

```
import java.awt.*;
import javax.swing.*;

import java.util.*;

public class Sprite
{
    /*
     * This maintains a database of all of the sprites
     */

    private static LinkedList<Sprite> allOfThem = new LinkedList<Sprite>();

    private static void rememberThisSprite(Sprite sprite)
    {
        allOfThem.add(sprite);
        sprite.speedX =
        sprite.speedY = 0;
    }

    public static void MoveSprites(double time)
    {
        for(Sprite s : allOfThem)
        {
            s.x += (int)(s.speedX * time);
            s.y += (int)(s.speedY * time);
        }
    }

    /*
     * This maintains a database of all of the sprites
     */

    protected Image    image;

    protected int      width;
    protected int      height;

    protected int      x;
    protected int      y;

    protected boolean  visible;

    protected double   speedX;    // speed measured in pixels per millisecond
    protected double   speedY;

    /*
     * Constructors
     */

    public Sprite(String filename)
    {
        rememberThisSprite(this);

        image = (new ImageIcon(filename)).getImage();
    }
}
```

```
width = image.getWidth(null);
height = image.getHeight(null);

//System.out.println(filename);
//System.out.println("width = " + width);
//System.out.println("height = " + height);

x =
y = 0;

visible = false;
}

public Sprite(String filename, int x, int y)
{
    this(filename);
    this.x = x;
    this.y = y;
}

public Sprite(String filename, int x, int y, boolean visible)
{
    this(filename, x, y);
    this.visible = visible;
}

/*
 * Accessors and Mutators
 */

public Image getImage()
{
    return image;
}

public int getWidth()
{
    return width;
}

public int getHeight()
{
    return height;
}

public void setXY(int x, int y)
{
    this.x = x;
    this.y = y;
}

public int getX()
{
    return x;
}

public int getY()
{
    return y;
}
```

```
public void setVisible(boolean visible)
{
    this.visible = visible;
}

public boolean isVisible()
{
    return visible;
}

public void setSpeedX(double speedX)
{
    this.speedX = speedX;
}

public void setSpeedY(double speedY)
{
    this.speedY = speedY;
}

public void setSpeedXY(double speedX, double speedY)
{
    this.speedX = speedX;
    this.speedY = speedY;
}
}
```