

The Greenfoot API consists of six classes:

World	World methods are available to the world.	Greenfoot	Used to communicate with the Greenfoot environment itself.	GreenfootImage	For image presentation and manipulation.
Actor	Actor methods are available to all actor subclasses.	MouseInfo	Provide information about the last mouse event.	GreenfootSound	For controlling sound playback.

Class World	
World (int worldWidth, int worldHeight, int cellSize)	Construct a new world.
void act ()	Act method for the world. Called once per act round.
void addObject (Actor object, int x, int y)	Add an Actor to the world.
GreenfootImage getBackground ()	Return the world's background image.
int getCellSize ()	Return the size of a cell (in pixels).
Color getColorAt (int x, int y)	Return the color at the center of the cell.
int getHeight ()	Return the height of the world (in number of cells).
List getObjects (Class cls)	Get all the objects in the world.
List getObjectsAt (int x, int y, Class cls)	Return all objects at a given cell.
int getWidth ()	Return the width of the world (in number of cells).
int numberOfObjects ()	Get the number of actors currently in the world.
void removeObject (Actor object)	Remove an object from the world.
void removeObjects (Collection objects)	Remove a list of objects from the world.
void repaint ()	Repaint the world.
void setActOrder (Class... classes)	Set the act order of objects in the world.
void setBackground (GreenfootImage image)	Set a background image for the world.
void setBackground (String filename)	Set a background image for the world from an image file.
void setPaintOrder (Class... classes)	Set the paint order of objects in the world.
void started ()	Called by the Greenfoot system when execution has started.
void stopped ()	Called by the Greenfoot system when execution has stopped.

Class Actor	
Actor()	Construct an Actor.
void act()	The act method is called by the Greenfoot framework to give objects a chance to perform some action.
protected void addToWorld(World world)	This method is called by the Greenfoot system when the object has been inserted into the world.
GreenfootImage getImage()	Returns the image used to represent this Actor.
protected List getIntersectingObjects(Class cls)	Return all the objects that intersect this object.
protected List getNeighbours(int distance, boolean diagonal, Class cls)	Return the neighbours to this object within a given distance.
protected List getObjectsAtOffset(int dx, int dy, Class cls)	Return all objects that intersect the given location (relative to this object's location).
protected List getObjectsInRange(int r, Class cls)	Return all objects within range 'r' around this object.
protected Actor getOneIntersectingObject(Class cls)	Return an object that intersects this object.
protected Actor getOneObjectAtOffset(int dx, int dy, Class cls)	Return one object that is located at the specified cell (relative to this object's location).
int getRotation()	Return the current rotation of the object.
World getWorld()	Return the world that this object lives in.
int getX()	Return the x-coordinate of the object's current location.
int getY()	Return the y-coordinate of the object's current location.
protected boolean intersects(Actor other)	Check whether this object intersects another given object.
void setImage(GreenfootImage image)	Set the image for this object to the specified image.
void setImage(String filename)	Set an image for this object from an image file.
void setLocation(int x, int y)	Assign a new location for this object.
void setRotation(int rotation)	Set the rotation of the object.

Class GreenfootImage	
GreenfootImage(GreenfootImage image)	Create a GreenfootImage from another GreenfootImage.
GreenfootImage(int width, int height)	Create an empty (transparent) image with the specified size.
GreenfootImage(String filename)	Create an image from an image file.
GreenfootImage(String string, int size, Color foreground, Color background)	Create an image with the given string drawn as text using the font size, foreground color and background color.
void clear()	Clear the image.
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Class GreenfootImage	
void drawImage (GreenfootImage image, int x, int y)	Draws the given Image onto this image.
void drawLine (int x1, int y1, int x2, int y2)	Draw a line, using the current drawing color, between the points (x1, y1) and (x2, y2).
void drawOval (int x, int y, int width, int height)	Draw an oval bounded by the specified rectangle with the current drawing color.
void drawPolygon (int[] xPoints, int[] yPoints, int nPoints)	Draws a closed polygon defined by arrays of x and y coordinates.
void drawRect (int x, int y, int width, int height)	Draw the outline of the specified rectangle.
void drawString (String string, int x, int y)	Draw the text given by the specified string, using the current font and color.
void fill ()	Fill the entire image with the current drawing color.
void fillOval (int x, int y, int width, int height)	Fill an oval bounded by the specified rectangle with the current drawing color.
void fillPolygon (int[] xPoints, int[] yPoints, int nPoints)	Fill a closed polygon defined by arrays of x and y coordinates.
void fillRect (int x, int y, int width, int height)	Fill the specified rectangle.
BufferedImage getAwtImage ()	Returns the BufferedImage that backs this GreenfootImage.
Color getColor ()	Return the current drawing color.
Color getColorAt (int x, int y)	Return the color at the given pixel.
Font getFont ()	Get the current font.
int getHeight ()	Return the height of the image.
int getTransparency ()	Return the transparency of the image (range 0 to 255).
int getWidth ()	Return the width of the image.
void mirrorHorizontally ()	Mirror the image horizontally (flip around the x-axis).
void mirrorVertically ()	Mirror the image vertically (flip around the y-axis).
void rotate (int degrees)	Rotates this image around the center.
void scale (int width, int height)	Scales this image to a new size.
void setColor (Color color)	Set the current drawing color.
void setColorAt (int x, int y, Color color)	Sets the color at the given pixel to the given color.
void setFont (Font f)	Set the current font.
void setTransparency (int t)	Set the transparency of the image (range 0 to 255).
String toString ()	Return a string representation of this image.

Class Greenfoot

Greenfoot()	Constructor.
static void delay (int time)	Delay execution by a number of time steps. The size of one time step is defined by the speed slider.
static String getKey ()	Get the most recently pressed key since the last time this method was called.
static MouseInfo getMouseInfo ()	Return an object with information about the mouse state.
static int getRandomNumber (int limit)	Return a random number between 0 (inclusive) and limit (exclusive).
static boolean isKeyDown (String keyName)	Check whether a given key is currently pressed down.
static boolean mouseClicked (Object obj)	True if the mouse has been clicked on the given object.
static boolean mouseDragEnded (Object obj)	True if a mouse drag has ended.
static boolean mouseDragged (Object obj)	True if the mouse has been dragged on the given object.
static boolean mouseMoved (Object obj)	True if the mouse has been moved on the given object.
static boolean mousePressed (Object obj)	True the mouse has been pressed on the given object.
static void playSound (String soundFile)	Play sound from a file.
static void setSpeed (int speed)	Set the speed of the simulation execution.
static void start ()	Run (or resume) the simulation.
static void stop ()	Stop the simulation.

Class MouseInfo

Actor getActor ()	Return the actor (if any) that the current mouse behaviour is related to.
int getButton ()	The number of the pressed or clicked button (if any).
int getClickCount ()	The number of mouse clicks of this mouse event.
int getX ()	The current x position of the mouse cursor.
int getY ()	The current y position of the mouse cursor.
String toString ()	Return a string representation of this mouse event info.

Class GreenfootSound

GreenfootSound (String filename)	Create a new sound from the given file.
boolean isPlaying ()	True if the sound is currently playing.
void pause ()	Pauses the current sound if it is currently playing.
void play ()	Start playing this sound.
void playLoop ()	Play this sound repeatedly in a loop.
void stop ()	Stop playing this sound if it is currently playing.
String toString ()	Returns a string representation of this sound containing the name of the file and whether it is currently playing or not.