| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-all.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | | |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PREV CLASS   [**NEXT CLASS**](http://docs.google.com/info/gridworld/actor/ActorWorld.html) | [**FRAMES**](http://docs.google.com/index.html?info/gridworld/actor/Actor.html)    [**NO FRAMES**](http://docs.google.com/Actor.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#4d34og8) |

## **info.gridworld.actor**

Class Actor

[java.lang.Object](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true)  
 **info.gridworld.actor.Actor**

**Direct Known Subclasses:** [Bug](http://docs.google.com/info/gridworld/actor/Bug.html), [Critter](http://docs.google.com/info/gridworld/actor/Critter.html), [Flower](http://docs.google.com/info/gridworld/actor/Flower.html), [Rock](http://docs.google.com/info/gridworld/actor/Rock.html)

public class **Actor**extends [Object](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true)

An Actor is an entity with a color and direction that can act.

The API of this class is testable on the AP CS A and AB exams.

| **Constructor Summary** | |
| --- | --- |
| [**Actor**](http://docs.google.com/info/gridworld/actor/Actor.html#Actor())()            Constructs a blue actor that is facing north. |

| **Method Summary** | |
| --- | --- |
| void | [**act**](http://docs.google.com/info/gridworld/actor/Actor.html#act())()            Reverses the direction of this actor. |
| [Color](http://java.sun.com/j2se/1.5.0/docs/api/java/awt/Color.html?is-external=true) | [**getColor**](http://docs.google.com/info/gridworld/actor/Actor.html#getColor())()            Gets the color of this actor. |
| int | [**getDirection**](http://docs.google.com/info/gridworld/actor/Actor.html#getDirection())()            Gets the current direction of this actor. |
| [Grid](http://docs.google.com/info/gridworld/grid/Grid.html)<[Actor](http://docs.google.com/info/gridworld/actor/Actor.html)> | [**getGrid**](http://docs.google.com/info/gridworld/actor/Actor.html#getGrid())()            Gets the grid in which this actor is located. |
| [Location](http://docs.google.com/info/gridworld/grid/Location.html) | [**getLocation**](http://docs.google.com/info/gridworld/actor/Actor.html#getLocation())()            Gets the location of this actor. |
| void | [**moveTo**](http://docs.google.com/info/gridworld/actor/Actor.html#moveTo(info.gridworld.grid.Location))([Location](http://docs.google.com/info/gridworld/grid/Location.html) newLocation)            Moves this actor to a new location. |
| void | [**putSelfInGrid**](http://docs.google.com/info/gridworld/actor/Actor.html#putSelfInGrid(info.gridworld.grid.Grid,%20info.gridworld.grid.Location))([Grid](http://docs.google.com/info/gridworld/grid/Grid.html)<[Actor](http://docs.google.com/info/gridworld/actor/Actor.html)> gr, [Location](http://docs.google.com/info/gridworld/grid/Location.html) loc)            Puts this actor into a grid. |
| void | [**removeSelfFromGrid**](http://docs.google.com/info/gridworld/actor/Actor.html#removeSelfFromGrid())()            Removes this actor from its grid. |
| void | [**setColor**](http://docs.google.com/info/gridworld/actor/Actor.html#setColor(java.awt.Color))([Color](http://java.sun.com/j2se/1.5.0/docs/api/java/awt/Color.html?is-external=true) newColor)            Sets the color of this actor. |
| void | [**setDirection**](http://docs.google.com/info/gridworld/actor/Actor.html#setDirection(int))(int newDirection)            Sets the current direction of this actor. |
| [String](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/String.html?is-external=true) | [**toString**](http://docs.google.com/info/gridworld/actor/Actor.html#toString())()            Creates a string that describes this actor. |

| **Methods inherited from class java.lang.**[**Object**](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true) |
| --- |
| [clone](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#clone()), [equals](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#equals(java.lang.Object)), [finalize](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#finalize()), [getClass](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#getClass()), [hashCode](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#hashCode()), [notify](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#notify()), [notifyAll](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#notifyAll()), [wait](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#wait()), [wait](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#wait(long)), [wait](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#wait(long,%20int)) |

| **Constructor Detail** |
| --- |

### Actor

public **Actor**()

Constructs a blue actor that is facing north.

| **Method Detail** |
| --- |

### getColor

public [Color](http://java.sun.com/j2se/1.5.0/docs/api/java/awt/Color.html?is-external=true) **getColor**()

Gets the color of this actor.

**Returns:**the color of this actor

### setColor

public void **setColor**([Color](http://java.sun.com/j2se/1.5.0/docs/api/java/awt/Color.html?is-external=true) newColor)

Sets the color of this actor.

**Parameters:**newColor - the new color

### getDirection

public int **getDirection**()

Gets the current direction of this actor.

**Returns:**the direction of this actor, an angle between 0 and 359 degrees

### setDirection

public void **setDirection**(int newDirection)

Sets the current direction of this actor.

**Parameters:**newDirection - the new direction. The direction of this actor is set to the angle between 0 and 359 degrees that is equivalent to newDirection.

### getGrid

public [Grid](http://docs.google.com/info/gridworld/grid/Grid.html)<[Actor](http://docs.google.com/info/gridworld/actor/Actor.html)> **getGrid**()

Gets the grid in which this actor is located.

**Returns:**the grid of this actor, or null if this actor is not contained in a grid

### getLocation

public [Location](http://docs.google.com/info/gridworld/grid/Location.html) **getLocation**()

Gets the location of this actor.

Precondition: This actor is contained in a grid

**Returns:**the location of this actor

### putSelfInGrid

public void **putSelfInGrid**([Grid](http://docs.google.com/info/gridworld/grid/Grid.html)<[Actor](http://docs.google.com/info/gridworld/actor/Actor.html)> gr,  
 [Location](http://docs.google.com/info/gridworld/grid/Location.html) loc)

Puts this actor into a grid. If there is another actor at the given location, it is removed.

Precondition: (1) This actor is not contained in a grid (2) loc is valid in gr

**Parameters:**gr - the grid into which this actor should be placedloc - the location into which the actor should be placed

### removeSelfFromGrid

public void **removeSelfFromGrid**()

Removes this actor from its grid.

Precondition: This actor is contained in a grid

### moveTo

public void **moveTo**([Location](http://docs.google.com/info/gridworld/grid/Location.html) newLocation)

Moves this actor to a new location. If there is another actor at the given location, it is removed.

Precondition: (1) This actor is contained in a grid (2) newLocation is valid in the grid of this actor

**Parameters:**newLocation - the new location

### act

public void **act**()

Reverses the direction of this actor. Override this method in subclasses of Actor to define types of actors with different behavior

### toString

public [String](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/String.html?is-external=true) **toString**()

Creates a string that describes this actor.

**Overrides:**[toString](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true#toString()) in class [Object](http://java.sun.com/j2se/1.5.0/docs/api/java/lang/Object.html?is-external=true) **Returns:**a string with the location, direction, and color of this actor

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-all.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | | |  |
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