

Pembrograman Berorientasi Objek

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INF2143

UAS

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Teknik Informatika

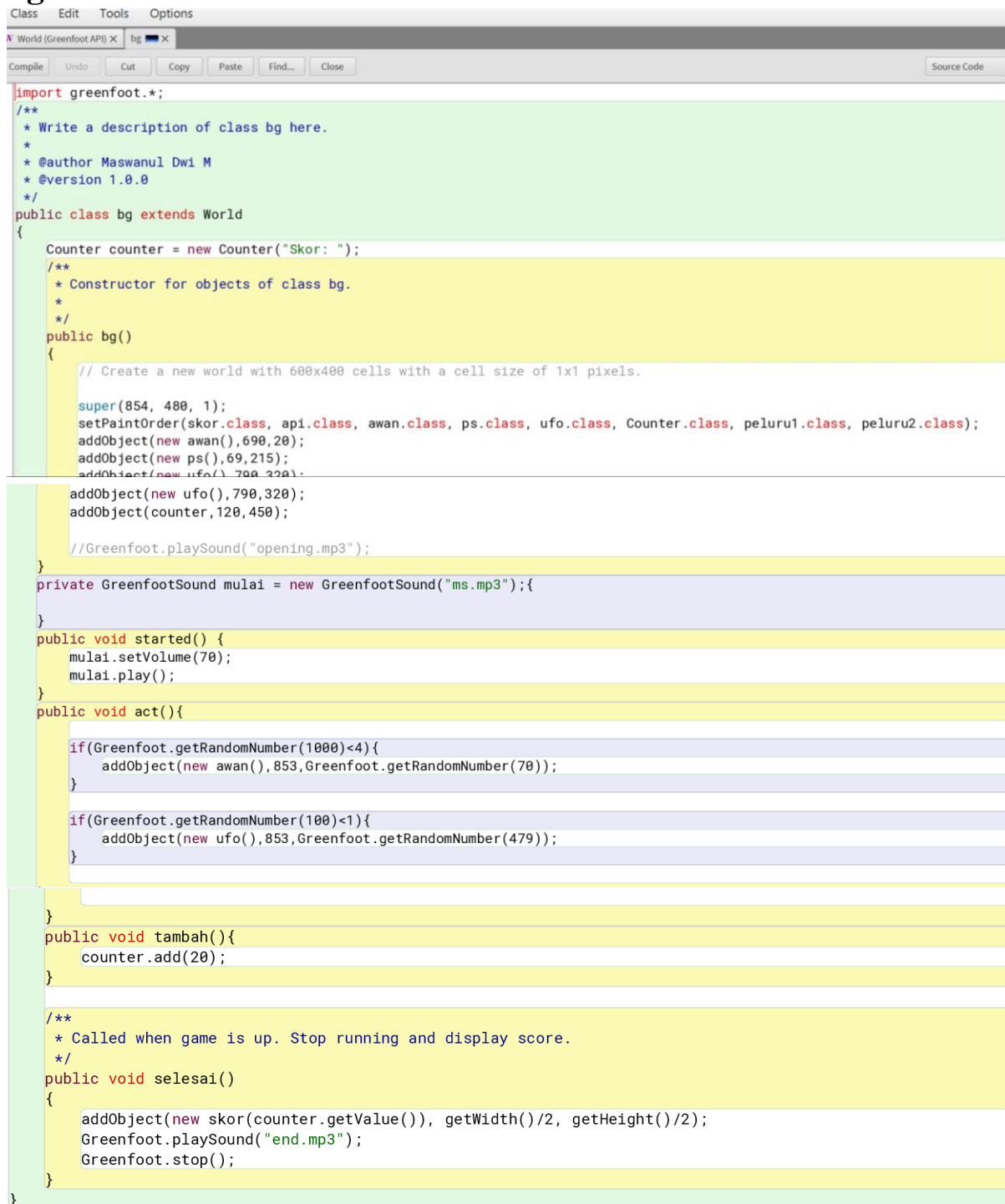
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Samarinda, 2023

✓ World

➤ bg



```
Class Edit Tools Options
N World (Greenfoot API) X bg X
Compile Undo Cut Copy Paste Find... Close Source Code

import greenfoot.*;

/**
 * Write a description of class bg here.
 *
 * @author Maswanul Dwi M
 * @version 1.0.0
 */
public class bg extends World
{
    Counter counter = new Counter("Skor: ");

    /**
     * Constructor for objects of class bg.
     *
     */
    public bg()
    {
        // Create a new world with 600x400 cells with a cell size of 1x1 pixels.

        super(854, 480, 1);
        setPaintOrder(skor.class, api.class, awan.class, ps.class, ufo.class, Counter.class, peluru1.class, peluru2.class);
        addObject(new awan(), 690, 20);
        addObject(new ps(), 69, 215);
        addObject(new ufo(), 700, 320);

        addObject(new ufo(), 790, 320);
        addObject(counter, 120, 450);

        //Greenfoot.playSound("opening.mp3");
    }

    private GreenfootSound mulai = new GreenfootSound("ms.mp3");
}

public void started() {
    mulai.setVolume(70);
    mulai.play();
}

public void act(){

    if(Greenfoot.getRandomNumber(1000)<4){
        addObject(new awan(), 853, Greenfoot.getRandomNumber(70));
    }

    if(Greenfoot.getRandomNumber(100)<1){
        addObject(new ufo(), 853, Greenfoot.getRandomNumber(479));
    }

}

public void tambah(){
    counter.add(20);
}

/**
 * Called when game is up. Stop running and display score.
 */
public void selesai()
{
    addObject(new skor(counter.getValue()), getWidth()/2, getHeight()/2);
    Greenfoot.playSound("end.mp3");
    Greenfoot.stop();
}
}
```

✓ Actor

➤ Counter

```
        updateImage();
    }

    public void add(int score)
    {
        Greenfoot.playSound("coin.mp3");
        target += score;
    }

    public void subtract(int score)
    {
        target -= score;
    }

    public int getValue()
    {
        return value;
    }

    /**
     * Make the image
     */
    public int getValue()
    {
        return value;
    }

    /**
     * Make the image
     */
    private void updateImage()
    {
        GreenfootImage image = getImage();
        image.clear();
        image.drawString(text + value, 1, 18);
        image.setColor(Color.WHITE);
    }
}
```

➤ Api



```
import greenfoot.*; // (World, Actor, GreenfootImage, Greenfoot and MouseInfo)

/**
 * Write a description of class api here.
 *
 * @author Maswanul Dwi M
 * @version (a version number or a date)
 */
public class api extends Actor
{
    private final static int IMAGE_COUNT= 8;
    private static GreenfootImage[] images;
    private int size=0;
    private int increment=1;

    public api() {
        initialiseImages();
        setImage(images[0]);
        Greenfoot.playSound("fire.wav");
    }

    /**
     * Create the images for explosion.
     */
    public synchronized static void initialiseImages() {
        if(images == null) {
            GreenfootImage baseImage = new GreenfootImage("api.png");
            int maxSize = baseImage.getWidth()*2;
            int delta = maxSize / (IMAGE_COUNT+1);
            int size = 0;
            images = new GreenfootImage[IMAGE_COUNT];
            for(int i=0; i < IMAGE_COUNT; i++) {
                size = size + delta;
                images[i] = new GreenfootImage(baseImage);
                images[i].scale(size, size);
            }
        }
    }

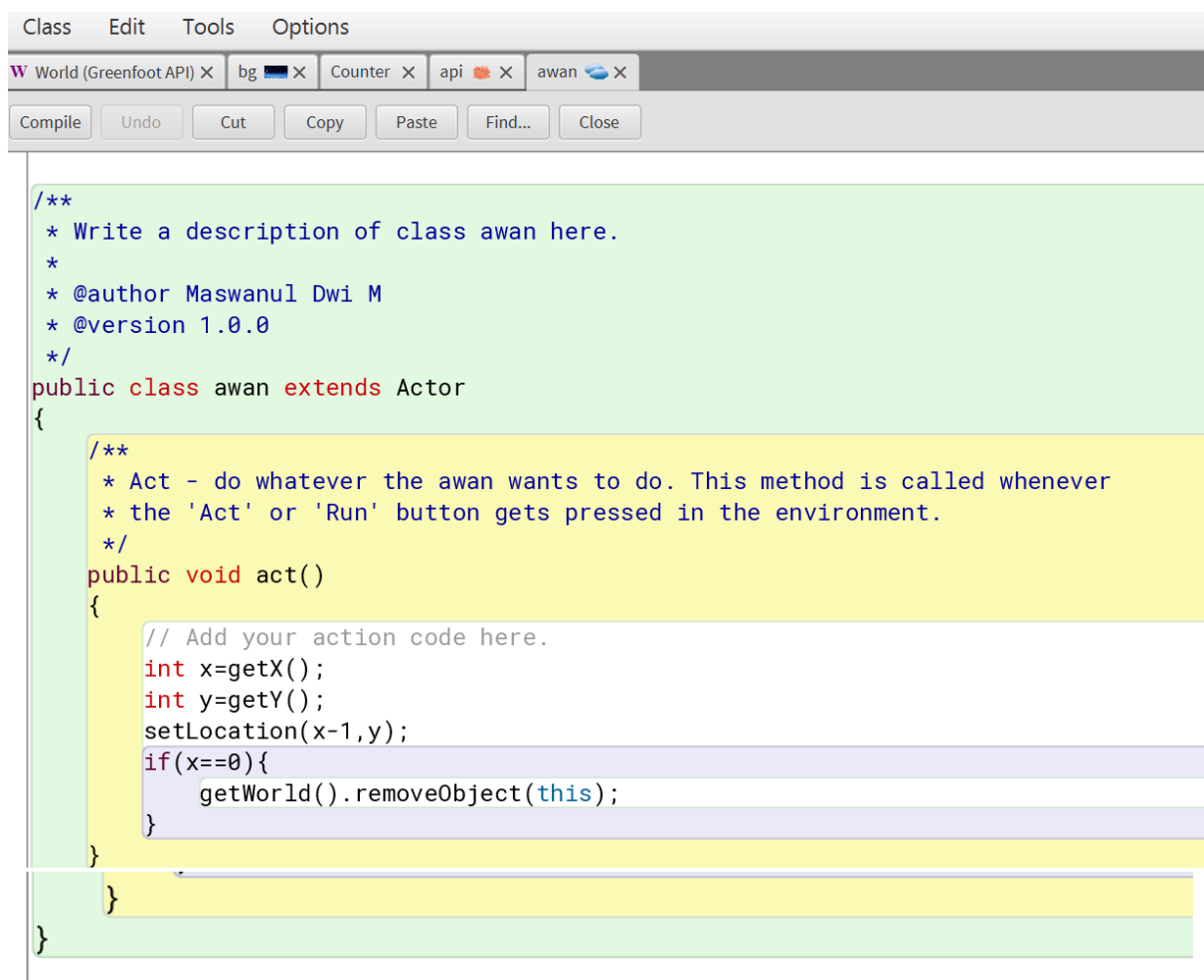
    public void act()
    {
        // Add your action code here.
        setImage(images[size]);
    }
}
```

```
public void act()
{
    // Add your action code here.
    setImage(images[size]);

    size += increment;
    if(size >= IMAGE_COUNT) {
        increment = -increment;
        size += increment;
    }

    if(size <= 0) {
        getWorld().removeObject(this);
    }
}
```

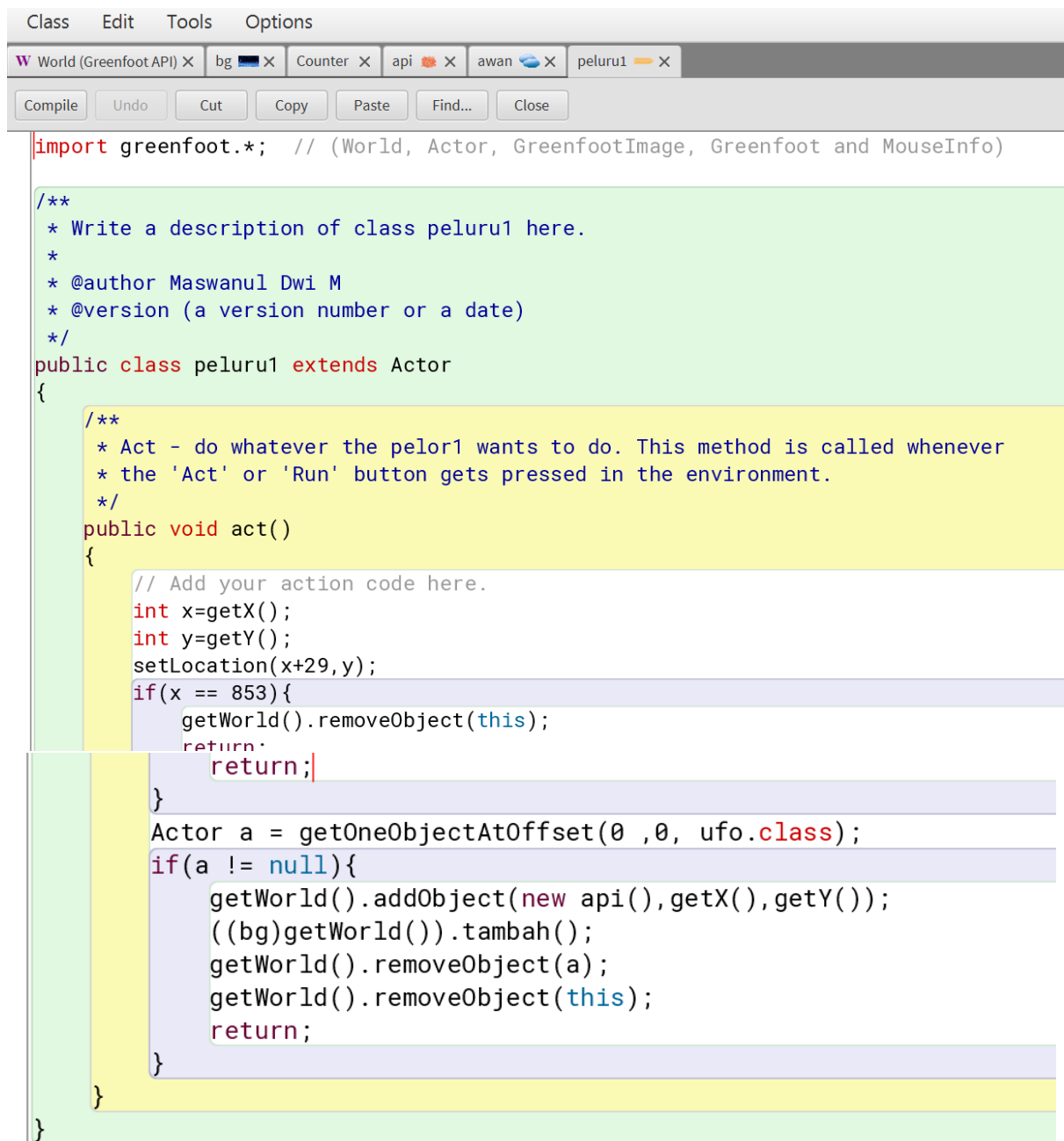
➤ Awan



The screenshot shows an IDE window with the title bar 'Class Edit Tools Options'. The tab bar shows several open files: 'W World (Greenfoot API) X', 'bg X', 'Counter X', 'api X', and 'awan X'. The toolbar includes buttons for 'Compile', 'Undo', 'Cut', 'Copy', 'Paste', 'Find...', and 'Close'. The code editor displays the following code:

```
/**
 * Write a description of class awan here.
 *
 * @author Maswanul Dwi M
 * @version 1.0.0
 */
public class awan extends Actor
{
    /**
     * Act - do whatever the awan wants to do. This method is called whenever
     * the 'Act' or 'Run' button gets pressed in the environment.
     */
    public void act()
    {
        // Add your action code here.
        int x=getX();
        int y=getY();
        setLocation(x-1,y);
        if(x==0){
            getWorld().removeObject(this);
        }
    }
}
```

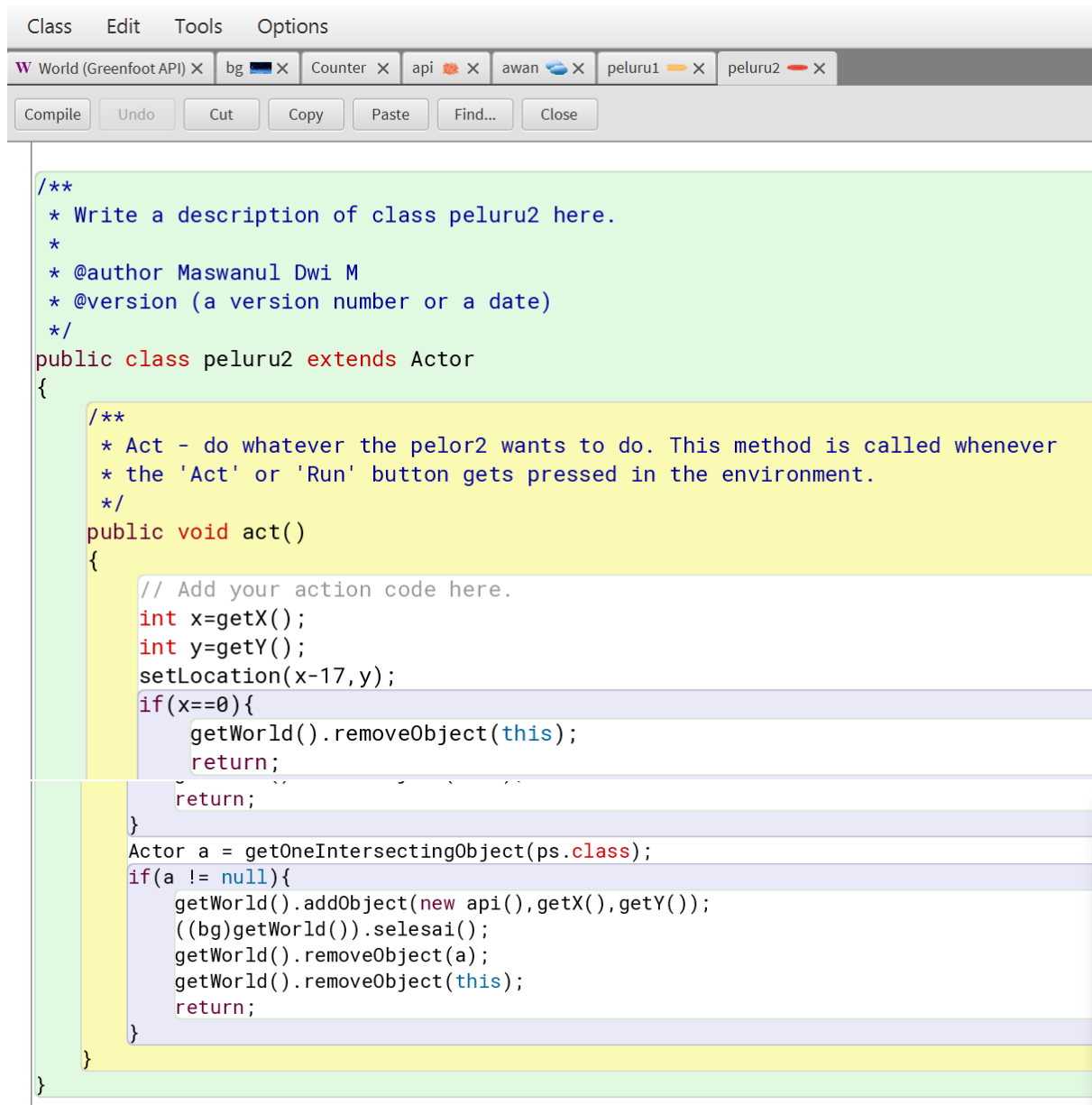
➤ Peluru1



```
import greenfoot.*; // (World, Actor, GreenfootImage, Greenfoot and MouseInfo)

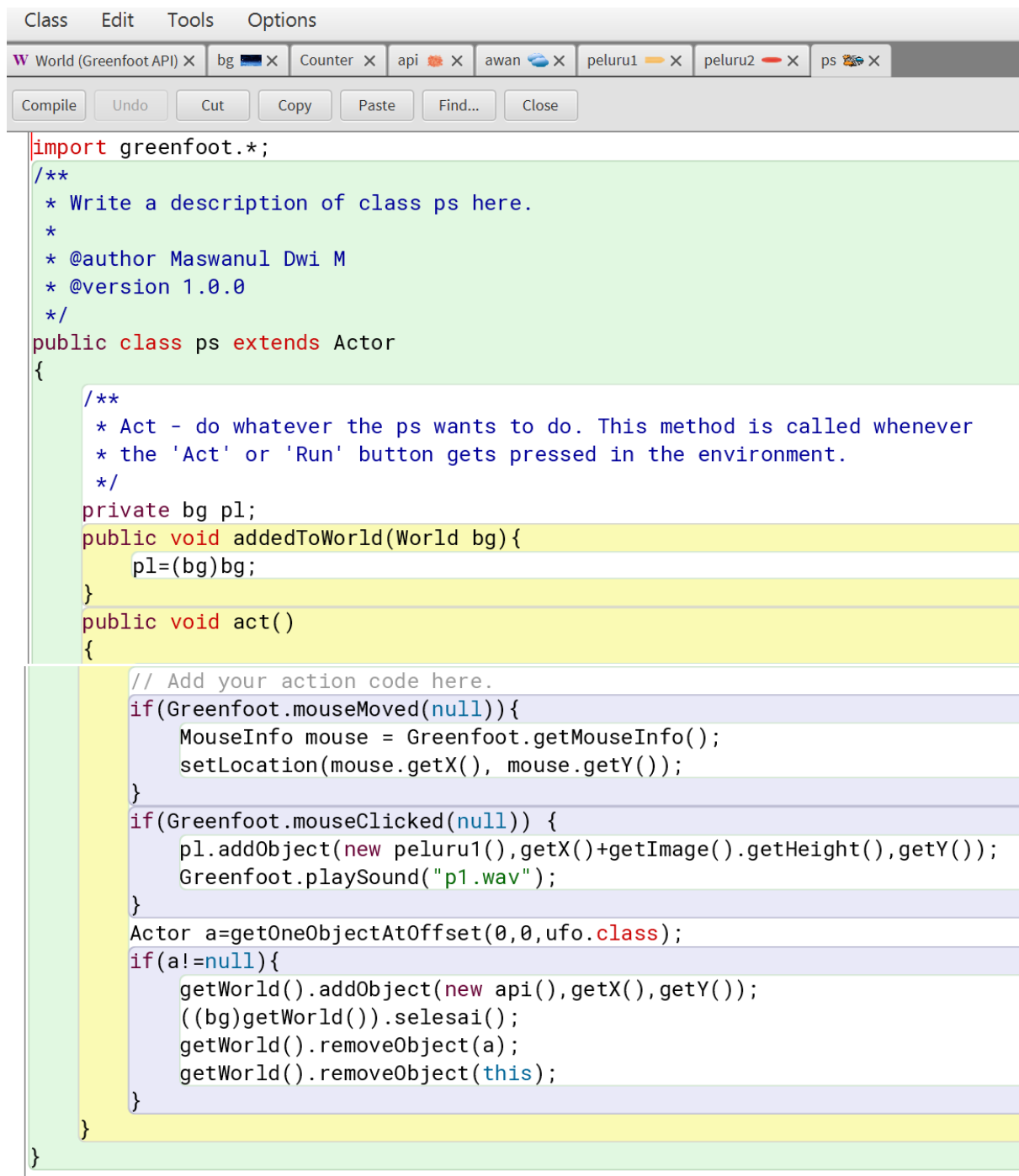
/**
 * Write a description of class peluru1 here.
 *
 * @author Maswanul Dwi M
 * @version (a version number or a date)
 */
public class peluru1 extends Actor
{
    /**
     * Act - do whatever the pelor1 wants to do. This method is called whenever
     * the 'Act' or 'Run' button gets pressed in the environment.
     */
    public void act()
    {
        // Add your action code here.
        int x=getX();
        int y=getY();
        setLocation(x+29,y);
        if(x == 853){
            getWorld().removeObject(this);
            return;
        }
        Actor a = getOneObjectAtOffset(0 ,0, ufo.class);
        if(a != null){
            getWorld().addObject(new api(),getX(),getY());
            ((bg)getWorld()).tambah();
            getWorld().removeObject(a);
            getWorld().removeObject(this);
            return;
        }
    }
}
```

➤ Peluru2



```
/**
 * Write a description of class peluru2 here.
 *
 * @author Maswanul Dwi M
 * @version (a version number or a date)
 */
public class peluru2 extends Actor
{
    /**
     * Act - do whatever the pelor2 wants to do. This method is called whenever
     * the 'Act' or 'Run' button gets pressed in the environment.
     */
    public void act()
    {
        // Add your action code here.
        int x=getX();
        int y=getY();
        setLocation(x-17,y);
        if(x==0){
            getWorld().removeObject(this);
            return;
        }
        return;
    }
    Actor a = getOneIntersectingObject(ps.class);
    if(a != null){
        getWorld().addObject(new api(),getX(),getY());
        ((bg)getWorld()).selesai();
        getWorld().removeObject(a);
        getWorld().removeObject(this);
        return;
    }
}
```

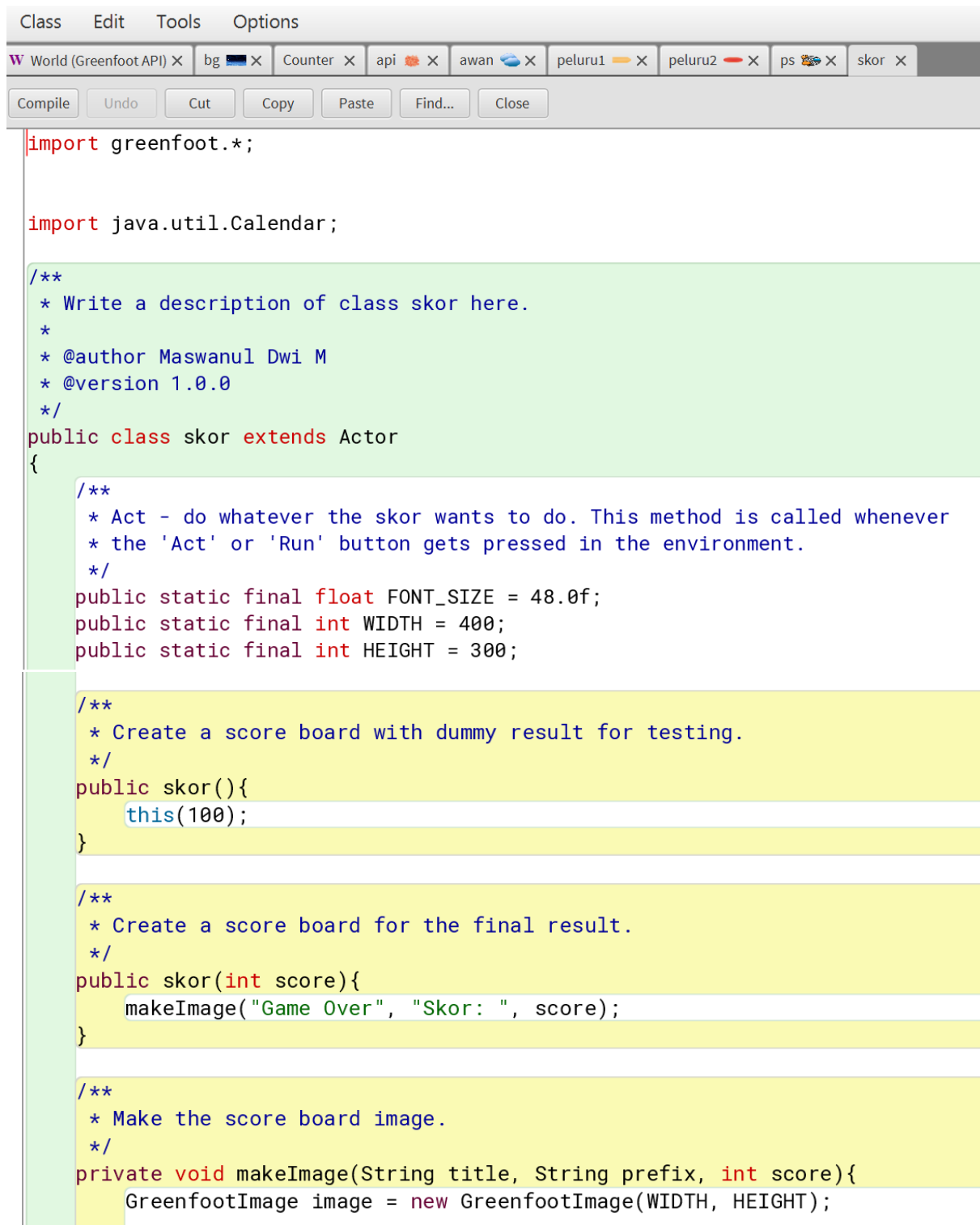
➤ Ps



```
import greenfoot.*;

/**
 * Write a description of class ps here.
 *
 * @author Maswanul Dwi M
 * @version 1.0.0
 */
public class ps extends Actor
{
    /**
     * Act - do whatever the ps wants to do. This method is called whenever
     * the 'Act' or 'Run' button gets pressed in the environment.
     */
    private bg pl;
    public void addToWorld(World bg){
        pl=(bg)bg;
    }
    public void act()
    {
        // Add your action code here.
        if(Greenfoot.mouseMoved(null)){
            MouseInfo mouse = Greenfoot.getMouseInfo();
            setLocation(mouse.getX(), mouse.getY());
        }
        if(Greenfoot.mouseClicked(null)) {
            pl.addObject(new peluru1(),getX()+getImage().getHeight(),getY());
            Greenfoot.playSound("p1.wav");
        }
        Actor a=getOneObjectAtOffset(0,0,ufo.class);
        if(a!=null){
            getWorld().addObject(new api(),getX(),getY());
            ((bg)getWorld()).selesai();
            getWorld().removeObject(a);
            getWorld().removeObject(this);
        }
    }
}
```

➤ Skor



```
Class Edit Tools Options
W World (Greenfoot API) X bg X Counter X api X awan X peluru1 X peluru2 X ps X skor X
Compile Undo Cut Copy Paste Find... Close

import greenfoot.*;

import java.util.Calendar;

/**
 * Write a description of class skor here.
 *
 * @author Maswanul Dwi M
 * @version 1.0.0
 */
public class skor extends Actor
{
    /**
     * Act - do whatever the skor wants to do. This method is called whenever
     * the 'Act' or 'Run' button gets pressed in the environment.
     */
    public static final float FONT_SIZE = 48.0f;
    public static final int WIDTH = 400;
    public static final int HEIGHT = 300;

    /**
     * Create a score board with dummy result for testing.
     */
    public skor(){
        this(100);
    }

    /**
     * Create a score board for the final result.
     */
    public skor(int score){
        makeImage("Game Over", "Skor: ", score);
    }

    /**
     * Make the score board image.
     */
    private void makeImage(String title, String prefix, int score){
        GreenfootImage image = new GreenfootImage(WIDTH, HEIGHT);
```

```

GreenfootImage image = new GreenfootImage(WIDTH, HEIGHT);

image.setColor(new Color(0, 0, 0, 160));
image.fillRect(0, 0, WIDTH, HEIGHT);
image.setColor(new Color(255, 255, 255, 100));
image.fillRect(5, 5, WIDTH-10, HEIGHT-10);
Font font = image.getFont();
font = font.deriveFont(FONT_SIZE);
image.setFont(font);
image.setColor(Color.WHITE);
image.drawString(title, 60, 100);
image.drawString(prefix + score, 60, 200);
setImage(image);
}

public void act()
{
    // Add your action code here.
}
}

```

➤ Ufo

```

/**
 * Write a description of class ufo here.
 *
 * @author Maswanul Dwi M
 * @version 1.0.0
 */
public class ufo extends Actor
{
    /**
     * Act - do whatever the ufo wants to do. This method is called whenever
     * the 'Act' or 'Run' button gets pressed in the environment.
     */

    public void act()
    {
        // Add your action code here.
        int x=getX();
        int y=getY();
        setLocation(x-2,y);
        if(x==0){
            getWorld().removeObject(this);
        }
    }
}

```

```
if(x==0){
    getWorld().removeObject(this);
}
if(Greenfoot.mouseMoved(null)){
    MouseInfo mouse=Greenfoot.getMouseInfo();
    if(mouse.getY()>(y-7) && mouse.getY()<(y+7)){
        getWorld().addObject(new peluru2(),getX(),getY());
        Greenfoot.playSound("p2.wav");
    }
}
```

Hasil :

