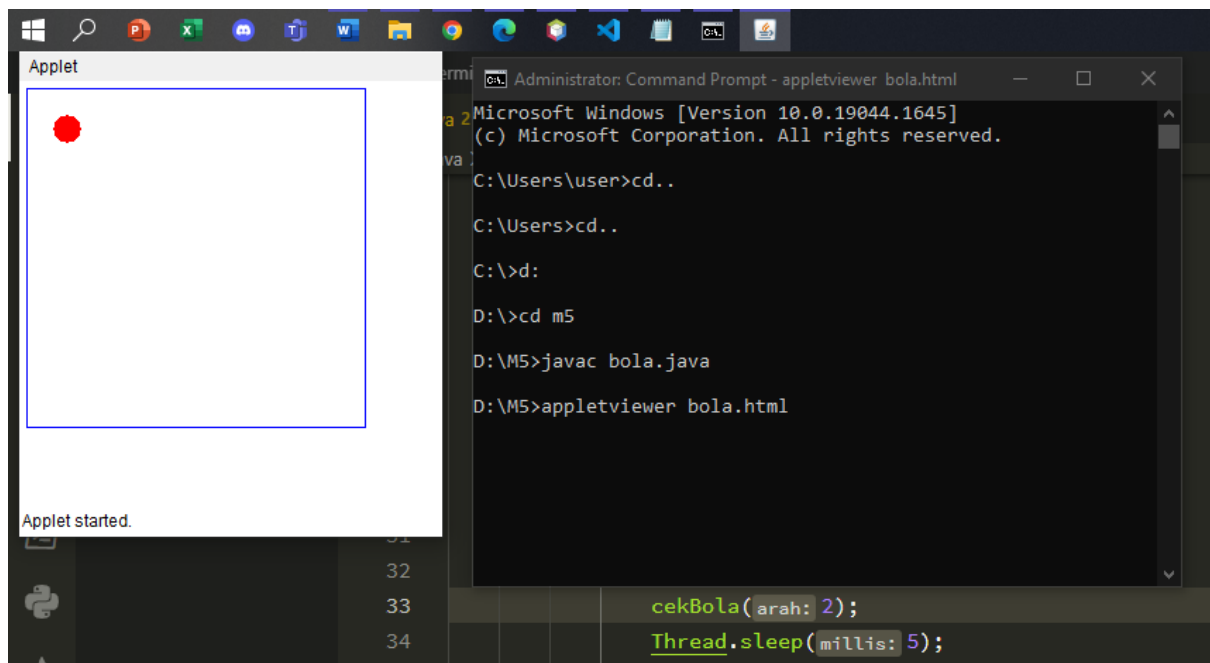




3. Diagonal (Bobot 20)

Output: Diagonal → cekBola(2)





4. Tombol (Bobot 40)

Source code Button:

```

import java.applet.*;
import java.awt.*;
import java.awt.event.*;

/**
 *
 * @author Shidqi Adiatma
 */

public class Bola extends Applet implements Runnable, ActionListener {
    Button h, v;

    int x, arahX;
    int y, arahY;
    int pilihan = 0;

    public void init(){

        h = new Button("Horizontal"); // yang ditambahkan
        h.setBounds(300, 40, 80, 30); // yang ditambahkan
  
```

```
h.addActionListener(this); // yang ditambahkan
```

```
v = new Button("Vertikal"); // yang ditambahkan
```

```
v.setBounds(300, 80, 80, 30); // yang ditambahkan
```

```
v.addActionListener(this); // yang ditambahkan
```

```
add(h); // yang ditambahkan
```

```
add(v);
```

```
x = 50;
```

```
y = 50;
```

```
arahX = 2;
```

```
arahY = 2;
```

```
Thread t = new Thread(this);
```

```
t.start();
```

```
}
```

```
public void paint(Graphics g){
```

```
    g.setColor(Color.blue);
```

```
    g.drawRect(5,5,240,240);
```

```
    g.setColor(Color.red);
```

```
    g.fillOval(x, y , 20, 20);
```

```
}
```

```
public void run(){
```

```
    while (true){
```

```
        try{
```

```
            cekBola(pilihan);
```

```
            Thread.sleep(5);
```

```
            repaint();
```



```

        } catch (Exception e){}
    }
}

public void cekBola(int arah){
    if (arah == 1){
        if(y > 225 || y < 5){
            arahY = -arahY;
        }
        x = 50;
        y = y + arahY;
    }else if (arah == 0){
        if (x > 225 || x < 5){
            arahX =-arahX;
        }
        y = 50;
        x = x + arahX;
    }else {
        if (x > 225 || y < 5) {
            arahX = -arahX;
            arahY =-arahY;
        }
        x = x + arahX;
        y = y + arahY;
    }
}

@Override

public void actionPerformed(ActionEvent e) {
    String y = e.getActionCommand();
    switch (y) {
        case "Horizontal":
            pilihan = 0;

```

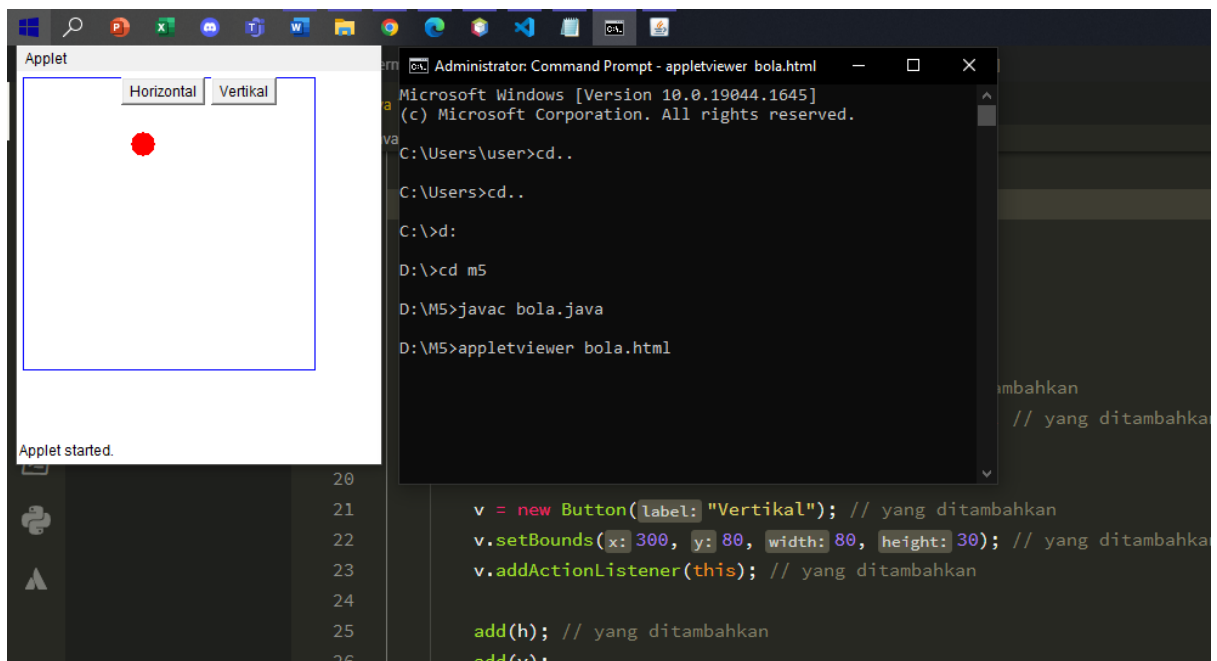
```

        break;

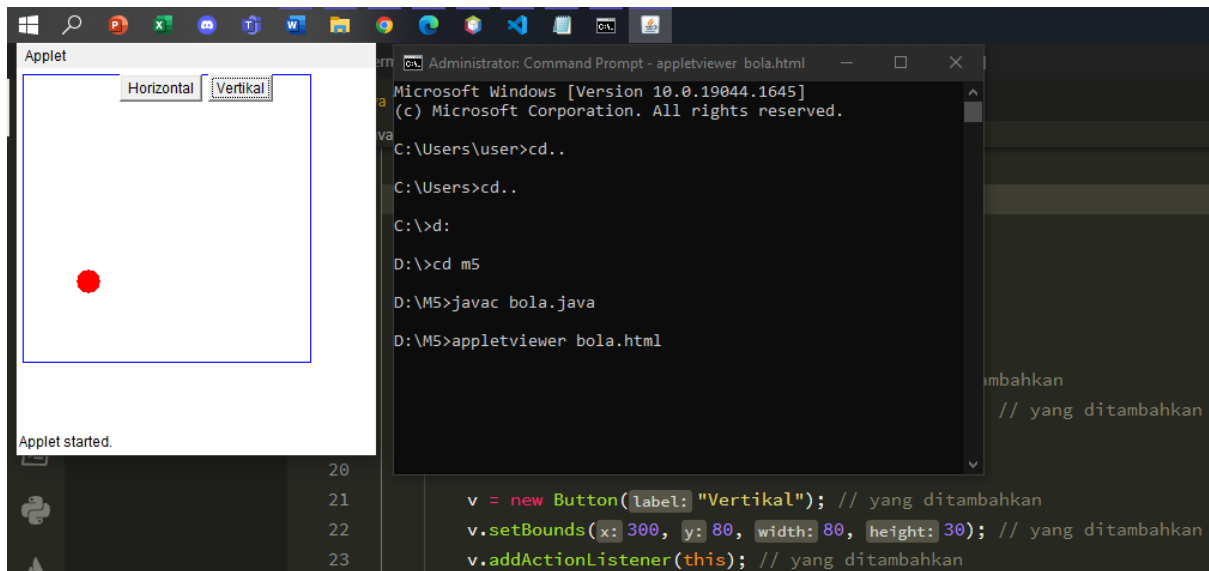
    case "Vertikal":
        pilihan = 1;
        break;
    }
}
}

```

Output Horizontal (dengan Button)



Output Vertikal (dengan Button)



Maaf kak untuk Act pertemuan 3 dan 4 saya ga bikin kak