Man of War Source Documentation

Group 1.D

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Contents

Class Hierarchy

Classes

- java.lang.Object
  - com.manofwar.logic.Config (in 4.1, page 25)
  - com.manofwar.logic.GameStateManager (in 4.3, page 28)
  - com.manofwar.logic.LevelFactory (in 4.5, page 34)
  - com.manofwar.logic.SaveLoad (in 4.6, page 36)
  - com.manofwar.logic.bullet.BulletGraphicsComponent (in 2.2, page 15)
  - com.manofwar.logic.bullet.BulletPhysicsComponent (in 2.3, page 16)
  - com.manofwar.logic.character.CharacterGraphicsComponent (in 3.2, page 21)
  - com.manofwar.logic.character.CharacterInputComponent (in 3.3, page 22)
  - com.manofwar.logic.character.CharacterPhysicsComponent (in 3.4, page 23)
  - com.manofwar.logic.door.DoorPhysicsComponent (in 5.2, page 40)
  - com.manofwar.logic.entities.GameObject (in 6.2, page 43)
    - com.manofwar.logic.block.Block (in 1.1, page 11)
    - com.manofwar.logic.bullet.Bullet (in 2.1, page 13)
    - com.manofwar.logic.character.Character (in 3.1, page 18)
    - com.manofwar.logic.door.Door (in 5.1, page 39)
    - com.manofwar.logic.item.Item (in 7.1, page 59)
    - com.manofwar.logic.mob.Mob (in 8.1, page 66)
    - com.manofwar.logic.squeezer.Squeezer (in 9.1, page 73)
  - com.manofwar.logic.entities.Inventory (in 6.4, page 55)
  - com.manofwar.logic.entities.Velocity (in 6.5, page 56)
  - com.manofwar.logic.item.ItemGraphicsComponent (in 7.2, page 62)
  - com.manofwar.logic.item.ItemPhysicsComponent (in 7.3, page 63)
  - com.manofwar.logic.mob.MobGraphicsComponent (in 8.2, page 69)
  - com.manofwar.logic.mob.MobInputComponent (in 8.3, page 70)
  - com.manofwar.logic.mob.MobPhysicsComponent (in 8.4, page 70)
  - com.manofwar.logic.squeezer.SqueezerGraphicsComponent (in 9.2, page 75)
  - com.manofwar.logic.squeezer.SqueezerPhysicsComponent (in 9.3, page 76)
  - com.manofwar.presentation.ButtonListener (in 10.1, page 78)
  - com.manofwar.presentation.InfoPanel (in 10.3, page 92)
  - com.manofwar.presentation.LoadGame (in 10.5, page 102)
  - com.manofwar.presentation.Settings (in 10.8, page 124)
  - com.manofwar.presentation.SettingsPanel (in 10.9, page 125)
  - com.manofwar.utilities.FileManager (in 11.1, page 127)

- com.manofwar.utilities.GraphicsManager (in 11.2, page 128)
- com.manofwar.utilities.InputManager (in 11.3, page 130)
- java.awt.Component
    - java.awt.Container
        - java.awt.Window
            - java.awt.Frame
                - javax.swing.JFrame
                    - com.manofwar.presentation.MainFrame (in 10.6, page 103)
                    - com.manofwar.presentation.MainMenuPanel (in 10.7, page 113)
        - javax.swing.JComponent
            - javax.swing.JLabel
                - com.manofwar.logic.entities.HealthBar (in 6.3, page 45)
            - javax.swing.JPanel
                - com.manofwar.presentation.GamePanel (in 10.2, page 82)
                - com.manofwar.presentation.InformationBar (in 10.4, page 93)
- java.lang.Enum
    - com.manofwar.logic.Direction (in 4.2, page 27)
    - com.manofwar.logic.entities.Difficulty (in 6.1, page 42)
    - com.manofwar.logic.item.ItemType (in 7.4, page 64)
    - com.manofwar.logic.mob.MobType (in 8.5, page 71)
- java.lang.Thread
    - com.manofwar.logic.GameThread (in 4.4, page 32)

Chapter 1

Package com.manofwar.logic.block

Package Contents *Page*

Classes

1.1 Class Block

Block is the game object that represents restricted tile in the map.

1.1.1 Declaration

```
public class Block
 extends com.manofwar.logic.entities.GameObject
```

1.1.2 Constructor summary

Block(Rectangle)

1.1.3 Method summary

update(GameStateManager) The method that is executed each iteration of game loop.

1.1.4 Constructors

- **Block**

```
public Block(java.awt.Rectangle boundingBox)
```

1.1.5 Methods

- **update**

  ```
  public void update(com.manofwar.logic.GameStateManager
      gameStateManager)
  ```

  - **Description**

    The method that is executed each iteration of game loop.

  - **Parameters**

    * `gameStateManager` – GameStateManager object that is in control.

1.1.6 Members inherited from class GameObject

`com.manofwar.logic.entities.GameObject` (in 6.2, page 43)

- `protected` **boundingBox**
- `public Rectangle` **getBoundingBox**`()`
- `public abstract void` **update**`(com.manofwar.logic.GameStateManager` **gameStateManager**`)`

Chapter 2

Package com.manofwar.logic.bullet

Package Contents *Page*

Classes

2.1 Class Bullet

Bullet is a GameObject that is used by Character and Enemy instances to attack and harm the opponent.

2.1.1 Declaration

```
public class Bullet
 extends com.manofwar.logic.entities.GameObject
```

2.1.2 Constructor summary

Bullet(Rectangle, Direction, int, boolean) Simply constructor.

2.1.3 Method summary

getPower() Returns power of the bullet
getVelocity() Returns velocity of the bullet
isMobFire() Return whether the bullet belongs to the mob
isVisible() Returns whether the bullet is visible
setVisible(boolean) Set visibility of the bullet
update(GameStateManager) Game loop update method for bullet

2.1.4 Constructors

- **Bullet**

```
public Bullet(java.awt.Rectangle boundingBox,com.manofwar.logic.
    Direction direction,int power,boolean isMobFire)
```

  - **Description**
    Simply constructor.
  - **Parameters**
    - `boundingBox` – bounding box of the bullet.
    - `power` – red power of the bullet

2.1.5 Methods

- **getPower**

```
public int getPower()
```

  - **Description**
    Returns power of the bullet
  - **Returns** – the power of the bullet

- **getVelocity**

```
public com.manofwar.logic.entities.Velocity getVelocity()
```

  - **Description**
    Returns velocity of the bullet
  - **Returns** – velocity of the bullet

- **isMobFire**

```
public boolean isMobFire()
```

  - **Description**
    Return whether the bullet belongs to the mob
  - **Returns** – whether the bullet belongs to the mob

- **isVisible**

```
public boolean isVisible()
```

- **Description**
  Returns whether the bullet is visible
- **Returns** – whether the bullet is visible

- **setVisible**

```
public void setVisible(boolean visible)
```

  - **Description**
    Set visibility of the bullet
  - **Parameters**
    * `visible` – visibility of the bullet

- **update**

```
public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

  - **Description**
    Game loop update method for bullet
  - **Parameters**
    * `gameStateManager` – GameStateManager object that is in control.

2.1.6 Members inherited from class GameObject

`com.manofwar.logic.entities.GameObject` (in 6.2, page 43)

- `protected` **boundingBox**
- `public Rectangle` **getBoundingBox**`()`
- `public abstract void` **update**`(com.manofwar.logic.GameStateManager` **gameStateManager**`)`

2.2 Class BulletGraphicsComponent

BulletGraphicsComponent is the responsible class for the graphics related business of Bullet. In other words, draws the Bullet in the required position. Works in coherence with GraphicsManager.

2.2.1 Declaration

```
public class BulletGraphicsComponent
 extends java.lang.Object
```

2.2.2 Constructor summary

BulletGraphicsComponent(Bullet) Simply, constructor

2.2.3 Method summary

update(GraphicsManager) The method that is executed each iteration of game loop.

2.2.4 Constructors

- **BulletGraphicsComponent**

```
public BulletGraphicsComponent(Bullet bullet)
```

  - **Description**
    Simply, constructor
  - **Parameters**
    * `bullet` – Bullet to be composited with this component

2.2.5 Methods

- **update**

```
public void update(com.manofwar.utilities.GraphicsManager
    graphicsManager)
```

  - **Description**
    The method that is executed each iteration of game loop. Requests to draw Bullet graphics.
  - **Parameters**
    * `graphicsManager` – The graphics manager that is in control of graphics of game

2.3 Class BulletPhysicsComponent

2.3.1 Declaration

```
public class BulletPhysicsComponent
 extends java.lang.Object
```

2.3.2 Constructor summary

BulletPhysicsComponent(Bullet) Simply, constructor.

2.3.3 Method summary

update(GameStateManager) The method that is executed each iteration of game loop.

2.3.4 Constructors

- **BulletPhysicsComponent**

```
public BulletPhysicsComponent(Bullet bullet)
```

  - **Description**
    Simply, constructor.
  - **Parameters**
    * `bullet` – Bullet to be composited with this component

2.3.5 Methods

- **update**

```
public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

  - **Description**
    The method that is executed each iteration of game loop. Resolves collisions with other game objects. For example, restricts passing on blocks. Also, responsible for moving object in each iteration
  - **Parameters**
    * `gameStateManager` – the GameStateManager instance that is in control of the game.

Chapter 3

Package com.manofwar.logic.character

Package Contents *Page*

Classes

3.1 Class Character

Character is the game object that is to be controlled by the player.

3.1.1 Declaration

```
public class Character
 extends com.manofwar.logic.entities.GameObject
```

3.1.2 Constructor summary

Character(Rectangle, int, int, int, Inventory, Velocity) Simply, constructor.

3.1.3 Method summary

getHealth() Returns the health value
getInventory() Returns the inventory of character
getMaxHealth() Returns the max health value

getPower() Returns the power
getVelocity() Returns the velocity of character
setHealth(int) Changes the current health value
setMaxHealth(int) Changes the max health value
setPower(int) Changes the blue power value
update(GameStateManager) The method that is executed each iteration of game loop.

3.1.4 Constructors

- **Character**

```
public Character(java.awt.Rectangle boundingBox,int power,int
    health,int maxHealth,com.manofwar.logic.entities.Inventory
    inventory,com.manofwar.logic.entities.Velocity velocity)
```

  - **Description**
    Simply, constructor.
  - **Parameters**
    - `boundingBox` – Initial bounding box
    - `power` – Initial power
    - `health` – Initial health
    - `maxHealth` – Initial maxHealth
    - `inventory` – Initial inventory containing items
    - `velocity` – Initial velocity containing X and Y axises

3.1.5 Methods

- **getHealth**

```
public int getHealth()
```

  - **Description**
    Returns the health value
  - **Returns** – the health of the character

- **getInventory**

```
public com.manofwar.logic.entities.Inventory getInventory()
```

  - **Description**
    Returns the inventory of character
  - **Returns** – the inventory of character

- **getMaxHealth**

  ```
  public int getMaxHealth()
  ```

  - **Description**
    Returns the max health value
  - **Returns** – the max health of the character

- **getPower**

  ```
  public int getPower()
  ```

  - **Description**
    Returns the power
  - **Returns** – the power of the character

- **getVelocity**

  ```
  public com.manofwar.logic.entities.Velocity getVelocity()
  ```

  - **Description**
    Returns the velocity of character
  - **Returns** – the velocity of character

- **setHealth**

  ```
  public void setHealth(int health)
  ```

  - **Description**
    Changes the current health value
  - **Parameters**
    - `health` – Current health of the character

- **setMaxHealth**

  ```
  public void setMaxHealth(int maxHealth)
  ```

  - **Description**
    Changes the max health value
  - **Parameters**
    - `maxHealth` – Max health of the character

- **setPower**

```
public void setPower(int power)
```

  - **Description**
    Changes the blue power value
  - **Parameters**
    * `power` – power of the character

- **update**

```
public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

  - **Description**
    The method that is executed each iteration of game loop. Executes its components' update methods.
  - **Parameters**
    * `gameStateManager` – GameStateManager object that is in control.

3.1.6 Members inherited from class GameObject

`com.manofwar.logic.entities.GameObject` (in 6.2, page 43)

- `protected` **boundingBox**
- `public Rectangle` **getBoundingBox**`()`
- `public abstract void` **update**`(com.manofwar.logic.GameStateManager` **gameStateManager**`)`

3.2 Class CharacterGraphicsComponent

CharacterGraphicsComponent is the responsible class for the graphics related business of character. In other words, draws the character in the required position. Works in coherence with GraphicsManager.

3.2.1 Declaration

```
public class CharacterGraphicsComponent
 extends java.lang.Object
```

3.2.2 Constructor summary

CharacterGraphicsComponent(Character) Simply, constructor

3.2.3 Method summary

update(GraphicsManager) The method that is executed each iteration of game loop.

3.2.4 Constructors

- **CharacterGraphicsComponent**

```
public CharacterGraphicsComponent(Character character)
```

  - **Description**
    Simply, constructor
  - **Parameters**
    * `character` – Character to be composited with this component

3.2.5 Methods

- **update**

```
public void update(com.manofwar.utilities.GraphicsManager
    graphicsManager)
```

  - **Description**
    The method that is executed each iteration of game loop. Requests to draw character graphics.
  - **Parameters**
    * `graphicsManager` – The graphics manager that is in control of graphics of game

3.3 Class CharacterInputComponent

CharacterInputComponent is the responsible class for the input related business of character. Works in coherence with InputManager.

3.3.1 Declaration

```
public class CharacterInputComponent
 extends java.lang.Object
```

3.3.2 Constructor summary

CharacterInputComponent(Character) Simply, constructor

3.3.3 Method summary

update(GameStateManager) The method that is executed each iteration of game loop.

3.3.4 Constructors

- **CharacterInputComponent**

```
public CharacterInputComponent(Character character)
```

  - **Description**
    Simply, constructor
  - **Parameters**
    - `character` – Character to be composited with this component

3.3.5 Methods

- **update**

```
public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

  - **Description**
    The method that is executed each iteration of game loop. Changes character's velocity according to the inputs.
  - **Parameters**
    - `gameStateManager` – The Game State Manager instance that is in control.

3.4 Class CharacterPhysicsComponent

The physics component of the character. Works in coherence with other game objects' physics components.

3.4.1 Declaration

```
public class CharacterPhysicsComponent
 extends java.lang.Object
```

3.4.2 Constructor summary

CharacterPhysicsComponent(Character) Simply, constructor.

3.4.3 Method summary

update(GameStateManager) The method that is executed each iteration of game loop.

3.4.4 Constructors

- **CharacterPhysicsComponent**

```
public CharacterPhysicsComponent(Character character)
```

  - **Description**
    Simply, constructor.
  - **Parameters**
    - `character` – Character to be composited with this component

3.4.5 Methods

- **update**

```
public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

  - **Description**
    The method that is executed each iteration of game loop. Resolves collisions with other game objects. For example, restricts passing on blocks. Also, responsible for moving object in each iteration
  - **Parameters**
    - `gameStateManager` – the GameStateManager instance that is in control of the game.

Chapter 4

Package com.manofwar.logic

Package Contents *Page*

Classes

4.1 Class Config

Config class contains the constants of the game. This class provides an easy interface to change and play with important constants of the game.

4.1.1 Declaration

```
public class Config
 extends java.lang.Object
```

4.1.2 Field summary

ANIMATION_SPEED The speed of the animation.
BULLET_SPEED Bullet Speed of each bullet.

BULLET_UPDATE_LIMIT Minimum number of frames that a bullet can be shot by character.
MOB_BULLET_UPDATE_LIMIT Minimum number of frames that a bullet can be shot by a mob.
MOB_SPEED Speed of each mob.
TILE_HEIGHT The height of each tile in game.
TILE_WIDTH The width of each tile in game.
UPDATE_DELAY The delay between each iteration of game loop.
VELOCITY The velocity of the character.

4.1.3 Constructor summary

Config()

4.1.4 Fields

- `public static final long` **UPDATE_DELAY**
  - The delay between each iteration of game loop.
- `public static final double` **VELOCITY**
  - The velocity of the character. It is high because it is also multiplied with seconds passed in each game loop iteration like green.001
- `public static final int` **TILE_WIDTH**
  - The width of each tile in game.
- `public static final int` **TILE_HEIGHT**
  - The height of each tile in game.
- `public static final int` **BULLET_SPEED**
  - Bullet Speed of each bullet. It is high because it is also multiplied with seconds passed in each game loop iteration like green.001
- `public static final int` **BULLET_UPDATE_LIMIT**
  - Minimum number of frames that a bullet can be shot by character.
- `public static final int` **MOB_BULLET_UPDATE_LIMIT**
  - Minimum number of frames that a bullet can be shot by a mob.
- `public static final int` **ANIMATION_SPEED**
  - The speed of the animation. Be careful! It is reverse correlated with the animation per frame. Not actually a speed!!
- `public static final int` **MOB_SPEED**
  - Speed of each mob. It is high because it is also multiplied with seconds passed in each game loop iteration like green.001

4.1.5 Constructors

- **Config**

```
public Config()
```

4.2 Class Direction

Direction enum that contains 4 main directions

4.2.1 Declaration

```
public final class Direction
 extends java.lang.Enum
```

4.2.2 Field summary

DOWN The south direction
LEFT The west direction
RIGHT The east direction
UP The north direction

4.2.3 Method summary

valueOf(String)
values()

4.2.4 Fields

- `public static final Direction` **LEFT**
  - The west direction
- `public static final Direction` **RIGHT**
  - The east direction
- `public static final Direction` **UP**
  - The north direction
- `public static final Direction` **DOWN**
  - The south direction

4.2.5 Methods

- **valueOf**

```
public static Direction valueOf(java.lang.String name)
```

- **values**

```
public static Direction[] values()
```

4.2.6 Members inherited from class Enum

`java.lang.Enum`

- `protected final Object` **clone**`() throws CloneNotSupportedException`
- `public final int` **compareTo**`(Enum` **arg0**`)`
- `public final boolean` **equals**`(Object` **arg0**`)`
- `protected final void` **finalize**`()`
- `public final Class` **getDeclaringClass**`()`
- `public final int` **hashCode**`()`
- `public final String` **name**`()`
- `public final int` **ordinal**`()`
- `public String` **toString**`()`
- `public static Enum` **valueOf**`(Class` **arg0**`, String` **arg1**`)`

4.3 Class GameStateManager

GameStateManager is to control the game state and contains all its game objects. Manages coherence between utility managers and game objects. Contains all managers and game objects but interferes with them as little as possible.

4.3.1 Declaration

```
public class GameStateManager
 extends java.lang.Object
```

4.3.2 Constructor summary

GameStateManager(FileManager, GraphicsManager, InputManager)
Simply, constructor.

4.3.3 Method summary

getBlocks() Returns the blocks in the game
getBullets() Gives the list of the bullets in game
getCharacter() Returns the character
getDoors() Returns the doors in the game
getFileManager() Returns the composited FileManager instance
getGraphicsManager() Returns the composited GraphicsManager instance
getInputManager() Returns the composited InputManager instance
getLevelNum() Gives the current level number
getMobs() Returns the mobs in the game
getNonTakenItems() Returns the non-taken items on the map
getPassedSeconds() Returns the passed seconds since the last iteration
getTotalPassedSeconds() Returns the passed seconds since the beginning of the game
initLevel(int) Inits level and shows it on screen.
restartLevel() It is used to restart the current level for example when character dies.
startGame(int) Starts the game with level 1
update(double) Executes game objects' update methods.

4.3.4 Constructors

- **GameStateManager**

```
public GameStateManager(com.manofwar.utilities.FileManager
    fileManager,com.manofwar.utilities.GraphicsManager
    graphicsManager,com.manofwar.utilities.InputManager
    inputManager)
```

  - **Description**
    Simply, constructor.
  - **Parameters**
    * `fileManager` – FileManager instance
    * `graphicsManager` – GraphicsManager instance
    * `inputManager` – InputManager instance

4.3.5 Methods

- **getBlocks**

```
public java.util.List getBlocks()
```

  - **Description**
    Returns the blocks in the game

  - **Returns** – the blocks in the game

- **getBullets**

  ```
  public java.util.List getBullets()
  ```

  - **Description**
    Gives the list of the bullets in game
  - **Returns** – the list of the bullets in game

- **getCharacter**

  ```
  public character.Character getCharacter()
  ```

  - **Description**
    Returns the character
  - **Returns** – the character

- **getDoors**

  ```
  public java.util.List getDoors()
  ```

  - **Description**
    Returns the doors in the game
  - **Returns** – the doors in the game

- **getFileManager**

  ```
  public com.manofwar.utilities.FileManager getFileManager()
  ```

  - **Description**
    Returns the composited FileManager instance
  - **Returns** – the composited FileManager instance

- **getGraphicsManager**

  ```
  public com.manofwar.utilities.GraphicsManager getGraphicsManager
      ()
  ```

  - **Description**
    Returns the composited GraphicsManager instance
  - **Returns** – the composited GraphicsManager instance

- **getInputManager**

  ```
  public com.manofwar.utilities.InputManager getInputManager()
  ```

  - **Description**
    Returns the composited InputManager instance
  - **Returns** – the composited InputManager instance

- **getLevelNum**

  ```
  public int getLevelNum()
  ```

  - **Description**
    Gives the current level number
  - **Returns** – the current level number

- **getMobs**

  ```
  public java.util.List getMobs()
  ```

  - **Description**
    Returns the mobs in the game
  - **Returns** – the mobs in the game

- **getNonTakenItems**

  ```
  public java.util.List getNonTakenItems()
  ```

  - **Description**
    Returns the non-taken items on the map
  - **Returns** – non-taken items on the map

- **getPassedSeconds**

  ```
  public double getPassedSeconds()
  ```

  - **Description**
    Returns the passed seconds since the last iteration
  - **Returns** – the passed seconds since the last iteration

- **getTotalPassedSeconds**

```
public double getTotalPassedSeconds()
```

  - **Description**
    Returns the passed seconds since the beginning of the game
  - **Returns** – the passed seconds since the beginning of the game

- **initLevel**

```
public void initLevel(int levelNum)
```

  - **Description**
    Inits level and shows it on screen. Does all the job.
  - **Parameters**
    * `levelNum` – target level number to be changed

- **restartLevel**

```
public void restartLevel()
```

  - **Description**
    It is used to restart the current level for example when character dies.

- **startGame**

```
public void startGame(int level)
```

  - **Description**
    Starts the game with level 1

- **update**

```
public void update(double passedSeconds)
```

  - **Description**
    Executes game objects' update methods.
  - **Parameters**
    * `passedSeconds` – passed seconds until last iteration of the game loop

4.4 Class GameThread

GameThread class is the responsible of the game loop. Executes update methods of the game objects through GameStateManager and repaints the GamePanel.

4.4.1 Declaration

```
public class GameThread
 extends java.lang.Thread
```

4.4.2 Constructor summary

GameThread(GameStateManager, GamePanel) Simply, constructor

4.4.3 Method summary

run() The method to be runned when thread starts.

4.4.4 Constructors

- **GameThread**

  ```
  public GameThread(GameStateManager gameStateManager,com.manofwar
      .presentation.GamePanel gamePanel)
  ```

  - **Description**
    Simply, constructor
  - **Parameters**
    - `gameStateManager` – the GameStateManager instance
    - `gamePanel` – the GamePanel instance

4.4.5 Methods

- **run**

  ```
  public void run()
  ```

  - **Description**
    The method to be runned when thread starts.

4.4.6 Members inherited from class Thread

`java.lang.Thread`

- `public static int` **activeCount**`()`
- `public final void` **checkAccess**`()`
- `protected Object` **clone**`() throws CloneNotSupportedException`
- `public native int` **countStackFrames**`()`
- `public static native Thread` **currentThread**`()`
- `public void` **destroy**`()`
- `public static void` **dumpStack**`()`
- `public static int` **enumerate**`(Thread[] arg0)`
- `public static Map` **getAllStackTraces**`()`
- `public ClassLoader` **getContextClassLoader**`()`

- public static Thread.UncaughtExceptionHandler **getDefaultUncaughtExceptionHandler**()
- public long **getId**()
- public final String **getName**()
- public final int **getPriority**()
- public StackTraceElement **getStackTrace**()
- public Thread.State **getState**()
- public final ThreadGroup **getThreadGroup**()
- public Thread.UncaughtExceptionHandler **getUncaughtExceptionHandler**()
- public static native boolean **holdsLock**(Object **arg0**)
- public void **interrupt**()
- public static boolean **interrupted**()
- public final native boolean **isAlive**()
- public final boolean **isDaemon**()
- public boolean **isInterrupted**()
- public final void **join**() throws InterruptedException
- public final synchronized void **join**(long **arg0**) throws InterruptedException
- public final synchronized void **join**(long **arg0**, int **arg1**) throws InterruptedException
- public static final **MAX_PRIORITY**
- public static final **MIN_PRIORITY**
- public static final **NORM_PRIORITY**
- public final void **resume**()
- public void **run**()
- public void **setContextClassLoader**(ClassLoader **arg0**)
- public final void **setDaemon**(boolean **arg0**)
- public static void **setDefaultUncaughtExceptionHandler**(Thread.UncaughtExceptionHandler **arg0**)
- public final synchronized void **setName**(String **arg0**)
- public final void **setPriority**(int **arg0**)
- public void **setUncaughtExceptionHandler**(Thread.UncaughtExceptionHandler **arg0**)
- public static native void **sleep**(long **arg0**) throws InterruptedException
- public static void **sleep**(long **arg0**, int **arg1**) throws InterruptedException
- public synchronized void **start**()
- public final void **stop**()
- public final synchronized void **stop**(Throwable **arg0**)
- public final void **suspend**()
- public String **toString**()
- public static native void **yield**()

4.5 Class LevelFactory

LevelFactory class is a helper class using Factory design pattern for GameStateManager. Creates the game objects and returns them to this manager.

4.5.1 Declaration

```
public class LevelFactory
 extends java.lang.Object
```

4.5.2 Constructor summary

LevelFactory()

4.5.3 Method summary

createBlocks(int) The factory method of blocks
createCharacter(int) The factory method of character
createDoors(int) The factory method of doors
createMobs(int) The factory method of mobs
createNonTakenItems(int) The factory method of items
createSqueezers(int) The factory method of squeezers

4.5.4 Constructors

- **LevelFactory**

```
public LevelFactory()
```

4.5.5 Methods

- **createBlocks**

```
public block.Block[] createBlocks(int levelNum)
```

  - **Description**
    The factory method of blocks
  - **Parameters**
    * `levelNum` – current level number to be created
  - **Returns** – the blocks array of the level.

- **createCharacter**

```
public character.Character createCharacter(int levelNum)
```

  - **Description**
    The factory method of character
  - **Parameters**
    * `levelNum` – current level number for the character to be created at.
  - **Returns** – the created character.

- **createDoors**

```
public door.Door[] createDoors(int levelNum)
```

  - **Description**
    The factory method of doors

- **Parameters**
  - `levelNum` – current level number to be created
- **Returns** – the doors array of the level.

- **createMobs**

```
public mob.Mob[] createMobs(int levelNum)
```

  - **Description**
    The factory method of mobs
  - **Parameters**
    - `levelNum` – current level number to be created
  - **Returns** – the mobs array of the level.

- **createNonTakenItems**

```
public item.Item[] createNonTakenItems(int levelNum)
```

  - **Description**
    The factory method of items
  - **Parameters**
    - `levelNum` – current level number to be created
  - **Returns** – the items array of the level.

- **createSqueezers**

```
public squeezer.Squeezer[] createSqueezers(int levelNum)
```

  - **Description**
    The factory method of squeezers
  - **Parameters**
    - `levelNum` – current level number to be created
  - **Returns** – the squeezers array of the level.

4.6 Class SaveLoad

4.6.1 Declaration

```
public class SaveLoad
 extends java.lang.Object
```

4.6.2 Constructor summary

SaveLoad()

4.6.3 Method summary

getAttack()
getHealth()
getLevel()
getPlayerX()
getPlayerY()
readLoad()
writeSave(int, int, int, int, int)

4.6.4 Constructors

- **SaveLoad**

```
public SaveLoad()
```

4.6.5 Methods

- **getAttack**

```
public static int getAttack() throws java.io.
    FileNotFoundException
```

- **getHealth**

```
public static int getHealth() throws java.io.
    FileNotFoundException
```

- **getLevel**

```
public static int getLevel() throws java.io.
    FileNotFoundException
```

- **getPlayerX**

```
public static int getPlayerX() throws java.io.
    FileNotFoundException
```

- **getPlayerY**

```
public static int getPlayerY() throws java.io.
    FileNotFoundException
```

- **readLoad**

```
public static java.util.ArrayList readLoad() throws java.io.
    FileNotFoundException
```

- **writeSave**

```
public static void writeSave(int levelNo,int CharHealth,int
    CharAttack,int X,int Y) throws java.io.
    UnsupportedEncodingException, java.io.FileNotFoundException
```

Chapter 5

Package com.manofwar.logic.door

Package Contents *Page*

Classes

5.1 Class Door

Door is the game object that represents the situation when user is in, level changes.

5.1.1 Declaration

```
public class Door
 extends com.manofwar.logic.entities.GameObject
```

5.1.2 Constructor summary

Door(Rectangle, int) Simply, constructor

5.1.3 Method summary

getTargetLevelNum() Returns the target level number
update(GameStateManager) The method that is executed each iteration of game loop.

5.1.4 Constructors

- **Door**

```
public Door(java.awt.Rectangle boundingBox, int targetLevelNum)
```

- **Description**
  Simply, constructor
- **Parameters**
  - `boundingBox` – the bounding box of the door game object
  - `targetLevelNum` – the level of game to be changed when user is goes in the door

5.1.5 Methods

- **getTargetLevelNum**

```
public int getTargetLevelNum()
```

  - **Description**
    Returns the target level number
  - **Returns** – the target level number

- **update**

```
public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

  - **Description**
    The method that is executed each iteration of game loop. Executes its components
  - **Parameters**
    - `gameStateManager` – GameStateManager object that is in control.

5.1.6 Members inherited from class GameObject

`com.manofwar.logic.entities.GameObject` (in 6.2, page 43)

- `protected` **boundingBox**
- `public Rectangle` **getBoundingBox**`()`
- `public abstract void` **update**`(com.manofwar.logic.GameStateManager` **gameStateManager**`)`

5.2 Class DoorPhysicsComponent

DoorPhysicsComponent is to check whether the Character is reached to the door.

5.2.1 Declaration

```
public class DoorPhysicsComponent
 extends java.lang.Object
```

5.2.2 Constructor summary

DoorPhysicsComponent(Door) Simply, constructor

5.2.3 Method summary

update(GameStateManager)

5.2.4 Constructors

- **DoorPhysicsComponent**

  ```
  public DoorPhysicsComponent(Door door)
  ```

  - **Description**
    Simply, constructor
  - **Parameters**
    - `door` – Door instance to be composited with this component

5.2.5 Methods

- **update**

  ```
  public void update(com.manofwar.logic.GameStateManager
      gameStateManager)
  ```

Chapter 6

Package com.manofwar.logic.entities

Package Contents *Page*

Classes

6.1 Class Difficulty

Contains the difficulties of the game as EASY, NORMAL, HARD.

6.1.1 Declaration

```
public final class Difficulty
 extends java.lang.Enum
```

6.1.2 Field summary

EASY The easy game mode
HARD The hard game mode
NORMAL The medium game mode

6.1.3 Method summary

valueOf(String)
values()

6.1.4 Fields

- `public static final Difficulty` **EASY**
  - The easy game mode
- `public static final Difficulty` **NORMAL**
  - The medium game mode
- `public static final Difficulty` **HARD**
  - The hard game mode

6.1.5 Methods

- **valueOf**

```
public static Difficulty valueOf(java.lang.String name)
```

- **values**

```
public static Difficulty[] values()
```

6.1.6 Members inherited from class Enum

`java.lang.Enum`

- `protected final Object` **clone**`() throws CloneNotSupportedException`
- `public final int` **compareTo**`(Enum` **arg0**`)`
- `public final boolean` **equals**`(Object` **arg0**`)`
- `protected final void` **finalize**`()`
- `public final Class` **getDeclaringClass**`()`
- `public final int` **hashCode**`()`
- `public final String` **name**`()`
- `public final int` **ordinal**`()`
- `public String` **toString**`()`
- `public static Enum` **valueOf**`(Class` **arg0**`, String` **arg1**`)`

6.2 Class GameObject

GameObject class is a main template of the objects in the game. Common properties of objects in the game are represented in this class.

6.2.1 Declaration

```
public abstract class GameObject
 extends java.lang.Object
```

6.2.2 All known subclasses

Block (in 1.1, page 11), Bullet (in 2.1, page 13), Character (in 3.1, page 18), Door (in 5.1, page 39), Item (in 7.1, page 59), Mob (in 8.1, page 66), Squeezer (in 9.1, page 73)

6.2.3 Field summary

boundingBox Bounding box of the game object.

6.2.4 Constructor summary

GameObject(Rectangle) Simply constructor.

6.2.5 Method summary

getBoundingBox() Returns the bounding box of the game object.
update(GameStateManager) The method that is executed each iteration of game loop.

6.2.6 Fields

- `protected java.awt.Rectangle` **boundingBox**
  - Bounding box of the game object.

6.2.7 Constructors

- **GameObject**

```
public GameObject(java.awt.Rectangle boundingBox)
```

  - **Description**
    Simply constructor.
  - **Parameters**
    * `boundingBox` – bounding box of the game object.

6.2.8 Methods

- **getBoundingBox**

```
public java.awt.Rectangle getBoundingBox()
```

  - **Description**
    Returns the bounding box of the game object.
  - **Returns** – the bounding box of the game object.

- **update**

```
public abstract void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

- **Description**
  The method that is executed each iteration of game loop.
- **Parameters**
  - `gameStateManager` – GameStateManager object that is in control.

6.3 Class HealthBar

Health bar which is on the character

6.3.1 Declaration

```
public class HealthBar
 extends javax.swing.JLabel
```

6.3.2 Constructor summary

HealthBar() Empty constructor for healthbar
HealthBar(ImageIcon) Simply, constructor

6.3.3 Constructors

- **HealthBar**

  ```
  public HealthBar()
  ```

  - **Description**
    Empty constructor for healthbar

- **HealthBar**

  ```
  public HealthBar(javax.swing.ImageIcon icon)
  ```

  - **Description**
    Simply, constructor
  - **Parameters**
    - `icon` – the image of the icon

6.3.4 Members inherited from class JLabel

`javax.swing.JLabel`

- `protected int` **checkHorizontalKey**`(int` **arg0**`, java.lang.String` **arg1**`)`
- `protected int` **checkVerticalKey**`(int` **arg0**`, java.lang.String` **arg1**`)`
- `public AccessibleContext` **getAccessibleContext**`()`
- `public Icon` **getDisabledIcon**`()`
- `public int` **getDisplayedMnemonic**`()`

- public int **getDisplayedMnemonicIndex**()
- public int **getHorizontalAlignment**()
- public int **getHorizontalTextPosition**()
- public Icon **getIcon**()
- public int **getIconTextGap**()
- public Component **getLabelFor**()
- public String **getText**()
- public LabelUI **getUI**()
- public String **getUIClassID**()
- public int **getVerticalAlignment**()
- public int **getVerticalTextPosition**()
- public boolean **imageUpdate**(java.awt.Image **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**, int **arg5**)
- protected **labelFor**
- protected String **paramString**()
- public void **setDisabledIcon**(Icon **arg0**)
- public void **setDisplayedMnemonic**(char **arg0**)
- public void **setDisplayedMnemonic**(int **arg0**)
- public void **setDisplayedMnemonicIndex**(int **arg0**) throws java.lang.IllegalArgumentException
- public void **setHorizontalAlignment**(int **arg0**)
- public void **setHorizontalTextPosition**(int **arg0**)
- public void **setIcon**(Icon **arg0**)
- public void **setIconTextGap**(int **arg0**)
- public void **setLabelFor**(java.awt.Component **arg0**)
- public void **setText**(java.lang.String **arg0**)
- public void **setUI**(plaf.LabelUI **arg0**)
- public void **setVerticalAlignment**(int **arg0**)
- public void **setVerticalTextPosition**(int **arg0**)
- public void **updateUI**()

6.3.5 Members inherited from class JComponent

javax.swing.JComponent

- public void **addAncestorListener**(event.AncestorListener **arg0**)
- public void **addNotify**()
- public synchronized void **addVetoableChangeListener**(java.beans.VetoableChangeListener **arg0**)
- public void **computeVisibleRect**(java.awt.Rectangle **arg0**)
- public boolean **contains**(int **arg0**, int **arg1**)
- public JToolTip **createToolTip**()
- public void **disable**()
- public void **enable**()
- public void **firePropertyChange**(java.lang.String **arg0**, boolean **arg1**, boolean **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, char **arg1**, char **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, int **arg1**, int **arg2**)
- protected void **fireVetoableChange**(java.lang.String **arg0**, java.lang.Object **arg1**, java.lang.Object **arg2**) throws java.beans.PropertyVetoException
- public ActionListener **getActionForKeyStroke**(KeyStroke **arg0**)
- public final ActionMap **getActionMap**()
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public AncestorListener **getAncestorListeners**()
- public boolean **getAutoscrolls**()

- public int **getBaseline**(int **arg0**, int **arg1**)
- public Component.BaselineResizeBehavior **getBaselineResizeBehavior**()
- public Border **getBorder**()
- public Rectangle **getBounds**(java.awt.Rectangle **arg0**)
- public final Object **getClientProperty**(java.lang.Object **arg0**)
- protected Graphics **getComponentGraphics**(java.awt.Graphics **arg0**)
- public JPopupMenu **getComponentPopupMenu**()
- public int **getConditionForKeyStroke**(KeyStroke **arg0**)
- public int **getDebugGraphicsOptions**()
- public static Locale **getDefaultLocale**()
- public FontMetrics **getFontMetrics**(java.awt.Font **arg0**)
- public Graphics **getGraphics**()
- public int **getHeight**()
- public boolean **getInheritsPopupMenu**()
- public final InputMap **getInputMap**()
- public final InputMap **getInputMap**(int **arg0**)
- public InputVerifier **getInputVerifier**()
- public Insets **getInsets**()
- public Insets **getInsets**(java.awt.Insets **arg0**)
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Point **getLocation**(java.awt.Point **arg0**)
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public Component **getNextFocusableComponent**()
- public Point **getPopupLocation**(java.awt.event.MouseEvent **arg0**)
- public Dimension **getPreferredSize**()
- public KeyStroke **getRegisteredKeyStrokes**()
- public JRootPane **getRootPane**()
- public Dimension **getSize**(java.awt.Dimension **arg0**)
- public Point **getToolTipLocation**(java.awt.event.MouseEvent **arg0**)
- public String **getToolTipText**()
- public String **getToolTipText**(java.awt.event.MouseEvent **arg0**)
- public Container **getTopLevelAncestor**()
- public TransferHandler **getTransferHandler**()
- public String **getUIClassID**()
- public boolean **getVerifyInputWhenFocusTarget**()
- public synchronized VetoableChangeListener **getVetoableChangeListeners**()
- public Rectangle **getVisibleRect**()
- public int **getWidth**()
- public int **getX**()
- public int **getY**()
- public void **grabFocus**()
- public void **hide**()
- public boolean **isDoubleBuffered**()
- public static boolean **isLightweightComponent**(java.awt.Component **arg0**)
- public boolean **isManagingFocus**()
- public boolean **isOpaque**()
- public boolean **isOptimizedDrawingEnabled**()
- public final boolean **isPaintingForPrint**()
- protected boolean **isPaintingOrigin**()
- public boolean **isPaintingTile**()
- public boolean **isRequestFocusEnabled**()
- public boolean **isValidateRoot**()
- protected **listenerList**
- public void **paint**(java.awt.Graphics **arg0**)
- protected void **paintBorder**(java.awt.Graphics **arg0**)

- protected void **paintChildren**(java.awt.Graphics **arg0**)
- protected void **paintComponent**(java.awt.Graphics **arg0**)
- public void **paintImmediately**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **paintImmediately**(java.awt.Rectangle **arg0**)
- protected String **paramString**()
- public void **print**(java.awt.Graphics **arg0**)
- public void **printAll**(java.awt.Graphics **arg0**)
- protected void **printBorder**(java.awt.Graphics **arg0**)
- protected void **printChildren**(java.awt.Graphics **arg0**)
- protected void **printComponent**(java.awt.Graphics **arg0**)
- protected void **processComponentKeyEvent**(java.awt.event.KeyEvent **arg0**)
- protected boolean **processKeyBinding**(KeyStroke **arg0**, java.awt.event.KeyEvent **arg1**, int **arg2**, boolean **arg3**)
- protected void **processKeyEvent**(java.awt.event.KeyEvent **arg0**)
- protected void **processMouseEvent**(java.awt.event.MouseEvent **arg0**)
- protected void **processMouseMotionEvent**(java.awt.event.MouseEvent **arg0**)
- public final void **putClientProperty**(java.lang.Object **arg0**, java.lang.Object **arg1**)
- public void **registerKeyboardAction**(java.awt.event.ActionListener **arg0**, KeyStroke **arg1**, int **arg2**)
- public void **registerKeyboardAction**(java.awt.event.ActionListener **arg0**, java.lang.String **arg1**, KeyStroke **arg2**, int **arg3**)
- public void **removeAncestorListener**(event.AncestorListener **arg0**)
- public void **removeNotify**()
- public synchronized void **removeVetoableChangeListener**(java.beans.VetoableChangeListener **arg0**)
- public void **repaint**(long **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**)
- public void **repaint**(java.awt.Rectangle **arg0**)
- public boolean **requestDefaultFocus**()
- public void **requestFocus**()
- public boolean **requestFocus**(boolean **arg0**)
- public boolean **requestFocusInWindow**()
- protected boolean **requestFocusInWindow**(boolean **arg0**)
- public void **resetKeyboardActions**()
- public void **reshape**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **revalidate**()
- public void **scrollRectToVisible**(java.awt.Rectangle **arg0**)
- public final void **setActionMap**(ActionMap **arg0**)
- public void **setAlignmentX**(float **arg0**)
- public void **setAlignmentY**(float **arg0**)
- public void **setAutoscrolls**(boolean **arg0**)
- public void **setBackground**(java.awt.Color **arg0**)
- public void **setBorder**(border.Border **arg0**)
- public void **setComponentPopupMenu**(JPopupMenu **arg0**)
- public void **setDebugGraphicsOptions**(int **arg0**)
- public static void **setDefaultLocale**(java.util.Locale **arg0**)
- public void **setDoubleBuffered**(boolean **arg0**)
- public void **setEnabled**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFont**(java.awt.Font **arg0**)
- public void **setForeground**(java.awt.Color **arg0**)
- public void **setInheritsPopupMenu**(boolean **arg0**)
- public final void **setInputMap**(int **arg0**, InputMap **arg1**)
- public void **setInputVerifier**(InputVerifier **arg0**)
- public void **setMaximumSize**(java.awt.Dimension **arg0**)
- public void **setMinimumSize**(java.awt.Dimension **arg0**)

- public void **setNextFocusableComponent**(java.awt.Component **arg0**)
- public void **setOpaque**(boolean **arg0**)
- public void **setPreferredSize**(java.awt.Dimension **arg0**)
- public void **setRequestFocusEnabled**(boolean **arg0**)
- public void **setToolTipText**(java.lang.String **arg0**)
- public void **setTransferHandler**(TransferHandler **arg0**)
- protected void **setUI**(plaf.ComponentUI **arg0**)
- public void **setVerifyInputWhenFocusTarget**(boolean **arg0**)
- public void **setVisible**(boolean **arg0**)
- public static final **TOOL_TIP_TEXT_KEY**
- protected transient **ui**
- public static final **UNDEFINED_CONDITION**
- public void **unregisterKeyboardAction**(KeyStroke **arg0**)
- public void **update**(java.awt.Graphics **arg0**)
- public void **updateUI**()
- public static final **WHEN_ANCESTOR_OF_FOCUSED_COMPONENT**
- public static final **WHEN_FOCUSED**
- public static final **WHEN_IN_FOCUSED_WINDOW**

6.3.6 Members inherited from class Container

java.awt.Container

- public Component **add**(Component **arg0**)
- public Component **add**(Component **arg0**, int **arg1**)
- public void **add**(Component **arg0**, java.lang.Object **arg1**)
- public void **add**(Component **arg0**, java.lang.Object **arg1**, int **arg2**)
- public Component **add**(java.lang.String **arg0**, Component **arg1**)
- public synchronized void **addContainerListener**(event.ContainerListener **arg0**)
- protected void **addImpl**(Component **arg0**, java.lang.Object **arg1**, int **arg2**)
- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **applyComponentOrientation**(ComponentOrientation **arg0**)
- public boolean **areFocusTraversalKeysSet**(int **arg0**)
- public int **countComponents**()
- public void **deliverEvent**(Event **arg0**)
- public void **doLayout**()
- public Component **findComponentAt**(int **arg0**, int **arg1**)
- public Component **findComponentAt**(Point **arg0**)
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public Component **getComponent**(int **arg0**)
- public Component **getComponentAt**(int **arg0**, int **arg1**)
- public Component **getComponentAt**(Point **arg0**)
- public int **getComponentCount**()
- public Component **getComponents**()
- public int **getComponentZOrder**(Component **arg0**)
- public synchronized ContainerListener **getContainerListeners**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public FocusTraversalPolicy **getFocusTraversalPolicy**()
- public Insets **getInsets**()
- public LayoutManager **getLayout**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Dimension **getMaximumSize**()

- public Dimension **getMinimumSize**()
- public Point **getMousePosition**(boolean **arg0**) throws HeadlessException
- public Dimension **getPreferredSize**()
- public Insets **insets**()
- public void **invalidate**()
- public boolean **isAncestorOf**(Component **arg0**)
- public boolean **isFocusCycleRoot**()
- public boolean **isFocusCycleRoot**(Container **arg0**)
- public final boolean **isFocusTraversalPolicyProvider**()
- public boolean **isFocusTraversalPolicySet**()
- public boolean **isValidateRoot**()
- public void **layout**()
- public void **list**(java.io.PrintStream **arg0**, int **arg1**)
- public void **list**(java.io.PrintWriter **arg0**, int **arg1**)
- public Component **locate**(int **arg0**, int **arg1**)
- public Dimension **minimumSize**()
- public void **paint**(Graphics **arg0**)
- public void **paintComponents**(Graphics **arg0**)
- protected String **paramString**()
- public Dimension **preferredSize**()
- public void **print**(Graphics **arg0**)
- public void **printComponents**(Graphics **arg0**)
- protected void **processContainerEvent**(event.ContainerEvent **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- public void **remove**(Component **arg0**)
- public void **remove**(int **arg0**)
- public void **removeAll**()
- public synchronized void **removeContainerListener**(event.ContainerListener **arg0**)
- public void **removeNotify**()
- public void **setComponentZOrder**(Component **arg0**, int **arg1**)
- public void **setFocusCycleRoot**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFocusTraversalPolicy**(FocusTraversalPolicy **arg0**)
- public final void **setFocusTraversalPolicyProvider**(boolean **arg0**)
- public void **setFont**(Font **arg0**)
- public void **setLayout**(LayoutManager **arg0**)
- public void **transferFocusDownCycle**()
- public void **update**(Graphics **arg0**)
- public void **validate**()
- protected void **validateTree**()

6.3.7 Members inherited from class Component

java.awt.Component

- protected **accessibleContext**
- public boolean **action**(Event **arg0**, java.lang.Object **arg1**)
- public void **add**(PopupMenu **arg0**)
- public synchronized void **addComponentListener**(event.ComponentListener **arg0**)
- public synchronized void **addFocusListener**(event.FocusListener **arg0**)
- public void **addHierarchyBoundsListener**(event.HierarchyBoundsListener **arg0**)
- public void **addHierarchyListener**(event.HierarchyListener **arg0**)
- public synchronized void **addInputMethodListener**(event.InputMethodListener **arg0**)
- public synchronized void **addKeyListener**(event.KeyListener **arg0**)
- public synchronized void **addMouseListener**(event.MouseListener **arg0**)
- public synchronized void **addMouseMotionListener**(event.MouseMotionListener **arg0**)
- public synchronized void **addMouseWheelListener**(event.MouseWheelListener **arg0**)
- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **applyComponentOrientation**(ComponentOrientation **arg0**)
- public boolean **areFocusTraversalKeysSet**(int **arg0**)
- public static final **BOTTOM_ALIGNMENT**
- public Rectangle **bounds**()
- public static final **CENTER_ALIGNMENT**
- public int **checkImage**(Image **arg0**, image.ImageObserver **arg1**)
- public int **checkImage**(Image **arg0**, int **arg1**, int **arg2**, image.ImageObserver **arg3**)
- protected AWTEvent **coalesceEvents**(AWTEvent **arg0**, AWTEvent **arg1**)
- public boolean **contains**(int **arg0**, int **arg1**)
- public boolean **contains**(Point **arg0**)
- public Image **createImage**(image.ImageProducer **arg0**)
- public Image **createImage**(int **arg0**, int **arg1**)
- public VolatileImage **createVolatileImage**(int **arg0**, int **arg1**)
- public VolatileImage **createVolatileImage**(int **arg0**, int **arg1**, ImageCapabilities **arg2**) throws AWTException
- public void **deliverEvent**(Event **arg0**)
- public void **disable**()
- protected final void **disableEvents**(long **arg0**)
- public final void **dispatchEvent**(AWTEvent **arg0**)
- public void **doLayout**()
- public void **enable**()
- public void **enable**(boolean **arg0**)
- protected final void **enableEvents**(long **arg0**)
- public void **enableInputMethods**(boolean **arg0**)
- protected void **firePropertyChange**(java.lang.String **arg0**, boolean **arg1**, boolean **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, byte **arg1**, byte **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, char **arg1**, char **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, double **arg1**, double **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, float **arg1**, float **arg2**)
- protected void **firePropertyChange**(java.lang.String **arg0**, int **arg1**, int **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, long **arg1**, long **arg2**)
- protected void **firePropertyChange**(java.lang.String **arg0**, java.lang.Object **arg1**, java.lang.Object **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, short **arg1**, short **arg2**)

- public AccessibleContext **getAccessibleContext**()
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public Color **getBackground**()
- public int **getBaseline**(int **arg0**, int **arg1**)
- public Component.BaselineResizeBehavior **getBaselineResizeBehavior**()
- public Rectangle **getBounds**()
- public Rectangle **getBounds**(Rectangle **arg0**)
- public ColorModel **getColorModel**()
- public Component **getComponentAt**(int **arg0**, int **arg1**)
- public Component **getComponentAt**(Point **arg0**)
- public synchronized ComponentListener **getComponentListeners**()
- public ComponentOrientation **getComponentOrientation**()
- public Cursor **getCursor**()
- public synchronized DropTarget **getDropTarget**()
- public Container **getFocusCycleRootAncestor**()
- public synchronized FocusListener **getFocusListeners**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public boolean **getFocusTraversalKeysEnabled**()
- public Font **getFont**()
- public FontMetrics **getFontMetrics**(Font **arg0**)
- public Color **getForeground**()
- public Graphics **getGraphics**()
- public GraphicsConfiguration **getGraphicsConfiguration**()
- public int **getHeight**()
- public synchronized HierarchyBoundsListener **getHierarchyBoundsListeners**()
- public synchronized HierarchyListener **getHierarchyListeners**()
- public boolean **getIgnoreRepaint**()
- public InputContext **getInputContext**()
- public synchronized InputMethodListener **getInputMethodListeners**()
- public InputMethodRequests **getInputMethodRequests**()
- public synchronized KeyListener **getKeyListeners**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Locale **getLocale**()
- public Point **getLocation**()
- public Point **getLocation**(Point **arg0**)
- public Point **getLocationOnScreen**()
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public synchronized MouseListener **getMouseListeners**()
- public synchronized MouseMotionListener **getMouseMotionListeners**()
- public Point **getMousePosition**() throws HeadlessException
- public synchronized MouseWheelListener **getMouseWheelListeners**()
- public String **getName**()
- public Container **getParent**()
- public ComponentPeer **getPeer**()
- public Dimension **getPreferredSize**()
- public PropertyChangeListener **getPropertyChangeListeners**()
- public PropertyChangeListener **getPropertyChangeListeners**(java.lang.String **arg0**)
- public Dimension **getSize**()
- public Dimension **getSize**(Dimension **arg0**)
- public Toolkit **getToolkit**()
- public final Object **getTreeLock**()
- public int **getWidth**()
- public int **getX**()
- public int **getY**()

- public boolean **gotFocus**(Event **arg0**, java.lang.Object **arg1**)
- public boolean **handleEvent**(Event **arg0**)
- public boolean **hasFocus**()
- public void **hide**()
- public boolean **imageUpdate**(Image **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**, int **arg5**)
- public boolean **inside**(int **arg0**, int **arg1**)
- public void **invalidate**()
- public boolean **isBackgroundSet**()
- public boolean **isCursorSet**()
- public boolean **isDisplayable**()
- public boolean **isDoubleBuffered**()
- public boolean **isEnabled**()
- public boolean **isFocusable**()
- public boolean **isFocusCycleRoot**(Container **arg0**)
- public boolean **isFocusOwner**()
- public boolean **isFocusTraversable**()
- public boolean **isFontSet**()
- public boolean **isForegroundSet**()
- public boolean **isLightweight**()
- public boolean **isMaximumSizeSet**()
- public boolean **isMinimumSizeSet**()
- public boolean **isOpaque**()
- public boolean **isPreferredSizeSet**()
- public boolean **isShowing**()
- public boolean **isValid**()
- public boolean **isVisible**()
- public boolean **keyDown**(Event **arg0**, int **arg1**)
- public boolean **keyUp**(Event **arg0**, int **arg1**)
- public void **layout**()
- public static final **LEFT_ALIGNMENT**
- public void **list**()
- public void **list**(java.io.PrintStream **arg0**)
- public void **list**(java.io.PrintStream **arg0**, int **arg1**)
- public void **list**(java.io.PrintWriter **arg0**)
- public void **list**(java.io.PrintWriter **arg0**, int **arg1**)
- public Component **locate**(int **arg0**, int **arg1**)
- public Point **location**()
- public boolean **lostFocus**(Event **arg0**, java.lang.Object **arg1**)
- public Dimension **minimumSize**()
- public boolean **mouseDown**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseDrag**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseEnter**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseExit**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseMove**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseUp**(Event **arg0**, int **arg1**, int **arg2**)
- public void **move**(int **arg0**, int **arg1**)
- public void **nextFocus**()
- public void **paint**(Graphics **arg0**)
- public void **paintAll**(Graphics **arg0**)
- protected String **paramString**()
- public boolean **postEvent**(Event **arg0**)
- public Dimension **preferredSize**()
- public boolean **prepareImage**(Image **arg0**, image.ImageObserver **arg1**)
- public boolean **prepareImage**(Image **arg0**, int **arg1**, int **arg2**, image.ImageObserver **arg3**)

- public void **print**(Graphics **arg0**)
- public void **printAll**(Graphics **arg0**)
- protected void **processComponentEvent**(event.ComponentEvent **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- protected void **processFocusEvent**(event.FocusEvent **arg0**)
- protected void **processHierarchyBoundsEvent**(event.HierarchyEvent **arg0**)
- protected void **processHierarchyEvent**(event.HierarchyEvent **arg0**)
- protected void **processInputMethodEvent**(event.InputMethodEvent **arg0**)
- protected void **processKeyEvent**(event.KeyEvent **arg0**)
- protected void **processMouseEvent**(event.MouseEvent **arg0**)
- protected void **processMouseMotionEvent**(event.MouseEvent **arg0**)
- protected void **processMouseWheelEvent**(event.MouseWheelEvent **arg0**)
- public void **remove**(MenuComponent **arg0**)
- public synchronized void **removeComponentListener**(event.ComponentListener **arg0**)
- public synchronized void **removeFocusListener**(event.FocusListener **arg0**)
- public void **removeHierarchyBoundsListener**(event.HierarchyBoundsListener **arg0**)
- public void **removeHierarchyListener**(event.HierarchyListener **arg0**)
- public synchronized void **removeInputMethodListener**(event.InputMethodListener **arg0**)
- public synchronized void **removeKeyListener**(event.KeyListener **arg0**)
- public synchronized void **removeMouseListener**(event.MouseListener **arg0**)
- public synchronized void **removeMouseMotionListener**(event.MouseMotionListener **arg0**)
- public synchronized void **removeMouseWheelListener**(event.MouseWheelListener **arg0**)
- public void **removeNotify**()
- public void **removePropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **removePropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **repaint**()
- public void **repaint**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **repaint**(long **arg0**)
- public void **repaint**(long **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**)
- public void **requestFocus**()
- protected boolean **requestFocus**(boolean **arg0**)
- public boolean **requestFocusInWindow**()
- protected boolean **requestFocusInWindow**(boolean **arg0**)
- public void **reshape**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **resize**(Dimension **arg0**)
- public void **resize**(int **arg0**, int **arg1**)
- public void **revalidate**()
- public static final **RIGHT_ALIGNMENT**
- public void **setBackground**(Color **arg0**)
- public void **setBounds**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **setBounds**(Rectangle **arg0**)
- public void **setComponentOrientation**(ComponentOrientation **arg0**)
- public void **setCursor**(Cursor **arg0**)
- public synchronized void **setDropTarget**(dnd.DropTarget **arg0**)
- public void **setEnabled**(boolean **arg0**)
- public void **setFocusable**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFocusTraversalKeysEnabled**(boolean **arg0**)
- public void **setFont**(Font **arg0**)
- public void **setForeground**(Color **arg0**)
- public void **setIgnoreRepaint**(boolean **arg0**)

- public void **setLocale**(java.util.Locale **arg0**)
- public void **setLocation**(int **arg0**, int **arg1**)
- public void **setLocation**(Point **arg0**)
- public void **setMaximumSize**(Dimension **arg0**)
- public void **setMinimumSize**(Dimension **arg0**)
- public void **setName**(java.lang.String **arg0**)
- public void **setPreferredSize**(Dimension **arg0**)
- public void **setSize**(Dimension **arg0**)
- public void **setSize**(int **arg0**, int **arg1**)
- public void **setVisible**(boolean **arg0**)
- public void **show**()
- public void **show**(boolean **arg0**)
- public Dimension **size**()
- public static final **TOP_ALIGNMENT**
- public String **toString**()
- public void **transferFocus**()
- public void **transferFocusBackward**()
- public void **transferFocusUpCycle**()
- public void **update**(Graphics **arg0**)
- public void **validate**()

6.4 Class Inventory

Inventory class is a convenient name contains items with restricted access. That is just unmodifiable list of items.

6.4.1 Declaration

```
public class Inventory
 extends java.lang.Object
```

6.4.2 Constructor summary

Inventory() Simply, constructor

6.4.3 Method summary

getItems() Returns the list of items

6.4.4 Constructors

- **Inventory**

  ```
  public Inventory()
  ```

  - **Description**
    Simply, constructor

6.4.5 Methods

- **getItems**

```
public java.util.List getItems()
```

  - **Description**
    Returns the list of items
  - **Returns** – the list of items

6.5 Class Velocity

Velocity class contains x and y components of the velocity to be composited on a game object.

6.5.1 Declaration

```
public class Velocity
 extends java.lang.Object
```

6.5.2 Constructor summary

Velocity() A constructor that initiates x and y components of the velocity to green.green
Velocity(Direction) Simply, constructor with zero initializons of parts of vectors.
Velocity(double, double) Simply, constructor

6.5.3 Method summary

getDirection() Gives the direction of the belonging velocity
getX() Returns the X component of velocity
getY() Returns the Y component of velocity
setX(double) Changes the value of X component of velocity
setY(double) Changes the value of Y component of velocity

6.5.4 Constructors

- **Velocity**

```
public Velocity()
```

  - **Description**
    A constructor that initiates x and y components of the velocity to green.green

- **Velocity**

```
public Velocity(com.manofwar.logic.Direction direction)
```

- **Description**
  Simply, constructor with zero initializons of parts of vectors.
- **Parameters**
  * `direction` – direction of velocity

- **Velocity**

```
public Velocity(double xVelocity,double yVelocity)
```

- **Description**
  Simply, constructor
- **Parameters**
  * `xVelocity` – x component of velocity
  * `yVelocity` – y component of velocity

6.5.5 Methods

- **getDirection**

```
public com.manofwar.logic.Direction getDirection()
```

- **Description**
  Gives the direction of the belonging velocity
- **Returns** – the direction of velocity

- **getX**

```
public double getX()
```

- **Description**
  Returns the X component of velocity
- **Returns** – the X component of velocity

- **getY**

```
public double getY()
```

- **Description**
  Returns the Y component of velocity
- **Returns** – the Y component of velocity

- **setX**

  ```
  public void setX(double xVelocity)
  ```

  - **Description**
    Changes the value of X component of velocity
  - **Parameters**
    - `xVelocity` – the X component of velocity

- **setY**

  ```
  public void setY(double yVelocity)
  ```

  - **Description**
    Changes the value of Y component of velocity
  - **Parameters**
    - `yVelocity` – the Y component of velocity

Chapter 7

Package com.manofwar.logic.item

Package Contents *Page*

Classes

7.1 Class Item

Item class is to represent an item as a game object.

7.1.1 Declaration

```
public class Item
 extends com.manofwar.logic.entities.GameObject
```

7.1.2 Constructor summary

Item(Rectangle, boolean, ItemType, int, int, int) Simply, constructor

7.1.3 Method summary

getBonusBluePower() Returns the bonus blue powerto be given when the item is picked
getBonusHealth() Returns the bonus health to be given when the item is picked
getBonusRedPower() Returns the bonus red power to be given when the item is picked
getItemType() Returns the type of the item

isVisible() Returns whether the item is visible on the map
setVisible(boolean) Changes visibility of the item
update(GameStateManager) The method that is executed each iteration of game loop.

7.1.4 Constructors

- **Item**

```
public Item(java.awt.Rectangle boundingBox, boolean isVisible,
    ItemType itemType, int bonusHealth, int bonusBluePower, int
    bonusRedPower)
```

  - **Description**
    Simply, constructor
  - **Parameters**
    * `boundingBox` – The bounding box of the item on the map if it's visible
    * `isVisible` – whether the item is visible on the map
    * `itemType` – type of the item
    * `bonusHealth` – bonus health to be given when the item is picked.
    * `bonusBluePower` – bonus blue power to be given when the item is picked.
    * `bonusRedPower` – bonus red power to be given when the item is picked.

7.1.5 Methods

- **getBonusBluePower**

```
public int getBonusBluePower()
```

  - **Description**
    Returns the bonus blue powerto be given when the item is picked
  - **Returns** – bonus blue power to be given when the item is picked

- **getBonusHealth**

```
public int getBonusHealth()
```

  - **Description**
    Returns the bonus health to be given when the item is picked
  - **Returns** – bonus health to be given when the item is picked

- **getBonusRedPower**

```
public int getBonusRedPower()
```

  - **Description**
    Returns the bonus red power to be given when the item is picked
  - **Returns** – bonus red power to be given when the item is picked

- **getItemType**

```
public ItemType getItemType()
```

  - **Description**
    Returns the type of the item
  - **Returns** – the type of the item

- **isVisible**

```
public boolean isVisible()
```

  - **Description**
    Returns whether the item is visible on the map
  - **Returns** – whether the item is visible on the map

- **setVisible**

```
public void setVisible(boolean visible)
```

  - **Description**
    Changes visibility of the item
  - **Parameters**
    * `visible` – new visibility a

- **update**

```
public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

  - **Description**
    The method that is executed each iteration of game loop.
  - **Parameters**
    * `gameStateManager` – GameStateManager object that is in control.

7.1.6 Members inherited from class GameObject

`com.manofwar.logic.entities.GameObject` (in 6.2, page 43)

- `protected` **boundingBox**
- `public Rectangle` **getBoundingBox**`()`
- `public abstract void` **update**`(com.manofwar.logic.GameStateManager` **gameStateManager**`)`

7.2 Class ItemGraphicsComponent

ItemGraphicsComponent is the responsible class for the graphics related business of character. In other words, draws the item in the required position. Works in coherence with GraphicsManager.

7.2.1 Declaration

```
public class ItemGraphicsComponent
 extends java.lang.Object
```

7.2.2 Constructor summary

ItemGraphicsComponent(Item) Simply, constructor

7.2.3 Method summary

update(GraphicsManager) The method that is executed each iteration of game loop.

7.2.4 Constructors

- **ItemGraphicsComponent**

  ```
  public ItemGraphicsComponent(Item item)
  ```

  - **Description**
    Simply, constructor
  - **Parameters**
    - `item` – Character to be composited with this component

7.2.5 Methods

- **update**

  ```
  public void update(com.manofwar.utilities.GraphicsManager
    graphicsManager)
  ```

- **Description**
  The method that is executed each iteration of game loop. Requests to draw item graphics.
- **Parameters**
  - `graphicsManager` – The graphics manager that is in control of graphics of game

7.3 Class ItemPhysicsComponent

The physics component of the item. Works in coherence with other game objects' physics components.

7.3.1 Declaration

```
public class ItemPhysicsComponent
 extends java.lang.Object
```

7.3.2 Constructor summary

ItemPhysicsComponent(Item) Simply, constructor.

7.3.3 Method summary

update(GameStateManager) The method that is executed each iteration of game loop.

7.3.4 Constructors

- **ItemPhysicsComponent**

```
public ItemPhysicsComponent(Item item)
```

  - **Description**
    Simply, constructor.
  - **Parameters**
    - `item` – Character to be composited with this component

7.3.5 Methods

- **update**

```
public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

- **Description**
  The method that is executed each iteration of game loop. Resolves collisions with character. If it happens, character picks the item and item removed from the game scene.
- **Parameters**
  * `gameStateManager` – the GameStateManager instance that is in control of the game.

7.4 Class ItemType

ItemType enum is to represent various items like red potion

7.4.1 Declaration

```
public final class ItemType
 extends java.lang.Enum
```

7.4.2 Field summary

BLUE_POTION Blue potion type
RED_POTION Red potion type

7.4.3 Method summary

valueOf(String)
values()

7.4.4 Fields

- `public static final ItemType` **RED_POTION**
  - Red potion type
- `public static final ItemType` **BLUE_POTION**
  - Blue potion type

7.4.5 Methods

- **valueOf**

```
public static ItemType valueOf(java.lang.String name)
```

- **values**

```
public static ItemType[] values()
```

7.4.6 Members inherited from class Enum

java.lang.Enum

- protected final Object **clone**() throws CloneNotSupportedException
- public final int **compareTo**(Enum **arg0**)
- public final boolean **equals**(Object **arg0**)
- protected final void **finalize**()
- public final Class **getDeclaringClass**()
- public final int **hashCode**()
- public final String **name**()
- public final int **ordinal**()
- public String **toString**()
- public static Enum **valueOf**(Class **arg0**, String **arg1**)

Chapter 8

Package com.manofwar.logic.mob

Package Contents *Page*

Classes

8.1 Class Mob

Mob class that represents various mobs in game

8.1.1 Declaration

```
public class Mob
 extends com.manofwar.logic.entities.GameObject
```

8.1.2 Constructor summary

Mob(Rectangle, MobType, int, int, int, Inventory, Velocity) Simply, constructor

8.1.3 Method summary

getHealth() Returns the current health of the mob.
getMaxHealth() Returns the maximum (initial) health of the mob.
getPower() Returns the power of the mob

getType() Returns the type of the mob.
getVelocity() Gives the velocity of the mob
isVisible() Gives the visibility of the mob
takeDamage(int) This method is used to give damage to the mob
update(GameStateManager) Game loop update method

8.1.4 Constructors

- **Mob**

```
public Mob(java.awt.Rectangle boundingBox,MobType type,int power
    ,int health,int maxHealth,com.manofwar.logic.entities.
    Inventory itemsToDrop,com.manofwar.logic.entities.Velocity
    velocity)
```

  - **Description**
    Simply, constructor
  - **Parameters**
    * `boundingBox` – Bounding box of the mob
    * `type` – the type of the mob
    * `power` – power of the mob
    * `health` – health of the mob
    * `maxHealth` – maximum (initial) health of the mob
    * `itemsToDrop` – items to drop from the mob
    * `velocity` – velocity of the mob

8.1.5 Methods

- **getHealth**

```
public int getHealth()
```

  - **Description**
    Returns the current health of the mob.
  - **Returns** – the current health of the mob.

- **getMaxHealth**

```
public int getMaxHealth()
```

  - **Description**
    Returns the maximum (initial) health of the mob.
  - **Returns** – the maximum (initial) health of the mob.

- **getPower**

  ```
  public int getPower()
  ```

  - **Description**
    Returns the power of the mob
  - **Returns** – the power of the mob

- **getType**

  ```
  public MobType getType()
  ```

  - **Description**
    Returns the type of the mob.
  - **Returns** – the type of the mob.

- **getVelocity**

  ```
  public com.manofwar.logic.entities.Velocity getVelocity()
  ```

  - **Description**
    Gives the velocity of the mob
  - **Returns** – the velocity of the mob

- **isVisible**

  ```
  public boolean isVisible()
  ```

  - **Description**
    Gives the visibility of the mob
  - **Returns** – the visibility of the mob

- **takeDamage**

  ```
  public void takeDamage(int amount)
  ```

  - **Description**
    This method is used to give damage to the mob
  - **Parameters**
    - `amount` – The amount of the damage

- **update**

  ```
  public void update(com.manofwar.logic.GameStateManager
      gameStateManager)
  ```

  - **Description**

    Game loop update method

  - **Parameters**

    * `gameStateManager` – GameStateManager object that is in control.

8.1.6 Members inherited from class GameObject

`com.manofwar.logic.entities.GameObject` (in 6.2, page 43)

- `protected` **boundingBox**
- `public Rectangle` **getBoundingBox**`()`
- `public abstract void` **update**`(com.manofwar.logic.GameStateManager` **gameStateManager**`)`

8.2 Class MobGraphicsComponent

8.2.1 Declaration

```
public class MobGraphicsComponent
 extends java.lang.Object
```

8.2.2 Constructor summary

MobGraphicsComponent(Mob)

8.2.3 Method summary

update(GraphicsManager)

8.2.4 Constructors

- **MobGraphicsComponent**

  ```
  public MobGraphicsComponent(Mob mob)
  ```

8.2.5 Methods

- **update**

  ```
  public void update(com.manofwar.utilities.GraphicsManager
      graphicsManager)
  ```

8.3 Class MobInputComponent

MobInputComponent includes a simple AI for the mobs.

8.3.1 Declaration

```
public class MobInputComponent
 extends java.lang.Object
```

8.3.2 Constructor summary

MobInputComponent(Mob) Simply, constructor

8.3.3 Method summary

update(GameStateManager) The method that is executed each iteration of game loop.

8.3.4 Constructors

- **MobInputComponent**

  ```
  public MobInputComponent(Mob mob)
  ```

  - **Description**
    Simply, constructor
  - **Parameters**
    - `mob` – the mob to be composited with this component

8.3.5 Methods

- **update**

  ```
  public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
  ```

  - **Description**
    The method that is executed each iteration of game loop. Manages the fire AI for the mobs.
  - **Parameters**
    - `gameStateManager` – The Game State Manager instance that is in control.

8.4 Class MobPhysicsComponent

The physics component of the mob. Works in coherence with other game objects' physics components. For example, checks collisins.

8.4.1 Declaration

```
public class MobPhysicsComponent
 extends java.lang.Object
```

8.4.2 Constructor summary

MobPhysicsComponent(Mob) Simply, constructor.

8.4.3 Method summary

update(GameStateManager) The method that is executed each iteration of game loop.

8.4.4 Constructors

- **MobPhysicsComponent**

  ```
  public MobPhysicsComponent(Mob mob)
  ```

  - **Description**
    Simply, constructor.
  - **Parameters**
    - `mob` – Mob to be composited with this component

8.4.5 Methods

- **update**

  ```
  public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
  ```

  - **Description**
    The method that is executed each iteration of game loop. Resolves collisions with character and blocks and decides whether to move or not. Includes a very bit of AI.
  - **Parameters**
    - `gameStateManager` – the GameStateManager instance that is in control of the game.

8.5 Class MobType

The enum that contains the various types of the mobs

8.5.1 Declaration

```
public final class MobType
 extends java.lang.Enum
```

8.5.2 Field summary

BOSS_BROWN The boss type that is brown colored.
MOB_GREEN Green normal mob type

8.5.3 Method summary

valueOf(String)
values()

8.5.4 Fields

- `public static final MobType` **MOB_GREEN**
  - Green normal mob type
- `public static final MobType` **BOSS_BROWN**
  - The boss type that is brown colored.

8.5.5 Methods

- **valueOf**

```
public static MobType valueOf(java.lang.String name)
```

- **values**

```
public static MobType[] values()
```

8.5.6 Members inherited from class Enum

`java.lang.Enum`

- `protected final Object` **clone**`() throws CloneNotSupportedException`
- `public final int` **compareTo**`(Enum` **arg0**`)`
- `public final boolean` **equals**`(Object` **arg0**`)`
- `protected final void` **finalize**`()`
- `public final Class` **getDeclaringClass**`()`
- `public final int` **hashCode**`()`
- `public final String` **name**`()`
- `public final int` **ordinal**`()`
- `public String` **toString**`()`
- `public static Enum` **valueOf**`(Class` **arg0**`, String` **arg1**`)`

Chapter 9

Package com.manofwar.logic.squeezer

Package Contents *Page*

Classes

9.1 Class Squeezer

Squeezer game object in the game Hurts the character while colliding with it

9.1.1 Declaration

```
public class Squeezer
 extends com.manofwar.logic.entities.GameObject
```

9.1.2 Constructor summary

Squeezer(Rectangle, Direction) Simply, constructor

9.1.3 Method summary

getDirection() Gives the direction of squeezer
getOriginalBoundingBox()
update(GameStateManager) The method that is executed each iteration of game loop.

9.1.4 Constructors

- **Squeezer**

```
public Squeezer(java.awt.Rectangle boundingBox,com.manofwar.
    logic.Direction direction)
```

  - **Description**
    Simply, constructor
  - **Parameters**
    * `boundingBox` – the bounding box for the squeezer
    * `direction` – the direction squeezing of the squeezer

9.1.5 Methods

- **getDirection**

```
public com.manofwar.logic.Direction getDirection()
```

  - **Description**
    Gives the direction of squeezer
  - **Returns** – the direction of the squeezer

- **getOriginalBoundingBox**

```
public java.awt.Rectangle getOriginalBoundingBox()
```

  - **Returns** – the original bounding box where it is placed. It can be used when the bounding box changes for squeezing process.

- **update**

```
public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

  - **Description**
    The method that is executed each iteration of game loop. Executes its components' update methods.
  - **Parameters**
    * `gameStateManager` – GameStateManager object that is in control.

9.1.6 Members inherited from class GameObject

`com.manofwar.logic.entities.GameObject` (in 6.2, page 43)

- `protected` **boundingBox**
- `public Rectangle` **getBoundingBox**`()`
- `public abstract void` **update**`(com.manofwar.logic.GameStateManager` **gameStateManager**`)`

9.2 Class SqueezerGraphicsComponent

SqueezerGraphicsComponent is the responsible class for the graphics related business of Squeezer. In other words, draws the character in the required position. Works in coherence with GraphicsManager.

9.2.1 Declaration

```
public class SqueezerGraphicsComponent
 extends java.lang.Object
```

9.2.2 Constructor summary

SqueezerGraphicsComponent(Squeezer) Simply, constructor

9.2.3 Method summary

update(GraphicsManager) The method that is executed each iteration of game loop.

9.2.4 Constructors

- **SqueezerGraphicsComponent**

  ```
  public SqueezerGraphicsComponent(Squeezer squeezer)
  ```

  - **Description**
    Simply, constructor
  - **Parameters**
    - `squeezer` – Squeezer to be composited with this component

9.2.5 Methods

- **update**

  ```
  public void update(com.manofwar.utilities.GraphicsManager
      graphicsManager)
  ```

- **Description**
  The method that is executed each iteration of game loop. Requests to draw squeezer graphics.
- **Parameters**
  - `graphicsManager` – The graphics manager that is in control of graphics of game

9.3 Class SqueezerPhysicsComponent

The physics component of the squeezer. Works in coherence with other game objects' physics components.

9.3.1 Declaration

```
public class SqueezerPhysicsComponent
 extends java.lang.Object
```

9.3.2 Constructor summary

SqueezerPhysicsComponent(Squeezer) Simply, constructor.

9.3.3 Method summary

update(GameStateManager) The method that is executed each iteration of game loop.

9.3.4 Constructors

- **SqueezerPhysicsComponent**

```
public SqueezerPhysicsComponent(Squeezer squeezer)
```

  - **Description**
    Simply, constructor.
  - **Parameters**
    - `squeezer` – Squeezer to be composited with this component

9.3.5 Methods

- **update**

```
public void update(com.manofwar.logic.GameStateManager
    gameStateManager)
```

- **Description**

  The method that is executed each iteration of game loop. Responsible for squeezing and hurts the character if colliding with it

- **Parameters**

  * `gameStateManager` – the GameStateManager instance that is in control of the game.

Chapter 10

Package com.manofwar.presentation

Package Contents *Page*

Classes

10.1 Class ButtonListener

10.1.1 Declaration

```
public class ButtonListener
 extends java.lang.Object
```

10.1.2 Constructor summary

ButtonListener()

10.1.3 Method summary

defaultKeysButtonListener(JFrame)
easyKeysButtonListener(JFrame)
hardKeysButtonListener(JFrame)
ijklKeysButtonListener(JFrame)
infoButtonListener(JFrame)
loadButtonButtonListener(JFrame)
normalKeysButtonListener(JFrame)
numPadKeysButtonListener(JFrame)
playButtonListener(JFrame)
quitButtonListener(JFrame)
settingsButtonListener(JFrame)
turnFromInfoListener(JFrame)
turnFromPauseListener(JFrame)
turnFromSettingsListener(JFrame)

10.1.4 Constructors

- **ButtonListener**

```
public ButtonListener()
```

10.1.5 Methods

- **defaultKeysButtonListener**

```
public java.awt.event.ActionListener defaultKeysButtonListener(
    javax.swing.JFrame frame)
```

  - **Parameters**
    - `frame` –
  - **Returns** – ButtonListener which performs essential action

- **easyKeysButtonListener**

```
public java.awt.event.ActionListener easyKeysButtonListener(
    javax.swing.JFrame frame)
```

  - **Parameters**
    - `frame` –
  - **Returns** – ButtonListener which performs essential action

- **hardKeysButtonListener**

```
public java.awt.event.ActionListener hardKeysButtonListener(
    javax.swing.JFrame frame)
```

- **Parameters**
  - `frame` –
- **Returns** – ButtonListener which performs essential action

- **ijklKeysButtonListener**

```
public java.awt.event.ActionListener ijklKeysButtonListener(
    javax.swing.JFrame frame)
```

- **Parameters**
  - `frame` –
- **Returns** – ButtonListener which performs essential action

- **infoButtonListener**

```
public java.awt.event.ActionListener infoButtonListener(javax.
    swing.JFrame frame)
```

- **Parameters**
  - `frame` –
- **Returns** – ButtonListener which performs essential action

- **loadButtonButtonListener**

```
public java.awt.event.ActionListener loadButtonButtonListener(
    javax.swing.JFrame frame)
```

- **Parameters**
  - `frame` –
- **Returns** – ButtonListener which performs essential action

- **normalKeysButtonListener**

```
public java.awt.event.ActionListener normalKeysButtonListener(
    javax.swing.JFrame frame)
```

- **Parameters**
  - `frame` –

- **Returns** – ButtonListener which performs essential action

- **numPadKeysButtonListener**

  ```
  public java.awt.event.ActionListener numPadKeysButtonListener(
      javax.swing.JFrame frame)
  ```

  - **Parameters**
    - `frame` –
  - **Returns** – ButtonListener which performs essential action

- **playButtonListener**

  ```
  public java.awt.event.ActionListener playButtonListener(javax.
      swing.JFrame frame)
  ```

  - **Parameters**
    - `frame` –
  - **Returns** – ButtonListener which performs essential action

- **quitButtonListener**

  ```
  public java.awt.event.ActionListener quitButtonListener(javax.
      swing.JFrame frame)
  ```

  - **Parameters**
    - `frame` –
  - **Returns** – ButtonListener which performs essential action

- **settingsButtonListener**

  ```
  public java.awt.event.ActionListener settingsButtonListener(
      javax.swing.JFrame frame)
  ```

  - **Parameters**
    - `frame` –
  - **Returns** – ButtonListener which performs essential action

- **turnFromInfoListener**

  ```
  public java.awt.event.ActionListener turnFromInfoListener(javax.
      swing.JFrame frame)
  ```

- **Parameters**
  - `frame` –
- **Returns** – ButtonListener which performs essential action

- **turnFromPauseListener**

```
public java.awt.event.ActionListener turnFromPauseListener(javax
    .swing.JFrame frame)
```

- **Parameters**
  - `frame` –
- **Returns** – ButtonListener which performs essential action

- **turnFromSettingsListener**

```
public java.awt.event.ActionListener turnFromSettingsListener(
    javax.swing.JFrame frame)
```

- **Parameters**
  - `frame` –
- **Returns** – ButtonListener which performs essential action

10.2 Class GamePanel

10.2.1 Declaration

```
public class GamePanel
 extends javax.swing.JPanel
```

10.2.2 Constructor summary

GamePanel() constructor for game panel

10.2.3 Method summary

createGamePanel(JFrame)
loadGamePanel(JFrame)
paintComponent(Graphics)
removeGamePanel(JFrame)
saveGame()

10.2.4 Constructors

- **GamePanel**

  ```
  public GamePanel()
  ```

  - **Description**
    constructor for game panel

10.2.5 Methods

- **createGamePanel**

  ```
  public void createGamePanel(javax.swing.JFrame frame)
  ```

  - **Parameters**
    * `frame` – creates game panel and Starts new game

- **loadGamePanel**

  ```
  public void loadGamePanel(javax.swing.JFrame frame) throws java.
      io.FileNotFoundException
  ```

  - **Parameters**
    * `frame` –
  - **Throws**
    * `java.io.FileNotFoundException` – creates load game panel. It's like new game panel but it gets save information from SaveLoad

- **paintComponent**

  ```
  protected void paintComponent(java.awt.Graphics arg0)
  ```

- **removeGamePanel**

  ```
  public void removeGamePanel(javax.swing.JFrame frame)
  ```

  - **Parameters**
    * `frame` – removes game panel from frame

- **saveGame**

  ```
  public void saveGame() throws java.io.
      UnsupportedEncodingException, java.io.FileNotFoundException
  ```

10.2.6 Members inherited from class JPanel

javax.swing.JPanel

- public AccessibleContext **getAccessibleContext**()
- public PanelUI **getUI**()
- public String **getUIClassID**()
- protected String **paramString**()
- public void **setUI**(plaf.PanelUI **arg0**)
- public void **updateUI**()

10.2.7 Members inherited from class JComponent

javax.swing.JComponent

- public void **addAncestorListener**(event.AncestorListener **arg0**)
- public void **addNotify**()
- public synchronized void **addVetoableChangeListener**(java.beans.VetoableChangeListener **arg0**)
- public void **computeVisibleRect**(java.awt.Rectangle **arg0**)
- public boolean **contains**(int **arg0**, int **arg1**)
- public JToolTip **createToolTip**()
- public void **disable**()
- public void **enable**()
- public void **firePropertyChange**(java.lang.String **arg0**, boolean **arg1**, boolean **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, char **arg1**, char **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, int **arg1**, int **arg2**)
- protected void **fireVetoableChange**(java.lang.String **arg0**, java.lang.Object **arg1**, java.lang.Object **arg2**) throws java.beans.PropertyVetoException
- public ActionListener **getActionForKeyStroke**(KeyStroke **arg0**)
- public final ActionMap **getActionMap**()
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public AncestorListener **getAncestorListeners**()
- public boolean **getAutoscrolls**()
- public int **getBaseline**(int **arg0**, int **arg1**)
- public Component.BaselineResizeBehavior **getBaselineResizeBehavior**()
- public Border **getBorder**()
- public Rectangle **getBounds**(java.awt.Rectangle **arg0**)
- public final Object **getClientProperty**(java.lang.Object **arg0**)
- protected Graphics **getComponentGraphics**(java.awt.Graphics **arg0**)
- public JPopupMenu **getComponentPopupMenu**()
- public int **getConditionForKeyStroke**(KeyStroke **arg0**)
- public int **getDebugGraphicsOptions**()
- public static Locale **getDefaultLocale**()
- public FontMetrics **getFontMetrics**(java.awt.Font **arg0**)
- public Graphics **getGraphics**()
- public int **getHeight**()
- public boolean **getInheritsPopupMenu**()
- public final InputMap **getInputMap**()
- public final InputMap **getInputMap**(int **arg0**)
- public InputVerifier **getInputVerifier**()
- public Insets **getInsets**()
- public Insets **getInsets**(java.awt.Insets **arg0**)
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Point **getLocation**(java.awt.Point **arg0**)

- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public Component **getNextFocusableComponent**()
- public Point **getPopupLocation**(java.awt.event.MouseEvent **arg0**)
- public Dimension **getPreferredSize**()
- public KeyStroke **getRegisteredKeyStrokes**()
- public JRootPane **getRootPane**()
- public Dimension **getSize**(java.awt.Dimension **arg0**)
- public Point **getToolTipLocation**(java.awt.event.MouseEvent **arg0**)
- public String **getToolTipText**()
- public String **getToolTipText**(java.awt.event.MouseEvent **arg0**)
- public Container **getTopLevelAncestor**()
- public TransferHandler **getTransferHandler**()
- public String **getUIClassID**()
- public boolean **getVerifyInputWhenFocusTarget**()
- public synchronized VetoableChangeListener **getVetoableChangeListeners**()
- public Rectangle **getVisibleRect**()
- public int **getWidth**()
- public int **getX**()
- public int **getY**()
- public void **grabFocus**()
- public void **hide**()
- public boolean **isDoubleBuffered**()
- public static boolean **isLightweightComponent**(java.awt.Component **arg0**)
- public boolean **isManagingFocus**()
- public boolean **isOpaque**()
- public boolean **isOptimizedDrawingEnabled**()
- public final boolean **isPaintingForPrint**()
- protected boolean **isPaintingOrigin**()
- public boolean **isPaintingTile**()
- public boolean **isRequestFocusEnabled**()
- public boolean **isValidateRoot**()
- protected **listenerList**
- public void **paint**(java.awt.Graphics **arg0**)
- protected void **paintBorder**(java.awt.Graphics **arg0**)
- protected void **paintChildren**(java.awt.Graphics **arg0**)
- protected void **paintComponent**(java.awt.Graphics **arg0**)
- public void **paintImmediately**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **paintImmediately**(java.awt.Rectangle **arg0**)
- protected String **paramString**()
- public void **print**(java.awt.Graphics **arg0**)
- public void **printAll**(java.awt.Graphics **arg0**)
- protected void **printBorder**(java.awt.Graphics **arg0**)
- protected void **printChildren**(java.awt.Graphics **arg0**)
- protected void **printComponent**(java.awt.Graphics **arg0**)
- protected void **processComponentKeyEvent**(java.awt.event.KeyEvent **arg0**)
- protected boolean **processKeyBinding**(KeyStroke **arg0**, java.awt.event.KeyEvent **arg1**, int **arg2**, boolean **arg3**)
- protected void **processKeyEvent**(java.awt.event.KeyEvent **arg0**)
- protected void **processMouseEvent**(java.awt.event.MouseEvent **arg0**)
- protected void **processMouseMotionEvent**(java.awt.event.MouseEvent **arg0**)
- public final void **putClientProperty**(java.lang.Object **arg0**, java.lang.Object **arg1**)
- public void **registerKeyboardAction**(java.awt.event.ActionListener **arg0**, KeyStroke **arg1**, int **arg2**)

- public void **registerKeyboardAction**(java.awt.event.ActionListener **arg0**, java.lang.String **arg1**, KeyStroke **arg2**, int **arg3**)
- public void **removeAncestorListener**(event.AncestorListener **arg0**)
- public void **removeNotify**()
- public synchronized void **removeVetoableChangeListener**(java.beans.VetoableChangeListener **arg0**)
- public void **repaint**(long **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**)
- public void **repaint**(java.awt.Rectangle **arg0**)
- public boolean **requestDefaultFocus**()
- public void **requestFocus**()
- public boolean **requestFocus**(boolean **arg0**)
- public boolean **requestFocusInWindow**()
- protected boolean **requestFocusInWindow**(boolean **arg0**)
- public void **resetKeyboardActions**()
- public void **reshape**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **revalidate**()
- public void **scrollRectToVisible**(java.awt.Rectangle **arg0**)
- public final void **setActionMap**(ActionMap **arg0**)
- public void **setAlignmentX**(float **arg0**)
- public void **setAlignmentY**(float **arg0**)
- public void **setAutoscrolls**(boolean **arg0**)
- public void **setBackground**(java.awt.Color **arg0**)
- public void **setBorder**(border.Border **arg0**)
- public void **setComponentPopupMenu**(JPopupMenu **arg0**)
- public void **setDebugGraphicsOptions**(int **arg0**)
- public static void **setDefaultLocale**(java.util.Locale **arg0**)
- public void **setDoubleBuffered**(boolean **arg0**)
- public void **setEnabled**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFont**(java.awt.Font **arg0**)
- public void **setForeground**(java.awt.Color **arg0**)
- public void **setInheritsPopupMenu**(boolean **arg0**)
- public final void **setInputMap**(int **arg0**, InputMap **arg1**)
- public void **setInputVerifier**(InputVerifier **arg0**)
- public void **setMaximumSize**(java.awt.Dimension **arg0**)
- public void **setMinimumSize**(java.awt.Dimension **arg0**)
- public void **setNextFocusableComponent**(java.awt.Component **arg0**)
- public void **setOpaque**(boolean **arg0**)
- public void **setPreferredSize**(java.awt.Dimension **arg0**)
- public void **setRequestFocusEnabled**(boolean **arg0**)
- public void **setToolTipText**(java.lang.String **arg0**)
- public void **setTransferHandler**(TransferHandler **arg0**)
- protected void **setUI**(plaf.ComponentUI **arg0**)
- public void **setVerifyInputWhenFocusTarget**(boolean **arg0**)
- public void **setVisible**(boolean **arg0**)
- public static final **TOOL_TIP_TEXT_KEY**
- protected transient **ui**
- public static final **UNDEFINED_CONDITION**
- public void **unregisterKeyboardAction**(KeyStroke **arg0**)
- public void **update**(java.awt.Graphics **arg0**)
- public void **updateUI**()
- public static final **WHEN_ANCESTOR_OF_FOCUSED_COMPONENT**
- public static final **WHEN_FOCUSED**
- public static final **WHEN_IN_FOCUSED_WINDOW**

10.2.8 Members inherited from class Container

java.awt.Container

- public Component **add**(Component **arg0**)
- public Component **add**(Component **arg0**, int **arg1**)
- public void **add**(Component **arg0**, java.lang.Object **arg1**)
- public void **add**(Component **arg0**, java.lang.Object **arg1**, int **arg2**)
- public Component **add**(java.lang.String **arg0**, Component **arg1**)
- public synchronized void **addContainerListener**(event.ContainerListener **arg0**)
- protected void **addImpl**(Component **arg0**, java.lang.Object **arg1**, int **arg2**)
- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **applyComponentOrientation**(ComponentOrientation **arg0**)
- public boolean **areFocusTraversalKeysSet**(int **arg0**)
- public int **countComponents**()
- public void **deliverEvent**(Event **arg0**)
- public void **doLayout**()
- public Component **findComponentAt**(int **arg0**, int **arg1**)
- public Component **findComponentAt**(Point **arg0**)
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public Component **getComponent**(int **arg0**)
- public Component **getComponentAt**(int **arg0**, int **arg1**)
- public Component **getComponentAt**(Point **arg0**)
- public int **getComponentCount**()
- public Component **getComponents**()
- public int **getComponentZOrder**(Component **arg0**)
- public synchronized ContainerListener **getContainerListeners**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public FocusTraversalPolicy **getFocusTraversalPolicy**()
- public Insets **getInsets**()
- public LayoutManager **getLayout**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public Point **getMousePosition**(boolean **arg0**) throws HeadlessException
- public Dimension **getPreferredSize**()
- public Insets **insets**()
- public void **invalidate**()
- public boolean **isAncestorOf**(Component **arg0**)
- public boolean **isFocusCycleRoot**()
- public boolean **isFocusCycleRoot**(Container **arg0**)
- public final boolean **isFocusTraversalPolicyProvider**()
- public boolean **isFocusTraversalPolicySet**()
- public boolean **isValidateRoot**()
- public void **layout**()
- public void **list**(java.io.PrintStream **arg0**, int **arg1**)
- public void **list**(java.io.PrintWriter **arg0**, int **arg1**)
- public Component **locate**(int **arg0**, int **arg1**)
- public Dimension **minimumSize**()
- public void **paint**(Graphics **arg0**)
- public void **paintComponents**(Graphics **arg0**)
- protected String **paramString**()
- public Dimension **preferredSize**()

- public void **print**(Graphics **arg0**)
- public void **printComponents**(Graphics **arg0**)
- protected void **processContainerEvent**(event.ContainerEvent **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- public void **remove**(Component **arg0**)
- public void **remove**(int **arg0**)
- public void **removeAll**()
- public synchronized void **removeContainerListener**(event.ContainerListener **arg0**)
- public void **removeNotify**()
- public void **setComponentZOrder**(Component **arg0**, int **arg1**)
- public void **setFocusCycleRoot**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFocusTraversalPolicy**(FocusTraversalPolicy **arg0**)
- public final void **setFocusTraversalPolicyProvider**(boolean **arg0**)
- public void **setFont**(Font **arg0**)
- public void **setLayout**(LayoutManager **arg0**)
- public void **transferFocusDownCycle**()
- public void **update**(Graphics **arg0**)
- public void **validate**()
- protected void **validateTree**()

10.2.9 Members inherited from class Component

java.awt.Component

- protected **accessibleContext**
- public boolean **action**(Event **arg0**, java.lang.Object **arg1**)
- public void **add**(PopupMenu **arg0**)
- public synchronized void **addComponentListener**(event.ComponentListener **arg0**)
- public synchronized void **addFocusListener**(event.FocusListener **arg0**)
- public void **addHierarchyBoundsListener**(event.HierarchyBoundsListener **arg0**)
- public void **addHierarchyListener**(event.HierarchyListener **arg0**)
- public synchronized void **addInputMethodListener**(event.InputMethodListener **arg0**)
- public synchronized void **addKeyListener**(event.KeyListener **arg0**)
- public synchronized void **addMouseListener**(event.MouseListener **arg0**)
- public synchronized void **addMouseMotionListener**(event.MouseMotionListener **arg0**)
- public synchronized void **addMouseWheelListener**(event.MouseWheelListener **arg0**)
- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **applyComponentOrientation**(ComponentOrientation **arg0**)
- public boolean **areFocusTraversalKeysSet**(int **arg0**)
- public static final **BOTTOM_ALIGNMENT**
- public Rectangle **bounds**()
- public static final **CENTER_ALIGNMENT**
- public int **checkImage**(Image **arg0**, image.ImageObserver **arg1**)
- public int **checkImage**(Image **arg0**, int **arg1**, int **arg2**, image.ImageObserver **arg3**)
- protected AWTEvent **coalesceEvents**(AWTEvent **arg0**, AWTEvent **arg1**)
- public boolean **contains**(int **arg0**, int **arg1**)
- public boolean **contains**(Point **arg0**)
- public Image **createImage**(image.ImageProducer **arg0**)
- public Image **createImage**(int **arg0**, int **arg1**)
- public VolatileImage **createVolatileImage**(int **arg0**, int **arg1**)

- public VolatileImage **createVolatileImage**(int **arg0**, int **arg1**, ImageCapabilities **arg2**) throws AWTException
- public void **deliverEvent**(Event **arg0**)
- public void **disable**()
- protected final void **disableEvents**(long **arg0**)
- public final void **dispatchEvent**(AWTEvent **arg0**)
- public void **doLayout**()
- public void **enable**()
- public void **enable**(boolean **arg0**)
- protected final void **enableEvents**(long **arg0**)
- public void **enableInputMethods**(boolean **arg0**)
- protected void **firePropertyChange**(java.lang.String **arg0**, boolean **arg1**, boolean **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, byte **arg1**, byte **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, char **arg1**, char **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, double **arg1**, double **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, float **arg1**, float **arg2**)
- protected void **firePropertyChange**(java.lang.String **arg0**, int **arg1**, int **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, long **arg1**, long **arg2**)
- protected void **firePropertyChange**(java.lang.String **arg0**, java.lang.Object **arg1**, java.lang.Object **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, short **arg1**, short **arg2**)
- public AccessibleContext **getAccessibleContext**()
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public Color **getBackground**()
- public int **getBaseline**(int **arg0**, int **arg1**)
- public Component.BaselineResizeBehavior **getBaselineResizeBehavior**()
- public Rectangle **getBounds**()
- public Rectangle **getBounds**(Rectangle **arg0**)
- public ColorModel **getColorModel**()
- public Component **getComponentAt**(int **arg0**, int **arg1**)
- public Component **getComponentAt**(Point **arg0**)
- public synchronized ComponentListener **getComponentListeners**()
- public ComponentOrientation **getComponentOrientation**()
- public Cursor **getCursor**()
- public synchronized DropTarget **getDropTarget**()
- public Container **getFocusCycleRootAncestor**()
- public synchronized FocusListener **getFocusListeners**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public boolean **getFocusTraversalKeysEnabled**()
- public Font **getFont**()
- public FontMetrics **getFontMetrics**(Font **arg0**)
- public Color **getForeground**()
- public Graphics **getGraphics**()
- public GraphicsConfiguration **getGraphicsConfiguration**()
- public int **getHeight**()
- public synchronized HierarchyBoundsListener **getHierarchyBoundsListeners**()
- public synchronized HierarchyListener **getHierarchyListeners**()
- public boolean **getIgnoreRepaint**()
- public InputContext **getInputContext**()
- public synchronized InputMethodListener **getInputMethodListeners**()
- public InputMethodRequests **getInputMethodRequests**()
- public synchronized KeyListener **getKeyListeners**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Locale **getLocale**()

- public Point **getLocation**()
- public Point **getLocation**(Point **arg0**)
- public Point **getLocationOnScreen**()
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public synchronized MouseListener **getMouseListeners**()
- public synchronized MouseMotionListener **getMouseMotionListeners**()
- public Point **getMousePosition**() throws HeadlessException
- public synchronized MouseWheelListener **getMouseWheelListeners**()
- public String **getName**()
- public Container **getParent**()
- public ComponentPeer **getPeer**()
- public Dimension **getPreferredSize**()
- public PropertyChangeListener **getPropertyChangeListeners**()
- public PropertyChangeListener **getPropertyChangeListeners**(java.lang.String **arg0**)
- public Dimension **getSize**()
- public Dimension **getSize**(Dimension **arg0**)
- public Toolkit **getToolkit**()
- public final Object **getTreeLock**()
- public int **getWidth**()
- public int **getX**()
- public int **getY**()
- public boolean **gotFocus**(Event **arg0**, java.lang.Object **arg1**)
- public boolean **handleEvent**(Event **arg0**)
- public boolean **hasFocus**()
- public void **hide**()
- public boolean **imageUpdate**(Image **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**, int **arg5**)
- public boolean **inside**(int **arg0**, int **arg1**)
- public void **invalidate**()
- public boolean **isBackgroundSet**()
- public boolean **isCursorSet**()
- public boolean **isDisplayable**()
- public boolean **isDoubleBuffered**()
- public boolean **isEnabled**()
- public boolean **isFocusable**()
- public boolean **isFocusCycleRoot**(Container **arg0**)
- public boolean **isFocusOwner**()
- public boolean **isFocusTraversable**()
- public boolean **isFontSet**()
- public boolean **isForegroundSet**()
- public boolean **isLightweight**()
- public boolean **isMaximumSizeSet**()
- public boolean **isMinimumSizeSet**()
- public boolean **isOpaque**()
- public boolean **isPreferredSizeSet**()
- public boolean **isShowing**()
- public boolean **isValid**()
- public boolean **isVisible**()
- public boolean **keyDown**(Event **arg0**, int **arg1**)
- public boolean **keyUp**(Event **arg0**, int **arg1**)
- public void **layout**()
- public static final **LEFT_ALIGNMENT**
- public void **list**()
- public void **list**(java.io.PrintStream **arg0**)
- public void **list**(java.io.PrintStream **arg0**, int **arg1**)

- public void **list**(java.io.PrintWriter **arg0**)
- public void **list**(java.io.PrintWriter **arg0**, int **arg1**)
- public Component **locate**(int **arg0**, int **arg1**)
- public Point **location**()
- public boolean **lostFocus**(Event **arg0**, java.lang.Object **arg1**)
- public Dimension **minimumSize**()
- public boolean **mouseDown**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseDrag**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseEnter**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseExit**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseMove**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseUp**(Event **arg0**, int **arg1**, int **arg2**)
- public void **move**(int **arg0**, int **arg1**)
- public void **nextFocus**()
- public void **paint**(Graphics **arg0**)
- public void **paintAll**(Graphics **arg0**)
- protected String **paramString**()
- public boolean **postEvent**(Event **arg0**)
- public Dimension **preferredSize**()
- public boolean **prepareImage**(Image **arg0**, image.ImageObserver **arg1**)
- public boolean **prepareImage**(Image **arg0**, int **arg1**, int **arg2**, image.ImageObserver **arg3**)
- public void **print**(Graphics **arg0**)
- public void **printAll**(Graphics **arg0**)
- protected void **processComponentEvent**(event.ComponentEvent **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- protected void **processFocusEvent**(event.FocusEvent **arg0**)
- protected void **processHierarchyBoundsEvent**(event.HierarchyEvent **arg0**)
- protected void **processHierarchyEvent**(event.HierarchyEvent **arg0**)
- protected void **processInputMethodEvent**(event.InputMethodEvent **arg0**)
- protected void **processKeyEvent**(event.KeyEvent **arg0**)
- protected void **processMouseEvent**(event.MouseEvent **arg0**)
- protected void **processMouseMotionEvent**(event.MouseEvent **arg0**)
- protected void **processMouseWheelEvent**(event.MouseWheelEvent **arg0**)
- public void **remove**(MenuComponent **arg0**)
- public synchronized void **removeComponentListener**(event.ComponentListener **arg0**)
- public synchronized void **removeFocusListener**(event.FocusListener **arg0**)
- public void **removeHierarchyBoundsListener**(event.HierarchyBoundsListener **arg0**)
- public void **removeHierarchyListener**(event.HierarchyListener **arg0**)
- public synchronized void **removeInputMethodListener**(event.InputMethodListener **arg0**)
- public synchronized void **removeKeyListener**(event.KeyListener **arg0**)
- public synchronized void **removeMouseListener**(event.MouseListener **arg0**)
- public synchronized void **removeMouseMotionListener**(event.MouseMotionListener **arg0**)
- public synchronized void **removeMouseWheelListener**(event.MouseWheelListener **arg0**)
- public void **removeNotify**()
- public void **removePropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **removePropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **repaint**()
- public void **repaint**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **repaint**(long **arg0**)
- public void **repaint**(long **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**)

- public void **requestFocus**()
- protected boolean **requestFocus**(boolean **arg0**)
- public boolean **requestFocusInWindow**()
- protected boolean **requestFocusInWindow**(boolean **arg0**)
- public void **reshape**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **resize**(Dimension **arg0**)
- public void **resize**(int **arg0**, int **arg1**)
- public void **revalidate**()
- public static final **RIGHT_ALIGNMENT**
- public void **setBackground**(Color **arg0**)
- public void **setBounds**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **setBounds**(Rectangle **arg0**)
- public void **setComponentOrientation**(ComponentOrientation **arg0**)
- public void **setCursor**(Cursor **arg0**)
- public synchronized void **setDropTarget**(dnd.DropTarget **arg0**)
- public void **setEnabled**(boolean **arg0**)
- public void **setFocusable**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFocusTraversalKeysEnabled**(boolean **arg0**)
- public void **setFont**(Font **arg0**)
- public void **setForeground**(Color **arg0**)
- public void **setIgnoreRepaint**(boolean **arg0**)
- public void **setLocale**(java.util.Locale **arg0**)
- public void **setLocation**(int **arg0**, int **arg1**)
- public void **setLocation**(Point **arg0**)
- public void **setMaximumSize**(Dimension **arg0**)
- public void **setMinimumSize**(Dimension **arg0**)
- public void **setName**(java.lang.String **arg0**)
- public void **setPreferredSize**(Dimension **arg0**)
- public void **setSize**(Dimension **arg0**)
- public void **setSize**(int **arg0**, int **arg1**)
- public void **setVisible**(boolean **arg0**)
- public void **show**()
- public void **show**(boolean **arg0**)
- public Dimension **size**()
- public static final **TOP_ALIGNMENT**
- public String **toString**()
- public void **transferFocus**()
- public void **transferFocusBackward**()
- public void **transferFocusUpCycle**()
- public void **update**(Graphics **arg0**)
- public void **validate**()

10.3 Class InfoPanel

10.3.1 Declaration

```
public class InfoPanel
 extends java.lang.Object
```

10.3.2 Constructor summary

InfoPanel()

10.3.3 Method summary

createInfoPanel(JFrame)
removeInfoPanel(JFrame)

10.3.4 Constructors

- **InfoPanel**

```
public InfoPanel()
```

10.3.5 Methods

- **createInfoPanel**

```
public static void createInfoPanel(javax.swing.JFrame frame)
```

  - **Parameters**
    - `frame` – creates information panel

- **removeInfoPanel**

```
public void removeInfoPanel(javax.swing.JFrame frame)
```

  - **Parameters**
    - `frame` – removes information screen from frame

10.4 Class InformationBar

10.4.1 Declaration

```
public class InformationBar
 extends javax.swing.JPanel
```

10.4.2 Constructor summary

InformationBar() constructor for information bar creates information bar and label shows information about games move keys and difficulty

10.4.3 Constructors

- **InformationBar**

```
public InformationBar()
```

– **Description**

constructor for information bar creates information bar and label shows information about games move keys and difficulty

10.4.4 Members inherited from class JPanel

`javax.swing.JPanel`

- `public AccessibleContext` **getAccessibleContext**`()`
- `public PanelUI` **getUI**`()`
- `public String` **getUIClassID**`()`
- `protected String` **paramString**`()`
- `public void` **setUI**`(plaf.PanelUI` **arg0**`)`
- `public void` **updateUI**`()`

10.4.5 Members inherited from class JComponent

`javax.swing.JComponent`

- `public void` **addAncestorListener**`(event.AncestorListener` **arg0**`)`
- `public void` **addNotify**`()`
- `public synchronized void` **addVetoableChangeListener**`(java.beans.VetoableChangeListener` **arg0**`)`
- `public void` **computeVisibleRect**`(java.awt.Rectangle` **arg0**`)`
- `public boolean` **contains**`(int` **arg0**`, int` **arg1**`)`
- `public JToolTip` **createToolTip**`()`
- `public void` **disable**`()`
- `public void` **enable**`()`
- `public void` **firePropertyChange**`(java.lang.String` **arg0**`, boolean` **arg1**`, boolean` **arg2**`)`
- `public void` **firePropertyChange**`(java.lang.String` **arg0**`, char` **arg1**`, char` **arg2**`)`
- `public void` **firePropertyChange**`(java.lang.String` **arg0**`, int` **arg1**`, int` **arg2**`)`
- `protected void` **fireVetoableChange**`(java.lang.String` **arg0**`, java.lang.Object` **arg1**`, java.lang.Object` **arg2**`) throws java.beans.PropertyVetoException`
- `public ActionListener` **getActionForKeyStroke**`(KeyStroke` **arg0**`)`
- `public final ActionMap` **getActionMap**`()`
- `public float` **getAlignmentX**`()`
- `public float` **getAlignmentY**`()`
- `public AncestorListener` **getAncestorListeners**`()`
- `public boolean` **getAutoscrolls**`()`
- `public int` **getBaseline**`(int` **arg0**`, int` **arg1**`)`
- `public Component.BaselineResizeBehavior` **getBaselineResizeBehavior**`()`
- `public Border` **getBorder**`()`
- `public Rectangle` **getBounds**`(java.awt.Rectangle` **arg0**`)`
- `public final Object` **getClientProperty**`(java.lang.Object` **arg0**`)`
- `protected Graphics` **getComponentGraphics**`(java.awt.Graphics` **arg0**`)`
- `public JPopupMenu` **getComponentPopupMenu**`()`
- `public int` **getConditionForKeyStroke**`(KeyStroke` **arg0**`)`
- `public int` **getDebugGraphicsOptions**`()`
- `public static Locale` **getDefaultLocale**`()`
- `public FontMetrics` **getFontMetrics**`(java.awt.Font` **arg0**`)`
- `public Graphics` **getGraphics**`()`
- `public int` **getHeight**`()`
- `public boolean` **getInheritsPopupMenu**`()`
- `public final InputMap` **getInputMap**`()`
- `public final InputMap` **getInputMap**`(int` **arg0**`)`

- public InputVerifier **getInputVerifier**()
- public Insets **getInsets**()
- public Insets **getInsets**(java.awt.Insets **arg0**)
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Point **getLocation**(java.awt.Point **arg0**)
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public Component **getNextFocusableComponent**()
- public Point **getPopupLocation**(java.awt.event.MouseEvent **arg0**)
- public Dimension **getPreferredSize**()
- public KeyStroke **getRegisteredKeyStrokes**()
- public JRootPane **getRootPane**()
- public Dimension **getSize**(java.awt.Dimension **arg0**)
- public Point **getToolTipLocation**(java.awt.event.MouseEvent **arg0**)
- public String **getToolTipText**()
- public String **getToolTipText**(java.awt.event.MouseEvent **arg0**)
- public Container **getTopLevelAncestor**()
- public TransferHandler **getTransferHandler**()
- public String **getUIClassID**()
- public boolean **getVerifyInputWhenFocusTarget**()
- public synchronized VetoableChangeListener **getVetoableChangeListeners**()
- public Rectangle **getVisibleRect**()
- public int **getWidth**()
- public int **getX**()
- public int **getY**()
- public void **grabFocus**()
- public void **hide**()
- public boolean **isDoubleBuffered**()
- public static boolean **isLightweightComponent**(java.awt.Component **arg0**)
- public boolean **isManagingFocus**()
- public boolean **isOpaque**()
- public boolean **isOptimizedDrawingEnabled**()
- public final boolean **isPaintingForPrint**()
- protected boolean **isPaintingOrigin**()
- public boolean **isPaintingTile**()
- public boolean **isRequestFocusEnabled**()
- public boolean **isValidateRoot**()
- protected **listenerList**
- public void **paint**(java.awt.Graphics **arg0**)
- protected void **paintBorder**(java.awt.Graphics **arg0**)
- protected void **paintChildren**(java.awt.Graphics **arg0**)
- protected void **paintComponent**(java.awt.Graphics **arg0**)
- public void **paintImmediately**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **paintImmediately**(java.awt.Rectangle **arg0**)
- protected String **paramString**()
- public void **print**(java.awt.Graphics **arg0**)
- public void **printAll**(java.awt.Graphics **arg0**)
- protected void **printBorder**(java.awt.Graphics **arg0**)
- protected void **printChildren**(java.awt.Graphics **arg0**)
- protected void **printComponent**(java.awt.Graphics **arg0**)
- protected void **processComponentKeyEvent**(java.awt.event.KeyEvent **arg0**)
- protected boolean **processKeyBinding**(KeyStroke **arg0**, java.awt.event.KeyEvent **arg1**, int **arg2**, boolean **arg3**)
- protected void **processKeyEvent**(java.awt.event.KeyEvent **arg0**)
- protected void **processMouseEvent**(java.awt.event.MouseEvent **arg0**)
- protected void **processMouseMotionEvent**(java.awt.event.MouseEvent **arg0**)

- public final void **putClientProperty**(java.lang.Object **arg0**, java.lang.Object **arg1**)
- public void **registerKeyboardAction**(java.awt.event.ActionListener **arg0**, KeyStroke **arg1**, int **arg2**)
- public void **registerKeyboardAction**(java.awt.event.ActionListener **arg0**, java.lang.String **arg1**, KeyStroke **arg2**, int **arg3**)
- public void **removeAncestorListener**(event.AncestorListener **arg0**)
- public void **removeNotify**()
- public synchronized void **removeVetoableChangeListener**(java.beans.VetoableChangeListener **arg0**)
- public void **repaint**(long **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**)
- public void **repaint**(java.awt.Rectangle **arg0**)
- public boolean **requestDefaultFocus**()
- public void **requestFocus**()
- public boolean **requestFocus**(boolean **arg0**)
- public boolean **requestFocusInWindow**()
- protected boolean **requestFocusInWindow**(boolean **arg0**)
- public void **resetKeyboardActions**()
- public void **reshape**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **revalidate**()
- public void **scrollRectToVisible**(java.awt.Rectangle **arg0**)
- public final void **setActionMap**(ActionMap **arg0**)
- public void **setAlignmentX**(float **arg0**)
- public void **setAlignmentY**(float **arg0**)
- public void **setAutoscrolls**(boolean **arg0**)
- public void **setBackground**(java.awt.Color **arg0**)
- public void **setBorder**(border.Border **arg0**)
- public void **setComponentPopupMenu**(JPopupMenu **arg0**)
- public void **setDebugGraphicsOptions**(int **arg0**)
- public static void **setDefaultLocale**(java.util.Locale **arg0**)
- public void **setDoubleBuffered**(boolean **arg0**)
- public void **setEnabled**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFont**(java.awt.Font **arg0**)
- public void **setForeground**(java.awt.Color **arg0**)
- public void **setInheritsPopupMenu**(boolean **arg0**)
- public final void **setInputMap**(int **arg0**, InputMap **arg1**)
- public void **setInputVerifier**(InputVerifier **arg0**)
- public void **setMaximumSize**(java.awt.Dimension **arg0**)
- public void **setMinimumSize**(java.awt.Dimension **arg0**)
- public void **setNextFocusableComponent**(java.awt.Component **arg0**)
- public void **setOpaque**(boolean **arg0**)
- public void **setPreferredSize**(java.awt.Dimension **arg0**)
- public void **setRequestFocusEnabled**(boolean **arg0**)
- public void **setToolTipText**(java.lang.String **arg0**)
- public void **setTransferHandler**(TransferHandler **arg0**)
- protected void **setUI**(plaf.ComponentUI **arg0**)
- public void **setVerifyInputWhenFocusTarget**(boolean **arg0**)
- public void **setVisible**(boolean **arg0**)
- public static final **TOOL_TIP_TEXT_KEY**
- protected transient **ui**
- public static final **UNDEFINED_CONDITION**
- public void **unregisterKeyboardAction**(KeyStroke **arg0**)
- public void **update**(java.awt.Graphics **arg0**)
- public void **updateUI**()
- public static final **WHEN_ANCESTOR_OF_FOCUSED_COMPONENT**
- public static final **WHEN_FOCUSED**
- public static final **WHEN_IN_FOCUSED_WINDOW**

10.4.6 Members inherited from class Container

java.awt.Container

- public Component **add**(Component **arg0**)
- public Component **add**(Component **arg0**, int **arg1**)
- public void **add**(Component **arg0**, java.lang.Object **arg1**)
- public void **add**(Component **arg0**, java.lang.Object **arg1**, int **arg2**)
- public Component **add**(java.lang.String **arg0**, Component **arg1**)
- public synchronized void **addContainerListener**(event.ContainerListener **arg0**)
- protected void **addImpl**(Component **arg0**, java.lang.Object **arg1**, int **arg2**)
- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **applyComponentOrientation**(ComponentOrientation **arg0**)
- public boolean **areFocusTraversalKeysSet**(int **arg0**)
- public int **countComponents**()
- public void **deliverEvent**(Event **arg0**)
- public void **doLayout**()
- public Component **findComponentAt**(int **arg0**, int **arg1**)
- public Component **findComponentAt**(Point **arg0**)
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public Component **getComponent**(int **arg0**)
- public Component **getComponentAt**(int **arg0**, int **arg1**)
- public Component **getComponentAt**(Point **arg0**)
- public int **getComponentCount**()
- public Component **getComponents**()
- public int **getComponentZOrder**(Component **arg0**)
- public synchronized ContainerListener **getContainerListeners**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public FocusTraversalPolicy **getFocusTraversalPolicy**()
- public Insets **getInsets**()
- public LayoutManager **getLayout**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public Point **getMousePosition**(boolean **arg0**) throws HeadlessException
- public Dimension **getPreferredSize**()
- public Insets **insets**()
- public void **invalidate**()
- public boolean **isAncestorOf**(Component **arg0**)
- public boolean **isFocusCycleRoot**()
- public boolean **isFocusCycleRoot**(Container **arg0**)
- public final boolean **isFocusTraversalPolicyProvider**()
- public boolean **isFocusTraversalPolicySet**()
- public boolean **isValidateRoot**()
- public void **layout**()
- public void **list**(java.io.PrintStream **arg0**, int **arg1**)
- public void **list**(java.io.PrintWriter **arg0**, int **arg1**)
- public Component **locate**(int **arg0**, int **arg1**)
- public Dimension **minimumSize**()
- public void **paint**(Graphics **arg0**)
- public void **paintComponents**(Graphics **arg0**)
- protected String **paramString**()
- public Dimension **preferredSize**()

- public void **print**(Graphics **arg0**)
- public void **printComponents**(Graphics **arg0**)
- protected void **processContainerEvent**(event.ContainerEvent **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- public void **remove**(Component **arg0**)
- public void **remove**(int **arg0**)
- public void **removeAll**()
- public synchronized void **removeContainerListener**(event.ContainerListener **arg0**)
- public void **removeNotify**()
- public void **setComponentZOrder**(Component **arg0**, int **arg1**)
- public void **setFocusCycleRoot**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFocusTraversalPolicy**(FocusTraversalPolicy **arg0**)
- public final void **setFocusTraversalPolicyProvider**(boolean **arg0**)
- public void **setFont**(Font **arg0**)
- public void **setLayout**(LayoutManager **arg0**)
- public void **transferFocusDownCycle**()
- public void **update**(Graphics **arg0**)
- public void **validate**()
- protected void **validateTree**()

10.4.7 Members inherited from class Component

java.awt.Component

- protected **accessibleContext**
- public boolean **action**(Event **arg0**, java.lang.Object **arg1**)
- public void **add**(PopupMenu **arg0**)
- public synchronized void **addComponentListener**(event.ComponentListener **arg0**)
- public synchronized void **addFocusListener**(event.FocusListener **arg0**)
- public void **addHierarchyBoundsListener**(event.HierarchyBoundsListener **arg0**)
- public void **addHierarchyListener**(event.HierarchyListener **arg0**)
- public synchronized void **addInputMethodListener**(event.InputMethodListener **arg0**)
- public synchronized void **addKeyListener**(event.KeyListener **arg0**)
- public synchronized void **addMouseListener**(event.MouseListener **arg0**)
- public synchronized void **addMouseMotionListener**(event.MouseMotionListener **arg0**)
- public synchronized void **addMouseWheelListener**(event.MouseWheelListener **arg0**)
- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **applyComponentOrientation**(ComponentOrientation **arg0**)
- public boolean **areFocusTraversalKeysSet**(int **arg0**)
- public static final **BOTTOM_ALIGNMENT**
- public Rectangle **bounds**()
- public static final **CENTER_ALIGNMENT**
- public int **checkImage**(Image **arg0**, image.ImageObserver **arg1**)
- public int **checkImage**(Image **arg0**, int **arg1**, int **arg2**, image.ImageObserver **arg3**)
- protected AWTEvent **coalesceEvents**(AWTEvent **arg0**, AWTEvent **arg1**)
- public boolean **contains**(int **arg0**, int **arg1**)
- public boolean **contains**(Point **arg0**)
- public Image **createImage**(image.ImageProducer **arg0**)
- public Image **createImage**(int **arg0**, int **arg1**)
- public VolatileImage **createVolatileImage**(int **arg0**, int **arg1**)

- public VolatileImage **createVolatileImage**(int **arg0**, int **arg1**, ImageCapabilities **arg2**) throws AWTException
- public void **deliverEvent**(Event **arg0**)
- public void **disable**()
- protected final void **disableEvents**(long **arg0**)
- public final void **dispatchEvent**(AWTEvent **arg0**)
- public void **doLayout**()
- public void **enable**()
- public void **enable**(boolean **arg0**)
- protected final void **enableEvents**(long **arg0**)
- public void **enableInputMethods**(boolean **arg0**)
- protected void **firePropertyChange**(java.lang.String **arg0**, boolean **arg1**, boolean **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, byte **arg1**, byte **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, char **arg1**, char **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, double **arg1**, double **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, float **arg1**, float **arg2**)
- protected void **firePropertyChange**(java.lang.String **arg0**, int **arg1**, int **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, long **arg1**, long **arg2**)
- protected void **firePropertyChange**(java.lang.String **arg0**, java.lang.Object **arg1**, java.lang.Object **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, short **arg1**, short **arg2**)
- public AccessibleContext **getAccessibleContext**()
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public Color **getBackground**()
- public int **getBaseline**(int **arg0**, int **arg1**)
- public Component.BaselineResizeBehavior **getBaselineResizeBehavior**()
- public Rectangle **getBounds**()
- public Rectangle **getBounds**(Rectangle **arg0**)
- public ColorModel **getColorModel**()
- public Component **getComponentAt**(int **arg0**, int **arg1**)
- public Component **getComponentAt**(Point **arg0**)
- public synchronized ComponentListener **getComponentListeners**()
- public ComponentOrientation **getComponentOrientation**()
- public Cursor **getCursor**()
- public synchronized DropTarget **getDropTarget**()
- public Container **getFocusCycleRootAncestor**()
- public synchronized FocusListener **getFocusListeners**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public boolean **getFocusTraversalKeysEnabled**()
- public Font **getFont**()
- public FontMetrics **getFontMetrics**(Font **arg0**)
- public Color **getForeground**()
- public Graphics **getGraphics**()
- public GraphicsConfiguration **getGraphicsConfiguration**()
- public int **getHeight**()
- public synchronized HierarchyBoundsListener **getHierarchyBoundsListeners**()
- public synchronized HierarchyListener **getHierarchyListeners**()
- public boolean **getIgnoreRepaint**()
- public InputContext **getInputContext**()
- public synchronized InputMethodListener **getInputMethodListeners**()
- public InputMethodRequests **getInputMethodRequests**()
- public synchronized KeyListener **getKeyListeners**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Locale **getLocale**()

- public Point **getLocation**()
- public Point **getLocation**(Point **arg0**)
- public Point **getLocationOnScreen**()
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public synchronized MouseListener **getMouseListeners**()
- public synchronized MouseMotionListener **getMouseMotionListeners**()
- public Point **getMousePosition**() throws HeadlessException
- public synchronized MouseWheelListener **getMouseWheelListeners**()
- public String **getName**()
- public Container **getParent**()
- public ComponentPeer **getPeer**()
- public Dimension **getPreferredSize**()
- public PropertyChangeListener **getPropertyChangeListeners**()
- public PropertyChangeListener **getPropertyChangeListeners**(java.lang.String **arg0**)
- public Dimension **getSize**()
- public Dimension **getSize**(Dimension **arg0**)
- public Toolkit **getToolkit**()
- public final Object **getTreeLock**()
- public int **getWidth**()
- public int **getX**()
- public int **getY**()
- public boolean **gotFocus**(Event **arg0**, java.lang.Object **arg1**)
- public boolean **handleEvent**(Event **arg0**)
- public boolean **hasFocus**()
- public void **hide**()
- public boolean **imageUpdate**(Image **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**, int **arg5**)
- public boolean **inside**(int **arg0**, int **arg1**)
- public void **invalidate**()
- public boolean **isBackgroundSet**()
- public boolean **isCursorSet**()
- public boolean **isDisplayable**()
- public boolean **isDoubleBuffered**()
- public boolean **isEnabled**()
- public boolean **isFocusable**()
- public boolean **isFocusCycleRoot**(Container **arg0**)
- public boolean **isFocusOwner**()
- public boolean **isFocusTraversable**()
- public boolean **isFontSet**()
- public boolean **isForegroundSet**()
- public boolean **isLightweight**()
- public boolean **isMaximumSizeSet**()
- public boolean **isMinimumSizeSet**()
- public boolean **isOpaque**()
- public boolean **isPreferredSizeSet**()
- public boolean **isShowing**()
- public boolean **isValid**()
- public boolean **isVisible**()
- public boolean **keyDown**(Event **arg0**, int **arg1**)
- public boolean **keyUp**(Event **arg0**, int **arg1**)
- public void **layout**()
- public static final **LEFT_ALIGNMENT**
- public void **list**()
- public void **list**(java.io.PrintStream **arg0**)
- public void **list**(java.io.PrintStream **arg0**, int **arg1**)

- public void **list**(java.io.PrintWriter **arg0**)
- public void **list**(java.io.PrintWriter **arg0**, int **arg1**)
- public Component **locate**(int **arg0**, int **arg1**)
- public Point **location**()
- public boolean **lostFocus**(Event **arg0**, java.lang.Object **arg1**)
- public Dimension **minimumSize**()
- public boolean **mouseDown**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseDrag**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseEnter**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseExit**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseMove**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseUp**(Event **arg0**, int **arg1**, int **arg2**)
- public void **move**(int **arg0**, int **arg1**)
- public void **nextFocus**()
- public void **paint**(Graphics **arg0**)
- public void **paintAll**(Graphics **arg0**)
- protected String **paramString**()
- public boolean **postEvent**(Event **arg0**)
- public Dimension **preferredSize**()
- public boolean **prepareImage**(Image **arg0**, image.ImageObserver **arg1**)
- public boolean **prepareImage**(Image **arg0**, int **arg1**, int **arg2**, image.ImageObserver **arg3**)
- public void **print**(Graphics **arg0**)
- public void **printAll**(Graphics **arg0**)
- protected void **processComponentEvent**(event.ComponentEvent **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- protected void **processFocusEvent**(event.FocusEvent **arg0**)
- protected void **processHierarchyBoundsEvent**(event.HierarchyEvent **arg0**)
- protected void **processHierarchyEvent**(event.HierarchyEvent **arg0**)
- protected void **processInputMethodEvent**(event.InputMethodEvent **arg0**)
- protected void **processKeyEvent**(event.KeyEvent **arg0**)
- protected void **processMouseEvent**(event.MouseEvent **arg0**)
- protected void **processMouseMotionEvent**(event.MouseEvent **arg0**)
- protected void **processMouseWheelEvent**(event.MouseWheelEvent **arg0**)
- public void **remove**(MenuComponent **arg0**)
- public synchronized void **removeComponentListener**(event.ComponentListener **arg0**)
- public synchronized void **removeFocusListener**(event.FocusListener **arg0**)
- public void **removeHierarchyBoundsListener**(event.HierarchyBoundsListener **arg0**)
- public void **removeHierarchyListener**(event.HierarchyListener **arg0**)
- public synchronized void **removeInputMethodListener**(event.InputMethodListener **arg0**)
- public synchronized void **removeKeyListener**(event.KeyListener **arg0**)
- public synchronized void **removeMouseListener**(event.MouseListener **arg0**)
- public synchronized void **removeMouseMotionListener**(event.MouseMotionListener **arg0**)
- public synchronized void **removeMouseWheelListener**(event.MouseWheelListener **arg0**)
- public void **removeNotify**()
- public void **removePropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **removePropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **repaint**()
- public void **repaint**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **repaint**(long **arg0**)
- public void **repaint**(long **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**)

- public void **requestFocus**()
- protected boolean **requestFocus**(boolean **arg0**)
- public boolean **requestFocusInWindow**()
- protected boolean **requestFocusInWindow**(boolean **arg0**)
- public void **reshape**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **resize**(Dimension **arg0**)
- public void **resize**(int **arg0**, int **arg1**)
- public void **revalidate**()
- public static final **RIGHT_ALIGNMENT**
- public void **setBackground**(Color **arg0**)
- public void **setBounds**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **setBounds**(Rectangle **arg0**)
- public void **setComponentOrientation**(ComponentOrientation **arg0**)
- public void **setCursor**(Cursor **arg0**)
- public synchronized void **setDropTarget**(dnd.DropTarget **arg0**)
- public void **setEnabled**(boolean **arg0**)
- public void **setFocusable**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFocusTraversalKeysEnabled**(boolean **arg0**)
- public void **setFont**(Font **arg0**)
- public void **setForeground**(Color **arg0**)
- public void **setIgnoreRepaint**(boolean **arg0**)
- public void **setLocale**(java.util.Locale **arg0**)
- public void **setLocation**(int **arg0**, int **arg1**)
- public void **setLocation**(Point **arg0**)
- public void **setMaximumSize**(Dimension **arg0**)
- public void **setMinimumSize**(Dimension **arg0**)
- public void **setName**(java.lang.String **arg0**)
- public void **setPreferredSize**(Dimension **arg0**)
- public void **setSize**(Dimension **arg0**)
- public void **setSize**(int **arg0**, int **arg1**)
- public void **setVisible**(boolean **arg0**)
- public void **show**()
- public void **show**(boolean **arg0**)
- public Dimension **size**()
- public static final **TOP_ALIGNMENT**
- public String **toString**()
- public void **transferFocus**()
- public void **transferFocusBackward**()
- public void **transferFocusUpCycle**()
- public void **update**(Graphics **arg0**)
- public void **validate**()

10.5 Class LoadGame

10.5.1 Declaration

public class LoadGame
extends java.lang.Object

10.5.2 Constructor summary

LoadGame()

10.5.3 Method summary

createSettingsPanel(JFrame)
removeSettingsPanel(JFrame)

10.5.4 Constructors

- **LoadGame**

```
public LoadGame()
```

10.5.5 Methods

- **createSettingsPanel**

```
public void createSettingsPanel(javax.swing.JFrame frame)
```

- **removeSettingsPanel**

```
public void removeSettingsPanel(javax.swing.JFrame frame)
```

10.6 Class MainFrame

10.6.1 Declaration

```
public class MainFrame
 extends javax.swing.JFrame
```

10.6.2 Constructor summary

MainFrame()

10.6.3 Method summary

main(String[]) Starts game

10.6.4 Constructors

- **MainFrame**

```
public MainFrame()
```

10.6.5 Methods

- **main**

```
public static void main(java.lang.String[] args)
```

  - **Description**
    Starts game
  - **Parameters**
    * `args` –

10.6.6 Members inherited from class JFrame

`javax.swing.JFrame`

- `protected` **accessibleContext**
- `protected void` **addImpl**`(java.awt.Component` **arg0**`, java.lang.Object` **arg1**`, int` **arg2**`)`
- `protected JRootPane` **createRootPane**`()`
- `public static final` **EXIT_ON_CLOSE**
- `protected void` **frameInit**`()`
- `public AccessibleContext` **getAccessibleContext**`()`
- `public Container` **getContentPane**`()`
- `public int` **getDefaultCloseOperation**`()`
- `public Component` **getGlassPane**`()`
- `public Graphics` **getGraphics**`()`
- `public JMenuBar` **getJMenuBar**`()`
- `public JLayeredPane` **getLayeredPane**`()`
- `public JRootPane` **getRootPane**`()`
- `public TransferHandler` **getTransferHandler**`()`
- `public static boolean` **isDefaultLookAndFeelDecorated**`()`
- `protected boolean` **isRootPaneCheckingEnabled**`()`
- `protected String` **paramString**`()`
- `protected void` **processWindowEvent**`(java.awt.event.WindowEvent` **arg0**`)`
- `public void` **remove**`(java.awt.Component` **arg0**`)`
- `public void` **repaint**`(long` **arg0**`, int` **arg1**`, int` **arg2**`, int` **arg3**`, int` **arg4**`)`
- `protected` **rootPane**
- `protected` **rootPaneCheckingEnabled**
- `public void` **setContentPane**`(java.awt.Container` **arg0**`)`
- `public void` **setDefaultCloseOperation**`(int` **arg0**`)`
- `public static void` **setDefaultLookAndFeelDecorated**`(boolean` **arg0**`)`
- `public void` **setGlassPane**`(java.awt.Component` **arg0**`)`
- `public void` **setIconImage**`(java.awt.Image` **arg0**`)`
- `public void` **setJMenuBar**`(JMenuBar` **arg0**`)`
- `public void` **setLayeredPane**`(JLayeredPane` **arg0**`)`
- `public void` **setLayout**`(java.awt.LayoutManager` **arg0**`)`
- `protected void` **setRootPane**`(JRootPane` **arg0**`)`
- `protected void` **setRootPaneCheckingEnabled**`(boolean` **arg0**`)`
- `public void` **setTransferHandler**`(TransferHandler` **arg0**`)`
- `public void` **update**`(java.awt.Graphics` **arg0**`)`

10.6.7 Members inherited from class Frame

java.awt.Frame

- public void **addNotify**()
- public static final **CROSSHAIR_CURSOR**
- public static final **DEFAULT_CURSOR**
- public static final **E_RESIZE_CURSOR**
- public AccessibleContext **getAccessibleContext**()
- public int **getCursorType**()
- public int **getExtendedState**()
- public static Frame **getFrames**()
- public Image **getIconImage**()
- public Rectangle **getMaximizedBounds**()
- public MenuBar **getMenuBar**()
- public synchronized int **getState**()
- public String **getTitle**()
- public static final **HAND_CURSOR**
- public static final **ICONIFIED**
- public boolean **isResizable**()
- public boolean **isUndecorated**()
- public static final **MAXIMIZED_BOTH**
- public static final **MAXIMIZED_HORIZ**
- public static final **MAXIMIZED_VERT**
- public static final **MOVE_CURSOR**
- public static final **N_RESIZE_CURSOR**
- public static final **NE_RESIZE_CURSOR**
- public static final **NORMAL**
- public static final **NW_RESIZE_CURSOR**
- protected String **paramString**()
- public void **remove**(MenuComponent **arg0**)
- public void **removeNotify**()
- public static final **S_RESIZE_CURSOR**
- public static final **SE_RESIZE_CURSOR**
- public void **setBackground**(Color **arg0**)
- public void **setCursor**(int **arg0**)
- public void **setExtendedState**(int **arg0**)
- public void **setIconImage**(Image **arg0**)
- public void **setMaximizedBounds**(Rectangle **arg0**)
- public void **setMenuBar**(MenuBar **arg0**)
- public void **setOpacity**(float **arg0**)
- public void **setResizable**(boolean **arg0**)
- public void **setShape**(Shape **arg0**)
- public synchronized void **setState**(int **arg0**)
- public void **setTitle**(java.lang.String **arg0**)
- public void **setUndecorated**(boolean **arg0**)
- public static final **SW_RESIZE_CURSOR**
- public static final **TEXT_CURSOR**
- public static final **W_RESIZE_CURSOR**
- public static final **WAIT_CURSOR**

10.6.8 Members inherited from class Window

java.awt.Window

- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public synchronized void **addWindowFocusListener**(event.WindowFocusListener **arg0**)
- public synchronized void **addWindowListener**(event.WindowListener **arg0**)
- public synchronized void **addWindowStateListener**(event.WindowStateListener **arg0**)
- public void **applyResourceBundle**(java.util.ResourceBundle **arg0**)
- public void **applyResourceBundle**(java.lang.String **arg0**)
- public void **createBufferStrategy**(int **arg0**)
- public void **createBufferStrategy**(int **arg0**, BufferCapabilities **arg1**) throws AWTException
- public void **dispose**()
- public AccessibleContext **getAccessibleContext**()
- public Color **getBackground**()
- public BufferStrategy **getBufferStrategy**()
- public boolean **getFocusableWindowState**()
- public final Container **getFocusCycleRootAncestor**()
- public Component **getFocusOwner**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public List **getIconImages**()
- public InputContext **getInputContext**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Locale **getLocale**()
- public Dialog.ModalExclusionType **getModalExclusionType**()
- public Component **getMostRecentFocusOwner**()
- public float **getOpacity**()
- public Window **getOwnedWindows**()
- public Window **getOwner**()
- public static Window **getOwnerlessWindows**()
- public Shape **getShape**()
- public Toolkit **getToolkit**()
- public Window.Type **getType**()
- public final String **getWarningString**()
- public synchronized WindowFocusListener **getWindowFocusListeners**()
- public synchronized WindowListener **getWindowListeners**()
- public static Window **getWindows**()
- public synchronized WindowStateListener **getWindowStateListeners**()
- public void **hide**()
- public boolean **isActive**()
- public final boolean **isAlwaysOnTop**()
- public boolean **isAlwaysOnTopSupported**()
- public boolean **isAutoRequestFocus**()
- public final boolean **isFocusableWindow**()
- public final boolean **isFocusCycleRoot**()
- public boolean **isFocused**()
- public boolean **isLocationByPlatform**()
- public boolean **isOpaque**()
- public boolean **isShowing**()
- public boolean **isValidateRoot**()
- public void **pack**()

- public void **paint**(Graphics **arg0**)
- public boolean **postEvent**(Event **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- protected void **processWindowEvent**(event.WindowEvent **arg0**)
- protected void **processWindowFocusEvent**(event.WindowEvent **arg0**)
- protected void **processWindowStateEvent**(event.WindowEvent **arg0**)
- public void **removeNotify**()
- public synchronized void **removeWindowFocusListener**(event.WindowFocusListener **arg0**)
- public synchronized void **removeWindowListener**(event.WindowListener **arg0**)
- public synchronized void **removeWindowStateListener**(event.WindowStateListener **arg0**)
- public void **reshape**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public final void **setAlwaysOnTop**(boolean **arg0**) throws java.lang.SecurityException
- public void **setAutoRequestFocus**(boolean **arg0**)
- public void **setBackground**(Color **arg0**)
- public void **setBounds**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **setBounds**(Rectangle **arg0**)
- public void **setCursor**(Cursor **arg0**)
- public void **setFocusableWindowState**(boolean **arg0**)
- public final void **setFocusCycleRoot**(boolean **arg0**)
- public void **setIconImage**(Image **arg0**)
- public synchronized void **setIconImages**(java.util.List **arg0**)
- public void **setLocation**(int **arg0**, int **arg1**)
- public void **setLocation**(Point **arg0**)
- public void **setLocationByPlatform**(boolean **arg0**)
- public void **setLocationRelativeTo**(Component **arg0**)
- public void **setMinimumSize**(Dimension **arg0**)
- public void **setModalExclusionType**(Dialog.ModalExclusionType **arg0**)
- public void **setOpacity**(float **arg0**)
- public void **setShape**(Shape **arg0**)
- public void **setSize**(Dimension **arg0**)
- public void **setSize**(int **arg0**, int **arg1**)
- public void **setType**(Window.Type **arg0**)
- public void **setVisible**(boolean **arg0**)
- public void **show**()
- public void **toBack**()
- public void **toFront**()

10.6.9 Members inherited from class Container

java.awt.Container

- public Component **add**(Component **arg0**)
- public Component **add**(Component **arg0**, int **arg1**)
- public void **add**(Component **arg0**, java.lang.Object **arg1**)
- public void **add**(Component **arg0**, java.lang.Object **arg1**, int **arg2**)
- public Component **add**(java.lang.String **arg0**, Component **arg1**)
- public synchronized void **addContainerListener**(event.ContainerListener **arg0**)
- protected void **addImpl**(Component **arg0**, java.lang.Object **arg1**, int **arg2**)
- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **applyComponentOrientation**(ComponentOrientation **arg0**)
- public boolean **areFocusTraversalKeysSet**(int **arg0**)
- public int **countComponents**()
- public void **deliverEvent**(Event **arg0**)
- public void **doLayout**()
- public Component **findComponentAt**(int **arg0**, int **arg1**)
- public Component **findComponentAt**(Point **arg0**)
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public Component **getComponent**(int **arg0**)
- public Component **getComponentAt**(int **arg0**, int **arg1**)
- public Component **getComponentAt**(Point **arg0**)
- public int **getComponentCount**()
- public Component **getComponents**()
- public int **getComponentZOrder**(Component **arg0**)
- public synchronized ContainerListener **getContainerListeners**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public FocusTraversalPolicy **getFocusTraversalPolicy**()
- public Insets **getInsets**()
- public LayoutManager **getLayout**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public Point **getMousePosition**(boolean **arg0**) throws HeadlessException
- public Dimension **getPreferredSize**()
- public Insets **insets**()
- public void **invalidate**()
- public boolean **isAncestorOf**(Component **arg0**)
- public boolean **isFocusCycleRoot**()
- public boolean **isFocusCycleRoot**(Container **arg0**)
- public final boolean **isFocusTraversalPolicyProvider**()
- public boolean **isFocusTraversalPolicySet**()
- public boolean **isValidateRoot**()
- public void **layout**()
- public void **list**(java.io.PrintStream **arg0**, int **arg1**)
- public void **list**(java.io.PrintWriter **arg0**, int **arg1**)
- public Component **locate**(int **arg0**, int **arg1**)
- public Dimension **minimumSize**()
- public void **paint**(Graphics **arg0**)
- public void **paintComponents**(Graphics **arg0**)
- protected String **paramString**()
- public Dimension **preferredSize**()

- public void **print**(Graphics **arg0**)
- public void **printComponents**(Graphics **arg0**)
- protected void **processContainerEvent**(event.ContainerEvent **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- public void **remove**(Component **arg0**)
- public void **remove**(int **arg0**)
- public void **removeAll**()
- public synchronized void **removeContainerListener**(event.ContainerListener **arg0**)
- public void **removeNotify**()
- public void **setComponentZOrder**(Component **arg0**, int **arg1**)
- public void **setFocusCycleRoot**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFocusTraversalPolicy**(FocusTraversalPolicy **arg0**)
- public final void **setFocusTraversalPolicyProvider**(boolean **arg0**)
- public void **setFont**(Font **arg0**)
- public void **setLayout**(LayoutManager **arg0**)
- public void **transferFocusDownCycle**()
- public void **update**(Graphics **arg0**)
- public void **validate**()
- protected void **validateTree**()

10.6.10 Members inherited from class Component

java.awt.Component

- protected **accessibleContext**
- public boolean **action**(Event **arg0**, java.lang.Object **arg1**)
- public void **add**(PopupMenu **arg0**)
- public synchronized void **addComponentListener**(event.ComponentListener **arg0**)
- public synchronized void **addFocusListener**(event.FocusListener **arg0**)
- public void **addHierarchyBoundsListener**(event.HierarchyBoundsListener **arg0**)
- public void **addHierarchyListener**(event.HierarchyListener **arg0**)
- public synchronized void **addInputMethodListener**(event.InputMethodListener **arg0**)
- public synchronized void **addKeyListener**(event.KeyListener **arg0**)
- public synchronized void **addMouseListener**(event.MouseListener **arg0**)
- public synchronized void **addMouseMotionListener**(event.MouseMotionListener **arg0**)
- public synchronized void **addMouseWheelListener**(event.MouseWheelListener **arg0**)
- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **applyComponentOrientation**(ComponentOrientation **arg0**)
- public boolean **areFocusTraversalKeysSet**(int **arg0**)
- public static final **BOTTOM_ALIGNMENT**
- public Rectangle **bounds**()
- public static final **CENTER_ALIGNMENT**
- public int **checkImage**(Image **arg0**, image.ImageObserver **arg1**)
- public int **checkImage**(Image **arg0**, int **arg1**, int **arg2**, image.ImageObserver **arg3**)
- protected AWTEvent **coalesceEvents**(AWTEvent **arg0**, AWTEvent **arg1**)
- public boolean **contains**(int **arg0**, int **arg1**)
- public boolean **contains**(Point **arg0**)
- public Image **createImage**(image.ImageProducer **arg0**)
- public Image **createImage**(int **arg0**, int **arg1**)
- public VolatileImage **createVolatileImage**(int **arg0**, int **arg1**)

- public VolatileImage **createVolatileImage**(int **arg0**, int **arg1**, ImageCapabilities **arg2**) throws AWTException
- public void **deliverEvent**(Event **arg0**)
- public void **disable**()
- protected final void **disableEvents**(long **arg0**)
- public final void **dispatchEvent**(AWTEvent **arg0**)
- public void **doLayout**()
- public void **enable**()
- public void **enable**(boolean **arg0**)
- protected final void **enableEvents**(long **arg0**)
- public void **enableInputMethods**(boolean **arg0**)
- protected void **firePropertyChange**(java.lang.String **arg0**, boolean **arg1**, boolean **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, byte **arg1**, byte **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, char **arg1**, char **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, double **arg1**, double **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, float **arg1**, float **arg2**)
- protected void **firePropertyChange**(java.lang.String **arg0**, int **arg1**, int **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, long **arg1**, long **arg2**)
- protected void **firePropertyChange**(java.lang.String **arg0**, java.lang.Object **arg1**, java.lang.Object **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, short **arg1**, short **arg2**)
- public AccessibleContext **getAccessibleContext**()
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public Color **getBackground**()
- public int **getBaseline**(int **arg0**, int **arg1**)
- public Component.BaselineResizeBehavior **getBaselineResizeBehavior**()
- public Rectangle **getBounds**()
- public Rectangle **getBounds**(Rectangle **arg0**)
- public ColorModel **getColorModel**()
- public Component **getComponentAt**(int **arg0**, int **arg1**)
- public Component **getComponentAt**(Point **arg0**)
- public synchronized ComponentListener **getComponentListeners**()
- public ComponentOrientation **getComponentOrientation**()
- public Cursor **getCursor**()
- public synchronized DropTarget **getDropTarget**()
- public Container **getFocusCycleRootAncestor**()
- public synchronized FocusListener **getFocusListeners**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public boolean **getFocusTraversalKeysEnabled**()
- public Font **getFont**()
- public FontMetrics **getFontMetrics**(Font **arg0**)
- public Color **getForeground**()
- public Graphics **getGraphics**()
- public GraphicsConfiguration **getGraphicsConfiguration**()
- public int **getHeight**()
- public synchronized HierarchyBoundsListener **getHierarchyBoundsListeners**()
- public synchronized HierarchyListener **getHierarchyListeners**()
- public boolean **getIgnoreRepaint**()
- public InputContext **getInputContext**()
- public synchronized InputMethodListener **getInputMethodListeners**()
- public InputMethodRequests **getInputMethodRequests**()
- public synchronized KeyListener **getKeyListeners**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Locale **getLocale**()

- public Point **getLocation**()
- public Point **getLocation**(Point **arg0**)
- public Point **getLocationOnScreen**()
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public synchronized MouseListener **getMouseListeners**()
- public synchronized MouseMotionListener **getMouseMotionListeners**()
- public Point **getMousePosition**() throws HeadlessException
- public synchronized MouseWheelListener **getMouseWheelListeners**()
- public String **getName**()
- public Container **getParent**()
- public ComponentPeer **getPeer**()
- public Dimension **getPreferredSize**()
- public PropertyChangeListener **getPropertyChangeListeners**()
- public PropertyChangeListener **getPropertyChangeListeners**(java.lang.String **arg0**)
- public Dimension **getSize**()
- public Dimension **getSize**(Dimension **arg0**)
- public Toolkit **getToolkit**()
- public final Object **getTreeLock**()
- public int **getWidth**()
- public int **getX**()
- public int **getY**()
- public boolean **gotFocus**(Event **arg0**, java.lang.Object **arg1**)
- public boolean **handleEvent**(Event **arg0**)
- public boolean **hasFocus**()
- public void **hide**()
- public boolean **imageUpdate**(Image **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**, int **arg5**)
- public boolean **inside**(int **arg0**, int **arg1**)
- public void **invalidate**()
- public boolean **isBackgroundSet**()
- public boolean **isCursorSet**()
- public boolean **isDisplayable**()
- public boolean **isDoubleBuffered**()
- public boolean **isEnabled**()
- public boolean **isFocusable**()
- public boolean **isFocusCycleRoot**(Container **arg0**)
- public boolean **isFocusOwner**()
- public boolean **isFocusTraversable**()
- public boolean **isFontSet**()
- public boolean **isForegroundSet**()
- public boolean **isLightweight**()
- public boolean **isMaximumSizeSet**()
- public boolean **isMinimumSizeSet**()
- public boolean **isOpaque**()
- public boolean **isPreferredSizeSet**()
- public boolean **isShowing**()
- public boolean **isValid**()
- public boolean **isVisible**()
- public boolean **keyDown**(Event **arg0**, int **arg1**)
- public boolean **keyUp**(Event **arg0**, int **arg1**)
- public void **layout**()
- public static final **LEFT_ALIGNMENT**
- public void **list**()
- public void **list**(java.io.PrintStream **arg0**)
- public void **list**(java.io.PrintStream **arg0**, int **arg1**)

- public void **list**(java.io.PrintWriter **arg0**)
- public void **list**(java.io.PrintWriter **arg0**, int **arg1**)
- public Component **locate**(int **arg0**, int **arg1**)
- public Point **location**()
- public boolean **lostFocus**(Event **arg0**, java.lang.Object **arg1**)
- public Dimension **minimumSize**()
- public boolean **mouseDown**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseDrag**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseEnter**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseExit**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseMove**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseUp**(Event **arg0**, int **arg1**, int **arg2**)
- public void **move**(int **arg0**, int **arg1**)
- public void **nextFocus**()
- public void **paint**(Graphics **arg0**)
- public void **paintAll**(Graphics **arg0**)
- protected String **paramString**()
- public boolean **postEvent**(Event **arg0**)
- public Dimension **preferredSize**()
- public boolean **prepareImage**(Image **arg0**, image.ImageObserver **arg1**)
- public boolean **prepareImage**(Image **arg0**, int **arg1**, int **arg2**, image.ImageObserver **arg3**)
- public void **print**(Graphics **arg0**)
- public void **printAll**(Graphics **arg0**)
- protected void **processComponentEvent**(event.ComponentEvent **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- protected void **processFocusEvent**(event.FocusEvent **arg0**)
- protected void **processHierarchyBoundsEvent**(event.HierarchyEvent **arg0**)
- protected void **processHierarchyEvent**(event.HierarchyEvent **arg0**)
- protected void **processInputMethodEvent**(event.InputMethodEvent **arg0**)
- protected void **processKeyEvent**(event.KeyEvent **arg0**)
- protected void **processMouseEvent**(event.MouseEvent **arg0**)
- protected void **processMouseMotionEvent**(event.MouseEvent **arg0**)
- protected void **processMouseWheelEvent**(event.MouseWheelEvent **arg0**)
- public void **remove**(MenuComponent **arg0**)
- public synchronized void **removeComponentListener**(event.ComponentListener **arg0**)
- public synchronized void **removeFocusListener**(event.FocusListener **arg0**)
- public void **removeHierarchyBoundsListener**(event.HierarchyBoundsListener **arg0**)
- public void **removeHierarchyListener**(event.HierarchyListener **arg0**)
- public synchronized void **removeInputMethodListener**(event.InputMethodListener **arg0**)
- public synchronized void **removeKeyListener**(event.KeyListener **arg0**)
- public synchronized void **removeMouseListener**(event.MouseListener **arg0**)
- public synchronized void **removeMouseMotionListener**(event.MouseMotionListener **arg0**)
- public synchronized void **removeMouseWheelListener**(event.MouseWheelListener **arg0**)
- public void **removeNotify**()
- public void **removePropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **removePropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **repaint**()
- public void **repaint**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **repaint**(long **arg0**)
- public void **repaint**(long **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**)

- public void **requestFocus**()
- protected boolean **requestFocus**(boolean **arg0**)
- public boolean **requestFocusInWindow**()
- protected boolean **requestFocusInWindow**(boolean **arg0**)
- public void **reshape**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **resize**(Dimension **arg0**)
- public void **resize**(int **arg0**, int **arg1**)
- public void **revalidate**()
- public static final **RIGHT_ALIGNMENT**
- public void **setBackground**(Color **arg0**)
- public void **setBounds**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **setBounds**(Rectangle **arg0**)
- public void **setComponentOrientation**(ComponentOrientation **arg0**)
- public void **setCursor**(Cursor **arg0**)
- public synchronized void **setDropTarget**(dnd.DropTarget **arg0**)
- public void **setEnabled**(boolean **arg0**)
- public void **setFocusable**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFocusTraversalKeysEnabled**(boolean **arg0**)
- public void **setFont**(Font **arg0**)
- public void **setForeground**(Color **arg0**)
- public void **setIgnoreRepaint**(boolean **arg0**)
- public void **setLocale**(java.util.Locale **arg0**)
- public void **setLocation**(int **arg0**, int **arg1**)
- public void **setLocation**(Point **arg0**)
- public void **setMaximumSize**(Dimension **arg0**)
- public void **setMinimumSize**(Dimension **arg0**)
- public void **setName**(java.lang.String **arg0**)
- public void **setPreferredSize**(Dimension **arg0**)
- public void **setSize**(Dimension **arg0**)
- public void **setSize**(int **arg0**, int **arg1**)
- public void **setVisible**(boolean **arg0**)
- public void **show**()
- public void **show**(boolean **arg0**)
- public Dimension **size**()
- public static final **TOP_ALIGNMENT**
- public String **toString**()
- public void **transferFocus**()
- public void **transferFocusBackward**()
- public void **transferFocusUpCycle**()
- public void **update**(Graphics **arg0**)
- public void **validate**()

10.7 Class MainMenuPanel

10.7.1 Declaration

public class MainMenuPanel
extends javax.swing.JFrame

10.7.2 Constructor summary

MainMenuPanel() constructor for main menu panel

10.7.3 Method summary

createFrame(JFrame)
createMainPanel(JFrame)
removeMainPanel(JFrame)

10.7.4 Constructors

- **MainMenuPanel**

```
public MainMenuPanel()
```

  - **Description**
    constructor for main menu panel

10.7.5 Methods

- **createFrame**

```
public void createFrame(javax.swing.JFrame frame)
```

  - **Parameters**
    * `frame` – it specifies frame

- **createMainPanel**

```
public static void createMainPanel(javax.swing.JFrame frame)
```

  - **Parameters**
    * `frame` – it creates main panel

- **removeMainPanel**

```
public static void removeMainPanel(javax.swing.JFrame frame)
```

  - **Parameters**
    * `frame` – removes main panel from frame

10.7.6 Members inherited from class JFrame

`javax.swing.JFrame`

- `protected` **accessibleContext**
- `protected void` **addImpl**`(java.awt.Component` **arg0**`, java.lang.Object` **arg1**`, int` **arg2**`)`
- `protected JRootPane` **createRootPane**`()`

- public static final **EXIT_ON_CLOSE**
- protected void **frameInit**()
- public AccessibleContext **getAccessibleContext**()
- public Container **getContentPane**()
- public int **getDefaultCloseOperation**()
- public Component **getGlassPane**()
- public Graphics **getGraphics**()
- public JMenuBar **getJMenuBar**()
- public JLayeredPane **getLayeredPane**()
- public JRootPane **getRootPane**()
- public TransferHandler **getTransferHandler**()
- public static boolean **isDefaultLookAndFeelDecorated**()
- protected boolean **isRootPaneCheckingEnabled**()
- protected String **paramString**()
- protected void **processWindowEvent**(java.awt.event.WindowEvent **arg0**)
- public void **remove**(java.awt.Component **arg0**)
- public void **repaint**(long **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**)
- protected **rootPane**
- protected **rootPaneCheckingEnabled**
- public void **setContentPane**(java.awt.Container **arg0**)
- public void **setDefaultCloseOperation**(int **arg0**)
- public static void **setDefaultLookAndFeelDecorated**(boolean **arg0**)
- public void **setGlassPane**(java.awt.Component **arg0**)
- public void **setIconImage**(java.awt.Image **arg0**)
- public void **setJMenuBar**(JMenuBar **arg0**)
- public void **setLayeredPane**(JLayeredPane **arg0**)
- public void **setLayout**(java.awt.LayoutManager **arg0**)
- protected void **setRootPane**(JRootPane **arg0**)
- protected void **setRootPaneCheckingEnabled**(boolean **arg0**)
- public void **setTransferHandler**(TransferHandler **arg0**)
- public void **update**(java.awt.Graphics **arg0**)

10.7.7 Members inherited from class Frame

java.awt.Frame

- public void **addNotify**()
- public static final **CROSSHAIR_CURSOR**
- public static final **DEFAULT_CURSOR**
- public static final **E_RESIZE_CURSOR**
- public AccessibleContext **getAccessibleContext**()
- public int **getCursorType**()
- public int **getExtendedState**()
- public static Frame **getFrames**()
- public Image **getIconImage**()
- public Rectangle **getMaximizedBounds**()
- public MenuBar **getMenuBar**()
- public synchronized int **getState**()
- public String **getTitle**()
- public static final **HAND_CURSOR**
- public static final **ICONIFIED**
- public boolean **isResizable**()
- public boolean **isUndecorated**()
- public static final **MAXIMIZED_BOTH**
- public static final **MAXIMIZED_HORIZ**
- public static final **MAXIMIZED_VERT**
- public static final **MOVE_CURSOR**

- public static final **N_RESIZE_CURSOR**
- public static final **NE_RESIZE_CURSOR**
- public static final **NORMAL**
- public static final **NW_RESIZE_CURSOR**
- protected String **paramString**()
- public void **remove**(MenuComponent **arg0**)
- public void **removeNotify**()
- public static final **S_RESIZE_CURSOR**
- public static final **SE_RESIZE_CURSOR**
- public void **setBackground**(Color **arg0**)
- public void **setCursor**(int **arg0**)
- public void **setExtendedState**(int **arg0**)
- public void **setIconImage**(Image **arg0**)
- public void **setMaximizedBounds**(Rectangle **arg0**)
- public void **setMenuBar**(MenuBar **arg0**)
- public void **setOpacity**(float **arg0**)
- public void **setResizable**(boolean **arg0**)
- public void **setShape**(Shape **arg0**)
- public synchronized void **setState**(int **arg0**)
- public void **setTitle**(java.lang.String **arg0**)
- public void **setUndecorated**(boolean **arg0**)
- public static final **SW_RESIZE_CURSOR**
- public static final **TEXT_CURSOR**
- public static final **W_RESIZE_CURSOR**
- public static final **WAIT_CURSOR**

10.7.8 Members inherited from class Window

java.awt.Window

- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public synchronized void **addWindowFocusListener**(event.WindowFocusListener **arg0**)
- public synchronized void **addWindowListener**(event.WindowListener **arg0**)
- public synchronized void **addWindowStateListener**(event.WindowStateListener **arg0**)
- public void **applyResourceBundle**(java.util.ResourceBundle **arg0**)
- public void **applyResourceBundle**(java.lang.String **arg0**)
- public void **createBufferStrategy**(int **arg0**)
- public void **createBufferStrategy**(int **arg0**, BufferCapabilities **arg1**) throws AWTException
- public void **dispose**()
- public AccessibleContext **getAccessibleContext**()
- public Color **getBackground**()
- public BufferStrategy **getBufferStrategy**()
- public boolean **getFocusableWindowState**()
- public final Container **getFocusCycleRootAncestor**()
- public Component **getFocusOwner**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public List **getIconImages**()
- public InputContext **getInputContext**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Locale **getLocale**()

- public Dialog.ModalExclusionType **getModalExclusionType**()
- public Component **getMostRecentFocusOwner**()
- public float **getOpacity**()
- public Window **getOwnedWindows**()
- public Window **getOwner**()
- public static Window **getOwnerlessWindows**()
- public Shape **getShape**()
- public Toolkit **getToolkit**()
- public Window.Type **getType**()
- public final String **getWarningString**()
- public synchronized WindowFocusListener **getWindowFocusListeners**()
- public synchronized WindowListener **getWindowListeners**()
- public static Window **getWindows**()
- public synchronized WindowStateListener **getWindowStateListeners**()
- public void **hide**()
- public boolean **isActive**()
- public final boolean **isAlwaysOnTop**()
- public boolean **isAlwaysOnTopSupported**()
- public boolean **isAutoRequestFocus**()
- public final boolean **isFocusableWindow**()
- public final boolean **isFocusCycleRoot**()
- public boolean **isFocused**()
- public boolean **isLocationByPlatform**()
- public boolean **isOpaque**()
- public boolean **isShowing**()
- public boolean **isValidateRoot**()
- public void **pack**()
- public void **paint**(Graphics **arg0**)
- public boolean **postEvent**(Event **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- protected void **processWindowEvent**(event.WindowEvent **arg0**)
- protected void **processWindowFocusEvent**(event.WindowEvent **arg0**)
- protected void **processWindowStateEvent**(event.WindowEvent **arg0**)
- public void **removeNotify**()
- public synchronized void **removeWindowFocusListener**(event.WindowFocusListener **arg0**)
- public synchronized void **removeWindowListener**(event.WindowListener **arg0**)
- public synchronized void **removeWindowStateListener**(event.WindowStateListener **arg0**)
- public void **reshape**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public final void **setAlwaysOnTop**(boolean **arg0**) throws java.lang.SecurityException
- public void **setAutoRequestFocus**(boolean **arg0**)
- public void **setBackground**(Color **arg0**)
- public void **setBounds**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **setBounds**(Rectangle **arg0**)
- public void **setCursor**(Cursor **arg0**)
- public void **setFocusableWindowState**(boolean **arg0**)
- public final void **setFocusCycleRoot**(boolean **arg0**)
- public void **setIconImage**(Image **arg0**)
- public synchronized void **setIconImages**(java.util.List **arg0**)
- public void **setLocation**(int **arg0**, int **arg1**)
- public void **setLocation**(Point **arg0**)
- public void **setLocationByPlatform**(boolean **arg0**)
- public void **setLocationRelativeTo**(Component **arg0**)
- public void **setMinimumSize**(Dimension **arg0**)

- public void **setModalExclusionType**(Dialog.ModalExclusionType **arg0**)
- public void **setOpacity**(float **arg0**)
- public void **setShape**(Shape **arg0**)
- public void **setSize**(Dimension **arg0**)
- public void **setSize**(int **arg0**, int **arg1**)
- public void **setType**(Window.Type **arg0**)
- public void **setVisible**(boolean **arg0**)
- public void **show**()
- public void **toBack**()
- public void **toFront**()

10.7.9 Members inherited from class Container

java.awt.Container

- public Component **add**(Component **arg0**)
- public Component **add**(Component **arg0**, int **arg1**)
- public void **add**(Component **arg0**, java.lang.Object **arg1**)
- public void **add**(Component **arg0**, java.lang.Object **arg1**, int **arg2**)
- public Component **add**(java.lang.String **arg0**, Component **arg1**)
- public synchronized void **addContainerListener**(event.ContainerListener **arg0**)
- protected void **addImpl**(Component **arg0**, java.lang.Object **arg1**, int **arg2**)
- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **applyComponentOrientation**(ComponentOrientation **arg0**)
- public boolean **areFocusTraversalKeysSet**(int **arg0**)
- public int **countComponents**()
- public void **deliverEvent**(Event **arg0**)
- public void **doLayout**()
- public Component **findComponentAt**(int **arg0**, int **arg1**)
- public Component **findComponentAt**(Point **arg0**)
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public Component **getComponent**(int **arg0**)
- public Component **getComponentAt**(int **arg0**, int **arg1**)
- public Component **getComponentAt**(Point **arg0**)
- public int **getComponentCount**()
- public Component **getComponents**()
- public int **getComponentZOrder**(Component **arg0**)
- public synchronized ContainerListener **getContainerListeners**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public FocusTraversalPolicy **getFocusTraversalPolicy**()
- public Insets **getInsets**()
- public LayoutManager **getLayout**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public Point **getMousePosition**(boolean **arg0**) throws HeadlessException
- public Dimension **getPreferredSize**()
- public Insets **insets**()
- public void **invalidate**()
- public boolean **isAncestorOf**(Component **arg0**)
- public boolean **isFocusCycleRoot**()
- public boolean **isFocusCycleRoot**(Container **arg0**)

- public final boolean **isFocusTraversalPolicyProvider**()
- public boolean **isFocusTraversalPolicySet**()
- public boolean **isValidateRoot**()
- public void **layout**()
- public void **list**(java.io.PrintStream **arg0**, int **arg1**)
- public void **list**(java.io.PrintWriter **arg0**, int **arg1**)
- public Component **locate**(int **arg0**, int **arg1**)
- public Dimension **minimumSize**()
- public void **paint**(Graphics **arg0**)
- public void **paintComponents**(Graphics **arg0**)
- protected String **paramString**()
- public Dimension **preferredSize**()
- public void **print**(Graphics **arg0**)
- public void **printComponents**(Graphics **arg0**)
- protected void **processContainerEvent**(event.ContainerEvent **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- public void **remove**(Component **arg0**)
- public void **remove**(int **arg0**)
- public void **removeAll**()
- public synchronized void **removeContainerListener**(event.ContainerListener **arg0**)
- public void **removeNotify**()
- public void **setComponentZOrder**(Component **arg0**, int **arg1**)
- public void **setFocusCycleRoot**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFocusTraversalPolicy**(FocusTraversalPolicy **arg0**)
- public final void **setFocusTraversalPolicyProvider**(boolean **arg0**)
- public void **setFont**(Font **arg0**)
- public void **setLayout**(LayoutManager **arg0**)
- public void **transferFocusDownCycle**()
- public void **update**(Graphics **arg0**)
- public void **validate**()
- protected void **validateTree**()

10.7.10 Members inherited from class Component

java.awt.Component

- protected **accessibleContext**
- public boolean **action**(Event **arg0**, java.lang.Object **arg1**)
- public void **add**(PopupMenu **arg0**)
- public synchronized void **addComponentListener**(event.ComponentListener **arg0**)
- public synchronized void **addFocusListener**(event.FocusListener **arg0**)
- public void **addHierarchyBoundsListener**(event.HierarchyBoundsListener **arg0**)
- public void **addHierarchyListener**(event.HierarchyListener **arg0**)
- public synchronized void **addInputMethodListener**(event.InputMethodListener **arg0**)
- public synchronized void **addKeyListener**(event.KeyListener **arg0**)
- public synchronized void **addMouseListener**(event.MouseListener **arg0**)
- public synchronized void **addMouseMotionListener**(event.MouseMotionListener **arg0**)
- public synchronized void **addMouseWheelListener**(event.MouseWheelListener **arg0**)
- public void **addNotify**()
- public void **addPropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **addPropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **applyComponentOrientation**(ComponentOrientation **arg0**)

- public boolean **areFocusTraversalKeysSet**(int **arg0**)
- public static final **BOTTOM_ALIGNMENT**
- public Rectangle **bounds**()
- public static final **CENTER_ALIGNMENT**
- public int **checkImage**(Image **arg0**, image.ImageObserver **arg1**)
- public int **checkImage**(Image **arg0**, int **arg1**, int **arg2**, image.ImageObserver **arg3**)
- protected AWTEvent **coalesceEvents**(AWTEvent **arg0**, AWTEvent **arg1**)
- public boolean **contains**(int **arg0**, int **arg1**)
- public boolean **contains**(Point **arg0**)
- public Image **createImage**(image.ImageProducer **arg0**)
- public Image **createImage**(int **arg0**, int **arg1**)
- public VolatileImage **createVolatileImage**(int **arg0**, int **arg1**)
- public VolatileImage **createVolatileImage**(int **arg0**, int **arg1**, ImageCapabilities **arg2**) throws AWTException
- public void **deliverEvent**(Event **arg0**)
- public void **disable**()
- protected final void **disableEvents**(long **arg0**)
- public final void **dispatchEvent**(AWTEvent **arg0**)
- public void **doLayout**()
- public void **enable**()
- public void **enable**(boolean **arg0**)
- protected final void **enableEvents**(long **arg0**)
- public void **enableInputMethods**(boolean **arg0**)
- protected void **firePropertyChange**(java.lang.String **arg0**, boolean **arg1**, boolean **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, byte **arg1**, byte **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, char **arg1**, char **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, double **arg1**, double **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, float **arg1**, float **arg2**)
- protected void **firePropertyChange**(java.lang.String **arg0**, int **arg1**, int **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, long **arg1**, long **arg2**)
- protected void **firePropertyChange**(java.lang.String **arg0**, java.lang.Object **arg1**, java.lang.Object **arg2**)
- public void **firePropertyChange**(java.lang.String **arg0**, short **arg1**, short **arg2**)
- public AccessibleContext **getAccessibleContext**()
- public float **getAlignmentX**()
- public float **getAlignmentY**()
- public Color **getBackground**()
- public int **getBaseline**(int **arg0**, int **arg1**)
- public Component.BaselineResizeBehavior **getBaselineResizeBehavior**()
- public Rectangle **getBounds**()
- public Rectangle **getBounds**(Rectangle **arg0**)
- public ColorModel **getColorModel**()
- public Component **getComponentAt**(int **arg0**, int **arg1**)
- public Component **getComponentAt**(Point **arg0**)
- public synchronized ComponentListener **getComponentListeners**()
- public ComponentOrientation **getComponentOrientation**()
- public Cursor **getCursor**()
- public synchronized DropTarget **getDropTarget**()
- public Container **getFocusCycleRootAncestor**()
- public synchronized FocusListener **getFocusListeners**()
- public Set **getFocusTraversalKeys**(int **arg0**)
- public boolean **getFocusTraversalKeysEnabled**()
- public Font **getFont**()
- public FontMetrics **getFontMetrics**(Font **arg0**)
- public Color **getForeground**()

- public Graphics **getGraphics**()
- public GraphicsConfiguration **getGraphicsConfiguration**()
- public int **getHeight**()
- public synchronized HierarchyBoundsListener **getHierarchyBoundsListeners**()
- public synchronized HierarchyListener **getHierarchyListeners**()
- public boolean **getIgnoreRepaint**()
- public InputContext **getInputContext**()
- public synchronized InputMethodListener **getInputMethodListeners**()
- public InputMethodRequests **getInputMethodRequests**()
- public synchronized KeyListener **getKeyListeners**()
- public EventListener **getListeners**(java.lang.Class **arg0**)
- public Locale **getLocale**()
- public Point **getLocation**()
- public Point **getLocation**(Point **arg0**)
- public Point **getLocationOnScreen**()
- public Dimension **getMaximumSize**()
- public Dimension **getMinimumSize**()
- public synchronized MouseListener **getMouseListeners**()
- public synchronized MouseMotionListener **getMouseMotionListeners**()
- public Point **getMousePosition**() throws HeadlessException
- public synchronized MouseWheelListener **getMouseWheelListeners**()
- public String **getName**()
- public Container **getParent**()
- public ComponentPeer **getPeer**()
- public Dimension **getPreferredSize**()
- public PropertyChangeListener **getPropertyChangeListeners**()
- public PropertyChangeListener **getPropertyChangeListeners**(java.lang.String **arg0**)
- public Dimension **getSize**()
- public Dimension **getSize**(Dimension **arg0**)
- public Toolkit **getToolkit**()
- public final Object **getTreeLock**()
- public int **getWidth**()
- public int **getX**()
- public int **getY**()
- public boolean **gotFocus**(Event **arg0**, java.lang.Object **arg1**)
- public boolean **handleEvent**(Event **arg0**)
- public boolean **hasFocus**()
- public void **hide**()
- public boolean **imageUpdate**(Image **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**, int **arg5**)
- public boolean **inside**(int **arg0**, int **arg1**)
- public void **invalidate**()
- public boolean **isBackgroundSet**()
- public boolean **isCursorSet**()
- public boolean **isDisplayable**()
- public boolean **isDoubleBuffered**()
- public boolean **isEnabled**()
- public boolean **isFocusable**()
- public boolean **isFocusCycleRoot**(Container **arg0**)
- public boolean **isFocusOwner**()
- public boolean **isFocusTraversable**()
- public boolean **isFontSet**()
- public boolean **isForegroundSet**()
- public boolean **isLightweight**()
- public boolean **isMaximumSizeSet**()
- public boolean **isMinimumSizeSet**()

- public boolean **isOpaque**()
- public boolean **isPreferredSizeSet**()
- public boolean **isShowing**()
- public boolean **isValid**()
- public boolean **isVisible**()
- public boolean **keyDown**(Event **arg0**, int **arg1**)
- public boolean **keyUp**(Event **arg0**, int **arg1**)
- public void **layout**()
- public static final **LEFT_ALIGNMENT**
- public void **list**()
- public void **list**(java.io.PrintStream **arg0**)
- public void **list**(java.io.PrintStream **arg0**, int **arg1**)
- public void **list**(java.io.PrintWriter **arg0**)
- public void **list**(java.io.PrintWriter **arg0**, int **arg1**)
- public Component **locate**(int **arg0**, int **arg1**)
- public Point **location**()
- public boolean **lostFocus**(Event **arg0**, java.lang.Object **arg1**)
- public Dimension **minimumSize**()
- public boolean **mouseDown**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseDrag**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseEnter**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseExit**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseMove**(Event **arg0**, int **arg1**, int **arg2**)
- public boolean **mouseUp**(Event **arg0**, int **arg1**, int **arg2**)
- public void **move**(int **arg0**, int **arg1**)
- public void **nextFocus**()
- public void **paint**(Graphics **arg0**)
- public void **paintAll**(Graphics **arg0**)
- protected String **paramString**()
- public boolean **postEvent**(Event **arg0**)
- public Dimension **preferredSize**()
- public boolean **prepareImage**(Image **arg0**, image.ImageObserver **arg1**)
- public boolean **prepareImage**(Image **arg0**, int **arg1**, int **arg2**, image.ImageObserver **arg3**)
- public void **print**(Graphics **arg0**)
- public void **printAll**(Graphics **arg0**)
- protected void **processComponentEvent**(event.ComponentEvent **arg0**)
- protected void **processEvent**(AWTEvent **arg0**)
- protected void **processFocusEvent**(event.FocusEvent **arg0**)
- protected void **processHierarchyBoundsEvent**(event.HierarchyEvent **arg0**)
- protected void **processHierarchyEvent**(event.HierarchyEvent **arg0**)
- protected void **processInputMethodEvent**(event.InputMethodEvent **arg0**)
- protected void **processKeyEvent**(event.KeyEvent **arg0**)
- protected void **processMouseEvent**(event.MouseEvent **arg0**)
- protected void **processMouseMotionEvent**(event.MouseEvent **arg0**)
- protected void **processMouseWheelEvent**(event.MouseWheelEvent **arg0**)
- public void **remove**(MenuComponent **arg0**)
- public synchronized void **removeComponentListener**(event.ComponentListener **arg0**)
- public synchronized void **removeFocusListener**(event.FocusListener **arg0**)
- public void **removeHierarchyBoundsListener**(event.HierarchyBoundsListener **arg0**)
- public void **removeHierarchyListener**(event.HierarchyListener **arg0**)
- public synchronized void **removeInputMethodListener**(event.InputMethodListener **arg0**)
- public synchronized void **removeKeyListener**(event.KeyListener **arg0**)
- public synchronized void **removeMouseListener**(event.MouseListener **arg0**)

- public synchronized void **removeMouseMotionListener**(event.MouseMotionListener **arg0**)
- public synchronized void **removeMouseWheelListener**(event.MouseWheelListener **arg0**)
- public void **removeNotify**()
- public void **removePropertyChangeListener**(java.beans.PropertyChangeListener **arg0**)
- public void **removePropertyChangeListener**(java.lang.String **arg0**, java.beans.PropertyChangeListener **arg1**)
- public void **repaint**()
- public void **repaint**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **repaint**(long **arg0**)
- public void **repaint**(long **arg0**, int **arg1**, int **arg2**, int **arg3**, int **arg4**)
- public void **requestFocus**()
- protected boolean **requestFocus**(boolean **arg0**)
- public boolean **requestFocusInWindow**()
- protected boolean **requestFocusInWindow**(boolean **arg0**)
- public void **reshape**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **resize**(Dimension **arg0**)
- public void **resize**(int **arg0**, int **arg1**)
- public void **revalidate**()
- public static final **RIGHT_ALIGNMENT**
- public void **setBackground**(Color **arg0**)
- public void **setBounds**(int **arg0**, int **arg1**, int **arg2**, int **arg3**)
- public void **setBounds**(Rectangle **arg0**)
- public void **setComponentOrientation**(ComponentOrientation **arg0**)
- public void **setCursor**(Cursor **arg0**)
- public synchronized void **setDropTarget**(dnd.DropTarget **arg0**)
- public void **setEnabled**(boolean **arg0**)
- public void **setFocusable**(boolean **arg0**)
- public void **setFocusTraversalKeys**(int **arg0**, java.util.Set **arg1**)
- public void **setFocusTraversalKeysEnabled**(boolean **arg0**)
- public void **setFont**(Font **arg0**)
- public void **setForeground**(Color **arg0**)
- public void **setIgnoreRepaint**(boolean **arg0**)
- public void **setLocale**(java.util.Locale **arg0**)
- public void **setLocation**(int **arg0**, int **arg1**)
- public void **setLocation**(Point **arg0**)
- public void **setMaximumSize**(Dimension **arg0**)
- public void **setMinimumSize**(Dimension **arg0**)
- public void **setName**(java.lang.String **arg0**)
- public void **setPreferredSize**(Dimension **arg0**)
- public void **setSize**(Dimension **arg0**)
- public void **setSize**(int **arg0**, int **arg1**)
- public void **setVisible**(boolean **arg0**)
- public void **show**()
- public void **show**(boolean **arg0**)
- public Dimension **size**()
- public static final **TOP_ALIGNMENT**
- public String **toString**()
- public void **transferFocus**()
- public void **transferFocusBackward**()
- public void **transferFocusUpCycle**()
- public void **update**(Graphics **arg0**)
- public void **validate**()

10.8 Class Settings

10.8.1 Declaration

```
public class Settings
 extends java.lang.Object
```

10.8.2 Method summary

10.8.3 Methods

- **changeDiffculty**

  ```
  public void changeDiffculty(int i)
  ```

  - **Parameters**
    - `i` – it changes the level multiplier

- **changeKeys**

  ```
  public java.util.ArrayList changeKeys(int i)
  ```

  - **Parameters**
    - `i` –
  - **Returns** – arrayList that stores movement keys Due to settings changes keys changes

- **getDifficultyMultiplier**

  ```
  public double getDifficultyMultiplier()
  ```

  - **Returns** – difficultyMultiplier

- **getDifficultyName**

  ```
  public java.lang.String getDifficultyName()
  ```

- **Returns** – difficulty name

- **getInstance**

```
public static Settings getInstance()
```

- **getKeys**

```
public java.util.ArrayList getKeys()
```

  - **Returns** – key arrayList

- **getNames**

```
public java.util.ArrayList getNames()
```

  - **Returns** – keys names arraylist

10.9 Class SettingsPanel

10.9.1 Declaration

```
public class SettingsPanel
 extends java.lang.Object
```

10.9.2 Constructor summary

SettingsPanel()

10.9.3 Method summary

createSettingsPanel(JFrame)
removeSettingsPanel(JFrame)

10.9.4 Constructors

- **SettingsPanel**

```
public SettingsPanel()
```

10.9.5 Methods

- **createSettingsPanel**

  ```
  public void createSettingsPanel(javax.swing.JFrame frame)
  ```

  - **Parameters**
    - `frame` – it creates new SettingPanel

- **removeSettingsPanel**

  ```
  public void removeSettingsPanel(javax.swing.JFrame frame)
  ```

  - **Parameters**
    - `frame` –

Chapter 11

Package com.manofwar.utilities

Package Contents *Page*

Classes

11.1 Class FileManager

FileManager instance is responsible for the handling persistent file system.

11.1.1 Declaration

```
public class FileManager
 extends java.lang.Object
```

11.1.2 Constructor summary

FileManager()

11.1.3 Method summary

getImage(String) Returns the requested image as BufferedImage
getImage(URL) Returns the requested image as BufferedImage

11.1.4 Constructors

- **FileManager**

```
public FileManager()
```

11.1.5 Methods

- **getImage**

  ```
  public java.awt.image.BufferedImage getImage(java.lang.String
      urlString)
  ```

  - **Description**
    Returns the requested image as BufferedImage
  - **Parameters**
    - `urlString` – the url as URL instance of the requested image
  - **Returns** – the requested image as BufferedImage

- **getImage**

  ```
  public java.awt.image.BufferedImage getImage(java.net.URL url)
  ```

  - **Description**
    Returns the requested image as BufferedImage
  - **Parameters**
    - `url` – the url as URL instance of the requested image
  - **Returns** – the requested image as BufferedImage

11.2 Class GraphicsManager

GraphicsManager class is responsible for drawing the game screen.

11.2.1 Declaration

```
public class GraphicsManager
 extends java.lang.Object
```

11.2.2 Constructor summary

GraphicsManager(FileManager) Simply, constructor.

11.2.3 Method summary

draw(BufferedImage, Rectangle)
getFullImage() Returns the full image to be drawn on GamePanel
getResource(String)
resetFullImage() Resets full image by creating
setFullImage(BufferedImage)

11.2.4 Constructors

- **GraphicsManager**

  ```
  public GraphicsManager(FileManager fileManager)
  ```

  - **Description**
    Simply, constructor.
  - **Parameters**
    * `fileManager` – FileManager instance

11.2.5 Methods

- **draw**

  ```
  public void draw(java.awt.image.BufferedImage bufferedImage,java
      .awt.Rectangle boundingBox)
  ```

- **getFullImage**

  ```
  public java.awt.image.BufferedImage getFullImage()
  ```

  - **Description**
    Returns the full image to be drawn on GamePanel
  - **Returns** – the full image to be drawn on GamePanel.

- **getResource**

  ```
  public java.awt.image.BufferedImage getResource(java.lang.String
      name)
  ```

- **resetFullImage**

  ```
  public void resetFullImage()
  ```

  - **Description**
    Resets full image by creating

- **setFullImage**

  ```
  public void setFullImage(java.awt.image.BufferedImage fullImage)
  ```

11.3 Class InputManager

InputManager is responsible for tracking user inputs and stores them.

11.3.1 Declaration

```
public class InputManager
 extends java.lang.Object implements java.awt.event.KeyListener
```

11.3.2 Constructor summary

InputManager()

11.3.3 Method summary

getKeys() Returns the statuses of keys (whether pressed or not pressed)
isPressed(int) Returns whether the given key is pressed.
keyPressed(KeyEvent) Invoked when a key has been pressed.
keyReleased(KeyEvent) Invoked when a key has been released.
keyTyped(KeyEvent) Unused method but implemented due to the KeyListener interface.

11.3.4 Constructors

- **InputManager**

```
public InputManager()
```

11.3.5 Methods

- **getKeys**

```
public java.util.Map getKeys()
```

  - **Description**
    Returns the statuses of keys (whether pressed or not pressed)
  - **Returns** – the statuses of keys (whether pressed or not pressed)

- **isPressed**

```
public boolean isPressed(int keyEvent)
```

  - **Description**
    Returns whether the given key is pressed.
  - **Parameters**

    * `keyEvent` – awt.event.KeyEvent member. For example, KeyEvent.VK_UP for UP key.
  - **Returns** – whether the given key is pressed.

- **keyPressed**

  ```
  public void keyPressed(java.awt.event.KeyEvent e)
  ```

  - **Description**
    Invoked when a key has been pressed.

- **keyReleased**

  ```
  public void keyReleased(java.awt.event.KeyEvent e)
  ```

  - **Description**
    Invoked when a key has been released.

- **keyTyped**

  ```
  public void keyTyped(java.awt.event.KeyEvent e)
  ```

  - **Description**
    Unused method but implemented due to the KeyListener interface.