

All Classes and Interfaces

[All Classes and Interfaces](#) [Interfaces](#) [Classes](#) [Enum Classes](#) [Record Classes](#)

Class

Description

AnimationWrapper

Animation wrapper class for our projects animations that get used.

Application

The entry point of the application.

ConfettiAnimation

class to play confetti animation.

DailyRewardController

Controller for the daily reward popup screen.

DailyRewardModel

Model for handling daily reward logic and state.

DailyRewardType

Enum representing the possible daily reward outcomes.

DefinitionController

Controller for definition popup

DefinitionPopup

Represents Definition window called when a word is played

DevButton

wrapper class for dev buttons to toggle off or on when we want.

DictionaryDAO

The SQLite Dictionary.

EmptyTileSlotController

Empty Tile controller for EmptyTile view.

EmptyTileSlotModel

An empty tile slot model.

FXMLPageLoader

FXML Loader wrapper class for the project to load the game screen FXML pages.

GameMusicPlayer

Plays the game music track on repeat.

GameScene

Game Scenes enum.

GameScreenController

Game screen controller that has some startup on screen thing todo.

GameScreenController.SidebarLoaded

GameScreenFactory

create game screen controllers.

GameScreenModel

Game Screen Model.

GameSoundPlayer

plays an audio clip as a sound effect for the game.

InfiniteFloatingAnimation

floating tile animation.

LetterTileController

Controls the layout of the letterUIModel.

LetterTileGroup

tile group that observes an observable list and updates the ui Tile Controller's nodes into their EmptyTileSlotController nodes.

LetterTileModel

Represents the letter tiles the player plays holds, redraws.

LevelController

Controller for the level screen.

LevelModel

Represents the level model.

LevelScoreSequence

Animates each level tile popping up and the score text increasing for every tile in the word row.

Logger

com.example.project.services.Logger for Application and to show up in test and build CI workflow.

LoginController

Controller for the login scene.

LoginModel

Login model class.

MainMenuController

controller for the main menu.

MainMenuModel

main menu model class

PageLoader

Interface for page loading.

PasswordHasher

Hashes passwords.

PopupController<P>

Parent class for PopupControllers

PopupLoader

class to load the popup and initialize it with a controller

PopupModel

Parent class for popup windows

RootLayoutController

Root layout that remains the root scene of the application to switch scenes within.

SceneManager

Represents the scene manager class.

ScoreChimePlayer

plays a note from the F major scale ascending in pitch each time for a nice score combo sound.

ScoreTimeline

Class for total score counter animation

ScrabbleTileProvider

Static class to store the scrabble base letter value.

ScrabbleTileProvider.ScrabbleTileData**Session**

Game Session.

SessionData

Session data.

ShopController

Shop view controller.

ShopModel

Shop Model.

SidebarController

The sidebar on shop and level with the current round info.

SQLiteConnection

Abstract SQLiteConnection class.

SQLiteDictionaryConnection

Connection to the dictionary.db

SQLiteUsersConnection

Connection to the users.db

SVGIcons

a static class to hold some icons for the application.

TextEmphasisAnimation

An animation to quickly enlarge text and then return it to its original scale.

TileController<T>

Parent class of TileControllers.

TileControllerFactory

class to load the tile model controller for that tile model type.

TileGroup<modelType,controllerType>

Tile Group abstract class holds a row or column of tiles.

TileModel

Parent tile class for objects in the scene that are tiles.

TooltipSetup

sets a tooltip for desired element

TooltipSetup.Element

different types of elements that require a tooltip

UpgradeEffects

upgrade effect methods

UpgradeTileController

Controls the upgrade tile view fxml file.

UpgradeTileGroup

tile group that observes an observable list and updates the ui nodes for some game tiles.

UpgradeTileModel

Represents the upgrade tiles sold at the shop.

UpgradeTileModel.UpgradeBuilder

builder class for the upgrades

UpgradeTiles

Static class to store all the possible upgrade tiles available in the game.

User

Represents a user in the application that can log in.

UsersDAO

All Packages

Package Summary
Package
Description
com.example.project
com.example.project.controllers
com.example.project.controllers.gameScreens
com.example.project.controllers.gameScreens.animations
com.example.project.controllers.popupControllers
com.example.project.controllers.tiles
com.example.project.models
com.example.project.models.gameScreens
com.example.project.models.popups
com.example.project.models.tileGroups
com.example.project.models.tiles
com.example.project.services
com.example.project.services.shopItems
com.example.project.services.sound
com.example.project.services.sqlite
com.example.project.services.sqlite.dAOs

Module com.example.project

Package com.example.project.controllers.gameScreens

Class GameScreenController

java.lang.Object
com.example.project.controllers.gameScreens.GameScreenController

Direct Known Subclasses:

DailyRewardController, LevelController, LoginController, MainMenuController, ShopController

```
public abstract class GameScreenController  
extends Object
```

Game screen controller that has some startup on screen thing todo. Level, shop controllers.

Nested Class Summary

Nested Classes

Modifier and Type

Class

Description

protected static final record

GameScreenController.SidebarLoaded

Field Summary

Fields

Modifier and Type

Field

Description

protected Logger

logger

Constructor Summary

Constructors

Modifier

Constructor

Description

protected

GameScreenController()

Method Summary

All Methods

Instance Methods

Abstract Methods

Concrete Methods

Modifier and Type

Method

Description

protected GameScreenController.SidebarLoaded

```
loadSidebar()
```

```
abstract void
```

```
onSceneChangedToThis()
```

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

```
abstract void
```

```
setup(Session session, SceneManager sceneManager)
```

create models and inject session and scene manager.

Methods inherited from class java.lang.Object

```
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait
```

Field Details

logger

```
protected Logger logger
```

Constructor Details

GameScreenController

```
protected GameScreenController()
```

Method Details

onSceneChangedToThis

```
public abstract void onSceneChangedToThis()
```

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

setup

```
public abstract void setup(Session session,  
                           SceneManager sceneManager)
```

create models and inject session and scene manager.

Parameters:

session - session.

sceneManager - scene manager.

loadSidebar

```
protected GameScreenController.SidebarLoaded loadSidebar()
```

Hierarchy For Package com.example.project.models.popups

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#) ↗
 - [com.example.project.models.popups.PopupModel](#)
 - [com.example.project.models.popups.DefinitionPopup](#)

Uses of Package com.example.project.models.popups

Packages that use com.example.project.models.popups

Package

Description

[com.example.project.controllers.popupControllers](#)

[com.example.project.models.popups](#)

[com.example.project.services](#)

Classes in com.example.project.models.popups used by com.example.project.controllers.popupControllers

Class

Description

[DefinitionPopup](#)

Represents Definition window called when a word is played

[PopupModel](#)

Parent class for popup windows

Classes in com.example.project.models.popups used by com.example.project.models.popups

Class

Description

[PopupModel](#)

Parent class for popup windows

Classes in com.example.project.models.popups used by com.example.project.services

Class

Description

[PopupModel](#)

Parent class for popup windows

Module com.example.project

Package com.example.project.models.tileGroups

Class LetterTileGroup

```
java.lang.Object
  com.example.project.models.tileGroups.TileGroup<LetterTileModel,LetterTileController>
    com.example.project.models.tileGroups.LetterTileGroup
```

```
public class LetterTileGroup
extends TileGroup<LetterTileModel,LetterTileController>
```

tile group that observes an observable list and updates the ui Tile Controller's nodes into their EmptyTileSlotController nodes.

Field Summary

Fields inherited from class com.example.project.models.tileGroups.TileGroup

container, onClickAction, tileControllerFactory, tileControllers

Constructor Summary

Constructors

Modifier

Constructor

Description

```
LetterTileGroup(int numberOfEmptyTileSlots, javafx.scene.layout.Pane container,
javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList, Consumer<?
<LetterTileController> onClickAction)
```

Constructor

```
LetterTileGroup(int numberOfEmptyTileSlots, javafx.scene.layout.Pane container,
javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList, Consumer<?
<LetterTileController> onClickHandler, List<?><Runnable> afterSyncActions)
```

Constructor

protected

```
LetterTileGroup(int numberOfEmptyTileSlots, javafx.scene.layout.Pane container,
javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList, Consumer<?
<LetterTileController> onClickHandler, List<?><Runnable> afterSyncActions, TileControllerFactory factory)
```

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

protected void

`updateVisuals()`

Methods inherited from class com.example.project.models.tileGroups.TileGroup

`getControllers`, `syncTiles`

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

LetterTileGroup

```
protected LetterTileGroup(int numberEmptyTileSlots,
                         javafx.scene.layout.Pane container,
                         javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList,
                         Consumer<LetterTileController> onClickHandler,
                         List<Runnable> afterSyncActions,
                         TileControllerFactory factory)
```

LetterTileGroup

```
public LetterTileGroup(int numberEmptyTileSlots,
                      javafx.scene.layout.Pane container,
                      javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList,
                      Consumer<LetterTileController> onClickHandler,
                      List<Runnable> afterSyncActions)
```

Constructor

Parameters:

numberEmptyTileSlots - number of max tiles in group (empty slots)

container - container to place all in.

observedList - the observed list.

onClickHandler - On tile click action.

afterSyncActions - additional synchronisation actions that need to happen when this observed list changes.

LetterTileGroup

```
public LetterTileGroup(int numberEmptyTileSlots,
                      javafx.scene.layout.Pane container,
                      javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList,
                      Consumer<LetterTileController> onClickAction)
```

Constructor

Parameters:

numberEmptyTileSlots - number of max tiles in group (empty slots)

container - container to place all in.

observedList - the observed list.

onClickAction - On tile click action.

Method Details

updateVisuals

```
protected void updateVisuals()
```

Specified by:

[updateVisuals](#) in class [TileGroup<LetterTileModel,LetterTileController>](#)

Module com.example.project

Package com.example.project.models.tileGroups

Class TileGroup<modelType extends TileModel, controllerType extends TileController<modelType>>

java.lang.Object²
com.example.project.models.tileGroups.TileGroup<modelType,controllerType>

Type Parameters:

modelType - tile model type.

controllerType - controller type.

Direct Known Subclasses:

LetterTileGroup, UpgradeTileGroup

```
public abstract class TileGroup<modelType extends TileModel, controllerType extends TileController<modelType>>
extends Object2
```

Tile Group abstract class holds a row or column of tiles.

Field Summary

Fields

Modifier and Type

Field

Description

protected final javafx.scene.layout.Pane
container

protected Consumer²<controllerType>
onClickAction

protected TileControllerFactory
tileControllerFactory

protected final List²<controllerType>
tileControllers

Method Summary

All Methods

Instance Methods

Abstract Methods

Concrete Methods

Modifier and Type

Method

Description

List²<controllerType>

getControllers()

Gets the groups tile controllers.

void

syncTiles()

Sync tiles in this tile groups controller.

protected abstract void

```
updateVisuals()
```

Methods inherited from class java.lang.Object

```
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait
```

Field Details

container

```
protected final javafx.scene.layout.Pane container
```

tileControllers

```
protected final List<controllerType extends TileController<modelType>> tileControllers
```

tileControllerFactory

```
protected TileControllerFactory tileControllerFactory
```

onClickAction

```
protected Consumer<controllerType extends TileController<modelType>> onClickAction
```

Method Details

updateVisuals

```
protected abstract void updateVisuals()
```

syncTiles

```
public void syncTiles()
```

Sync tiles in this tile groups controller.

getControllers

```
public List<controllerType> getControllers()
```

Gets the groups tile controllers.

Returns:

the letter tile groups controllers

Module com.example.project
Package com.example.project.models.tileGroups

Class UpgradeTileGroup

java.lang.Object
 com.example.project.models.tileGroups.TileGroup<UpgradeTileModel,UpgradeTileController>
 com.example.project.models.tileGroups.UpgradeTileGroup

```
public class UpgradeTileGroup  
extends TileGroup<UpgradeTileModel,UpgradeTileController>
```

tile group that observes an observable list and updates the ui nodes for some game tiles.

Field Summary

Fields inherited from class com.example.project.models.tileGroups.TileGroup

container, onClickAction, tileControllerFactory, tileControllers

Constructor Summary

Constructors

Constructor

Description

UpgradeTileGroup(javafx.scene.layout.Pane container,
javafx.beans.property.ReadOnlyListProperty<UpgradeTileModel> observedList)

Constructor with no additional sync action parameter.

UpgradeTileGroup(javafx.scene.layout.Pane container,
javafx.beans.property.ReadOnlyListProperty<UpgradeTileModel> observedList, Consumer<UpgradeTileController> onClickAction)

Constructor.

Method Summary

All Methods

Static Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

static <T> Map<T, Integer>

trackDuplicates(List<T> list)

Makes hashmap that tracks the count of each element in list

protected void

updateVisuals()

Methods inherited from class com.example.project.models.tileGroups.TileGroup

getControllers, syncTiles

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

UpgradeTileGroup

```
public UpgradeTileGroup(javafx.scene.layout.Pane container,
                        javafx.beans.property.ReadOnlyListProperty<UpgradeTileModel> observedList,
                        Consumer<UpgradeTileController> onClickAction)
```

Constructor.

Parameters:

container - container all tiles are in.

observedList - the observed list that when changes this tile group will sync.

onClickAction - additional synchronisation actions that need to be called.

UpgradeTileGroup

```
public UpgradeTileGroup(javafx.scene.layout.Pane container,
                        javafx.beans.property.ReadOnlyListProperty<UpgradeTileModel> observedList)
```

Constructor with no additional sync action parameter.

Parameters:

container - container tiles are in.

observedList - the observed list that when changes this tile group will sync.

Method Details

trackDuplicates

```
public static <T> Map<T, Integer> trackDuplicates(List<T> list)
```

Makes hashmap that tracks the count of each element in list

Type Parameters:

T - the type of elements in the list

Parameters:

list - the input list of elements

Returns:

a map for # of dupes for each unique element

updateVisuals

```
protected void updateVisuals()
```

Specified by:

updateVisuals in class TileGroup<UpgradeTileModel, UpgradeTileController>

Uses of Class **com.example.project.models.tileGroups.LetterTileGroup**

No usage of com.example.project.models.tileGroups.LetterTileGroup

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.models.tileGroups.TileGroup

Packages that use TileGroup

Package

Description

com.example.project.models.tileGroups

Uses of TileGroup in com.example.project.models.tileGroups

Subclasses of TileGroup in com.example.project.models.tileGroups

Modifier and Type

Class

Description

class

LetterTileGroup

tile group that observes an observable list and updates the ui Tile Controller's nodes into their EmptyTileSlotController nodes.

class

UpgradeTileGroup

tile group that observes an observable list and updates the ui nodes for some game tiles.

Uses of Class com.example.project.models.tileGroups.UpgradeTileGroup

Packages that use UpgradeTileGroup

Package

Description

com.example.project.controllers.gameScreens

Uses of UpgradeTileGroup in com.example.project.controllers.gameScreens

Constructors in com.example.project.controllers.gameScreens with parameters of type UpgradeTileGroup

Modifier

Constructor

Description

protected

`ShopController(ShopModel model, UpgradeTileGroup players, UpgradeTileGroup shopItems, Logger logger)`

protected constructor for unit testing with mock model injection.

Module com.example.project

Package com.example.project.models.tileGroups

package com.example.project.models.tileGroups

Related Packages

Package

Description

[com.example.project.models](#)

[com.example.project.models.gameScreens](#)

[com.example.project.models.popups](#)

[com.example.project.models.tiles](#)

Classes

Class

Description

LetterTileGroup

tile group that observes an observable list and updates the ui Tile Controller's nodes into their EmptyTileSlotController nodes.

TileGroup<modelType extends TileModel, controllerType extends TileController<modelType>>

Tile Group abstract class holds a row or column of tiles.

UpgradeTileGroup

tile group that observes an observable list and updates the ui nodes for some game tiles.

Copyright © 2025. All rights reserved.

Hierarchy For Package com.example.project.models.tileGroups

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#)
- [com.example.project.models.tileGroups.TileGroup<modelType,controllerType>](#)
 - [com.example.project.models.tileGroups.LetterTileGroup](#)
 - [com.example.project.models.tileGroups.UpgradeTileGroup](#)

Module com.example.project

Package com.example.project.controllers.gameScreens

Class GameScreenFactory

java.lang.Object[↳]
 com.example.project.controllers.gameScreens.GameScreenFactory

```
public class GameScreenFactory  
extends Object↳
```

create game screen controllers.

Constructor Summary

Constructors

Constructor

Description

GameScreenFactory(Session session)

Constructor.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

loadGameScreens(RootLayoutController rootController, FXMLPageLoader loader)

Load all main game screens.

Methods inherited from class java.lang.Object[↳]

clone[↳], equals[↳], finalize[↳], getClass[↳], hashCode[↳], notify[↳], notifyAll[↳], toString[↳], wait[↳], wait[↳], wait[↳]

Constructor Details

GameScreenFactory

```
public GameScreenFactory(Session session)
```

Constructor.

Parameters:

session - session.

Method Details

loadGameScreens

```
public void loadGameScreens(RootLayoutController rootController,  
                           FXMLPageLoader loader)
```

Load all main game screens.

Parameters:

rootController - root.

Uses of Package com.example.project.models.tileGroups

Packages that use com.example.project.models.tileGroups

Package

Description

[com.example.project.controllers.gameScreens](#)

[com.example.project.models.tileGroups](#)

Classes in com.example.project.models.tileGroups used by com.example.project.controllers.gameScreens

Class

Description

[UpgradeTileGroup](#)

tile group that observes an observable list and updates the ui nodes for some game tiles.

Classes in com.example.project.models.tileGroups used by com.example.project.models.tileGroups

Class

Description

[TileGroup](#)

Tile Group abstract class holds a row or column of tiles.

Module com.example.project
Package com.example.project.models.tiles

Class EmptyTileSlotModel

java.lang.Object ↗
 com.example.project.models.tiles.TileModel
 com.example.project.models.tiles.EmptyTileSlotModel

```
public class EmptyTileSlotModel  
extends TileModel
```

An empty tile slot model. Empty tile slots store a letter tile.

Field Summary

Fields inherited from class com.example.project.models.tiles.TileModel

ClackSoundPlayer, CORNER_RADIUS, hoverSoundPlayer

Constructor Summary

Constructors

Constructor

Description

`EmptyTileSlotModel()`

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

`String` ↗

`getFXMLPath()`

gets the fxml path.

`LetterTileModel`

`getTile()`

get letter tile in slot.

`void`

`setTile(LetterTileModel tile)`

Set a new tile.

Methods inherited from class com.example.project.models.tiles.TileModel

`getClackSoundPlayer`, `getHoverSoundPlayer`

Methods inherited from class java.lang.Object

`clone` ↗, `equals` ↗, `finalize` ↗, `getClass` ↗, `hashCode` ↗, `notify` ↗, `notifyAll` ↗, `toString` ↗, `wait` ↗, `wait` ↗, `wait` ↗

Constructor Details

EmptyTileSlotModel

```
public EmptyTileSlotModel()
```

Method Details

getTile

```
public LetterTileModel getTile()
```

get letter tile in slot.

Returns:

letter tile.

setTile

```
public void setTile(LetterTileModel tile)
```

Set a new tile.

Parameters:

tile - letter tile.

getFXMLPath

```
public String getFXMLPath()
```

Description copied from class: TileModel

gets the fxml path.

Specified by:

getFXMLPath in class TileModel

Returns:

string path.

Module com.example.project
Package com.example.project.models.tiles

Class LetterTileModel

java.lang.Object
 com.example.project.models.tiles.TileModel
 com.example.project.models.tiles.LetterTileModel

```
public class LetterTileModel  
extends TileModel
```

Represents the letter tiles the player plays holds, redraws.

Field Summary

Fields inherited from class com.example.project.models.tiles.TileModel

ClackSoundPlayer, CORNER_RADIUS, hoverSoundPlayer

Constructor Summary

Constructors

Constructor

Description

LetterTileModel(Character newLetter)

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

String

getFXMLPath()

gets the fxml path.

Character

getLetter()

Integer

getValue()

Methods inherited from class com.example.project.models.tiles.TileModel

getClackSoundPlayer, getHoverSoundPlayer

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait

Constructor Details

LetterTileModel

```
public LetterTileModel(Character2 newLetter)
```

Parameters:

newLetter - letter

Method Details

getLetter

```
public Character2 getLetter()
```

Returns:

returns the tiles character.

getValue

```
public Integer2 getValue()
```

Returns:

base value of scrabble letter score.

getFXMLPath

```
public String2 getFXMLPath()
```

Description copied from class: [TileModel](#)

gets the fxml path.

Specified by:

[getFXMLPath](#) in class [TileModel](#)

Returns:

string path.

Module com.example.project

Package com.example.project.models.tiles

Record Class ScrabbleTileProvider.ScrabbleTileData

java.lang.Object²
 java.lang.Record²
 com.example.project.models.tiles.ScrabbleTileProvider.ScrabbleTileData

Record Components:

value - value of scrabble letter

frequency - population of tile

Enclosing class:

ScrabbleTileProvider

```
public static record ScrabbleTileProvider.ScrabbleTileData(int value, int frequency)
extends Record2
```

Constructor Summary

Constructors

Constructor

Description

ScrabbleTileData(int value, int frequency)

Creates an instance of a ScrabbleTileData record class.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

final boolean

equals(Object² o)

Indicates whether some other object is "equal to" this one.

int

frequency()

Returns the value of the frequency record component.

final int

hashCode()

Returns a hash code value for this object.

final String²

toString()

Returns a string representation of this record class.

int

value()

Returns the value of the value record component.

Methods inherited from class java.lang.Object²

clone², finalize², getClass², notify², notifyAll², wait², wait², wait²

Constructor Details

ScrabbleTileData

```
public ScrabbleTileData(int value,  
                      int frequency)
```

Creates an instance of a ScrabbleTileData record class.

Parameters:

value - the value for the `value` record component

frequency - the value for the `frequency` record component

Method Details

toString

```
public final String toString()
```

Returns a string representation of this record class. The representation contains the name of the class, followed by the name and value of each of the record components.

Specified by:

`toString` in class `Record`

Returns:

a string representation of this object

hashCode

```
public final int hashCode()
```

Returns a hash code value for this object. The value is derived from the hash code of each of the record components.

Specified by:

`hashCode` in class `Record`

Returns:

a hash code value for this object

equals

```
public final boolean equals(Object o)
```

Indicates whether some other object is "equal to" this one. The objects are equal if the other object is of the same class and if all the record components are equal. All components in this record class are compared with '=='.

Specified by:

`equals` in class `Record`

Parameters:

o - the object with which to compare

Returns:

true if this object is the same as the o argument; false otherwise.

value

```
public int value()
```

Returns the value of the `value` record component.

Returns:

the value of the `value` record component

frequency

```
public int frequency()
```

Returns the value of the `frequency` record component.

Returns:

the value of the `frequency` record component

Module com.example.project
Package com.example.project.models.tiles

Class ScrabbleTileProvider

java.lang.Object
com.example.project.models.tiles.ScrabbleTileProvider

```
public class ScrabbleTileProvider  
extends Object
```

Static class to store the scrabble base letter value.

Nested Class Summary

Nested Classes

Modifier and Type

Class

Description

static final record

ScrabbleTileProvider.ScrabbleTileData

Constructor Summary

Constructors

Constructor

Description

ScrabbleTileProvider()

Constructor.

Method Summary

All Methods

Static Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

Character

drawRandomTile()

int

getValue(Character letter)

Returns Integer of the letter according to scrabble

protected static void

seedRandomNumberGenerator(long newSeed)

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

ScrabbleTileProvider

```
public ScrabbleTileProvider()
```

Constructor.

Method Details

seedRandomNumberGenerator

```
protected static void seedRandomNumberGenerator(long newSeed)
```

getValue

```
public int getValue(Character letter)
```

Returns Integer of the letter according to scrabble

Parameters:

letter - letter to get value of

Returns:

Integer value of the letter, or 0 if not found

drawRandomTile

```
public Character drawRandomTile()
```

Returns:

randomly selected tile based on CDF

Module com.example.project
Package com.example.project.models.tiles

Class TileModel

java.lang.Object[↳]
 com.example.project.models.tiles.TileModel

Direct Known Subclasses:

EmptyTileSlotModel, LetterTileModel, UpgradeTileModel

```
public abstract class TileModel
extends Object↳
```

Parent tile class for objects in the scene that are tiles.

Field Summary

Fields

Modifier and Type

Field

Description

protected final GameSoundPlayer

ClackSoundPlayer

static final int

CORNER_RADIUS

corner radius (rounded corners).

protected final GameSoundPlayer

hoverSoundPlayer

Constructor Summary

Constructors

Constructor

Description

TileModel()

Method Summary

All Methods

Instance Methods

Abstract Methods

Concrete Methods

Modifier and Type

Method

Description

GameSoundPlayer

getClackSoundPlayer()

gets the sound player that plays the click sound.

abstract String[↳]

getFXMLPath()

gets the fxml path.

GameSoundPlayer

getHoverSoundPlayer()

gets the hover sound player

Methods inherited from class java.lang.Object

clone[✉], equals[✉], finalize[✉], getClass[✉], hashCode[✉], notify[✉], notifyAll[✉], toString[✉], wait[✉], wait[✉], wait[✉]

Field Details

hoverSoundPlayer

```
protected final GameSoundPlayer hoverSoundPlayer
```

ClackSoundPlayer

```
protected final GameSoundPlayer ClackSoundPlayer
```

CORNER_RADIUS

```
public static final int CORNER_RADIUS
```

corner radius (rounded corners).

See Also:

Constant Field Values

Constructor Details

TileModel

```
public TileModel()
```

Method Details

getFXMLPath

```
public abstract String✉ getFXMLPath()
```

gets the fxml path.

Returns:

string path.

getHoverSoundPlayer

```
public GameSoundPlayer getHoverSoundPlayer()
```

gets the hover sound player

Returns:

sound player

getClackSoundPlayer

```
public GameSoundPlayer getClackSoundPlayer()
```

gets the sound player that plays the click sound.

Returns:

sound player.

Module com.example.project
Package com.example.project.models.tiles

Class UpgradeEffects

java.lang.Object
com.example.project.models.tiles.UpgradeEffects

```
public class UpgradeEffects  
extends Object
```

upgrade effect methods

Constructor Summary

Constructors

Constructor

Description

`UpgradeEffects()`

Method Summary

All Methods

Static Methods

Concrete Methods

Modifier and Type

Method

Description

static void

`braceletEffect(LevelModel levelModel)`

Add +1 to score multiplier for every consecutive letter alphabetical order.

static void

`buttonEffect(LevelModel levelModel)`

adds 5 to the word score for every x in the tile rack.

static void

`coinEffect(LevelModel levelModel)`

20% Chance the total word score is doubled

static void

`diceEffect(LevelModel levelModel)`

Value is doubled for a random letter in the played word

static void

`glassesEffect(LevelModel levelModel)`

Adds +2 to the score multiplier for every identical pair of letters next to each other

static void

`mirrorEffect(LevelModel levelModel)`

If played word is a palindrome, doubles word score.

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

Constructor Details

UpgradeEffects

```
public UpgradeEffects()
```

Method Details

glassesEffect

```
public static void glassesEffect(LevelModel levelModel)
```

Adds +2 to the score multiplier for every identical pair of letters next to each other

Parameters:

levelModel - model to use.

diceEffect

```
public static void diceEffect(LevelModel levelModel)
```

Value is doubled for a random letter in the played word

Parameters:

levelModel - model to use.

coinEffect

```
public static void coinEffect(LevelModel levelModel)
```

20% Chance the total word score is doubled

Parameters:

levelModel - model to use.

mirrorEffect

```
public static void mirrorEffect(LevelModel levelModel)
```

If played word is a palindrome, doubles word score.

Parameters:

levelModel - model to use.

braceletEffect

```
public static void braceletEffect(LevelModel levelModel)
```

Add +1 to score multiplier for every consecutive letter alphabetical order.

Parameters:

levelModel - model to use.

buttonEffect

```
public static void buttonEffect(LevelModel levelModel)
```

adds 5 to the word score for every x in the tile rack.

Parameters:

levelModel - model to use effect on.

Module com.example.project

Package com.example.project.models.tiles

Class UpgradeTileModel.UpgradeBuilder

java.lang.Object[✉]
com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder

Enclosing class:

UpgradeTileModel

public static class UpgradeTileModel.UpgradeBuilder
extends Object[✉]

builder class for the upgrades

Constructor Summary

Constructors

Constructor

Description

UpgradeBuilder()

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

UpgradeTileModel

build()

build upgrade

UpgradeTileModel.UpgradeBuilder

cost(double cost)

upgrade cost builder

UpgradeTileModel.UpgradeBuilder

description(String[✉] description)

upgrade description builder

UpgradeTileModel.UpgradeBuilder

imagePath(String[✉] imagePath)

upgrade image path builder

UpgradeTileModel.UpgradeBuilder

name(String[✉] name)

upgrade name builder

UpgradeTileModel.UpgradeBuilder

upgradeEffect(Consumer<LevelModel> upgradeEffect)

upgrade effect builder

Methods inherited from class java.lang.Object[✉]

clone[✉], equals[✉], finalize[✉], getClass[✉], hashCode[✉], notify[✉], notifyAll[✉], toString[✉], wait[✉], wait[✉], wait[✉]

Constructor Details

UpgradeBuilder

```
public UpgradeBuilder()
```

Method Details

description

```
public UpgradeTileModel.UpgradeBuilder description(String¶ description)
```

upgrade description builder

Parameters:

description - new upgrade description

Returns:

description

name

```
public UpgradeTileModel.UpgradeBuilder name(String¶ name)
```

upgrade name builder

Parameters:

name - new upgrade name

Returns:

name

imagePath

```
public UpgradeTileModel.UpgradeBuilder imagePath(String¶ imagePath)
```

upgrade image path builder

Parameters:

imagePath - new upgrade image path

Returns:

image path

cost

```
public UpgradeTileModel.UpgradeBuilder cost(double cost)
```

upgrade cost builder

Parameters:

cost - new upgrade cost

Returns:

cost

upgradeEffect

```
public UpgradeTileModel.UpgradeBuilder upgradeEffect(Consumer¶<LevelModel> upgradeEffect)
```

upgrade effect builder

Parameters:

upgradeEffect - new upgrade effect

Returns:

upgrade effect

build

```
public UpgradeTileModel build()
```

build upgrade

Returns:

new upgrade

Module com.example.project
Package com.example.project.models.tiles

Class UpgradeTileModel

java.lang.Object ↗
 com.example.project.models.tiles.TileModel
 com.example.project.models.tiles.UpgradeTileModel

```
public class UpgradeTileModel  
extends TileModel
```

Represents the upgrade tiles sold at the shop.

Nested Class Summary

Nested Classes

Modifier and Type

Class

Description

static class

UpgradeTileModel.UpgradeBuilder

builder class for the upgrades

Field Summary

Fields inherited from class com.example.project.models.tiles.TileModel

ClackSoundPlayer, CORNER_RADIUS, hoverSoundPlayer

Constructor Summary

Constructors

Constructor

Description

UpgradeTileModel(UpgradeTileModel.UpgradeBuilder builder)

public upgrade constructor.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

String ↗

getAbilityImagePath()

gets upgrade tile image path.

double

getCost()

gets the cost

String ↗

getDescription()

gets the description.

String

getFXMLPath()

gets the fxml path.

String

getName()

gets the name.

void

runUpgradeEffect(LevelModel model)

gets the effect for this tile.

Methods inherited from class com.example.project.models.tiles.TileModel

getClackSoundPlayer, getHoverSoundPlayer

Methods inherited from class java.lang.Object

clone, **equals**, **finalize**, **getClass**, **hashCode**, **notify**, **notifyAll**, **toString**, **wait**, **wait**, **wait**

Constructor Details

UpgradeTileModel

public UpgradeTileModel(UpgradeTileModel.UpgradeBuilder builder)

public upgrade constructor.

Parameters:

builder - upgrade builder

Method Details

getName

public String getName()

gets the name.

Returns:

return name.

getDescription

public String getDescription()

gets the description.

Returns:

description.

getCost

public double getCost()

gets the cost

Returns:

return cost.

getAbilityImagePath

```
public String✉ getAbilityImagePath()
```

gets upgrade tile image path.

Returns:

returns loaded Image for this tile.

runUpgradeEffect

```
public void runUpgradeEffect(LevelModel model)
```

gets the effect for this tile.

Parameters:

model - level model.

getFXMLPath

```
public String✉ getFXMLPath()
```

Description copied from class: TileModel

gets the fxml path.

Specified by:

getFXMLPath in class TileModel

Returns:

string path.

Uses of Class com.example.project.models.tiles.EmptyTileSlotModel

Packages that use EmptyTileSlotModel

Package

Description

com.example.project.controllers.tiles

Uses of EmptyTileSlotModel in com.example.project.controllers.tiles

Methods in com.example.project.controllers.tiles with parameters of type EmptyTileSlotModel

Modifier and Type

Method

Description

void

`EmptyTileSlotController.bind(EmptyTileSlotModel modelToUse)`

Module com.example.project

Package com.example.project.controllers.gameScreens

Class LevelController

```
java.lang.Object
  com.example.project.controllers.gameScreens.GameScreenController
    com.example.project.controllers.gameScreens.LevelController
```

```
public class LevelController
extends GameScreenController
```

Controller for the level screen.

Nested Class Summary

Nested classes/interfaces inherited from class com.example.project.controllers.gameScreens.GameScreenController

```
GameScreenController.SidebarLoaded
```

Field Summary

Fields inherited from class com.example.project.controllers.gameScreens.GameScreenController

```
logger
```

Constructor Summary

Constructors

Modifier

Constructor

Description

```
LevelController()
```

Constructor only called once each time application opened.

protected

```
LevelController(LevelModel model)
```

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

protected void

```
onConfirmRedrawButton()
```

Handle redraw confirm button.

protected void

```
onPlayButton()
```

Handle play button

protected void

onRedrawButton()

redraw button opens or cancels the redraw.

```
void
```

onSceneChangedToThis()

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

```
protected void
```

onSkipButton()

```
void
```

setup(Session session, SceneManager sceneManager)

create models and inject session and scene manager.

Methods inherited from class com.example.project.controllers.gameScreens.GameScreenController

```
loadSidebar
```

Methods inherited from class java.lang.Object

```
clone(), equals(), finalize(), getClass(), hashCode(), notify(), notifyAll(), toString(), wait(), wait(), wait()
```

Constructor Details

LevelController

```
public LevelController()
```

Constructor only called once each time application opened.

LevelController

```
protected LevelController(LevelModel model)
```

Method Details

setup

```
public void setup(Session session,  
                  SceneManager sceneManager)
```

Description copied from class: GameScreenController

create models and inject session and scene manager.

Specified by:

[setup](#) in class [GameScreenController](#)

Parameters:

session - session.

sceneManager - scene manager.

onSceneChangedToThis

```
public void onSceneChangedToThis()
```

Description copied from class: GameScreenController

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

Specified by:

[onSceneChangedToThis](#) in class [GameScreenController](#)

onPlayButton

```
protected void onPlayButton()
```

Handle play button

onSkipButton

```
protected void onSkipButton()
```

onRedrawButton

```
protected void onRedrawButton()
```

redraw button opens or cancels the redraw.

onConfirmRedrawButton

```
protected void onConfirmRedrawButton()
```

Handle redraw confirm button.

Uses of Class com.example.project.models.tiles.LetterTileModel

Packages that use LetterTileModel

Package

Description

com.example.project.controllers.tiles

com.example.project.models.gameScreens

com.example.project.models.tileGroups

com.example.project.models.tiles

Uses of LetterTileModel in com.example.project.controllers.tiles

Methods in com.example.project.controllers.tiles that return LetterTileModel

Modifier and Type

Method

Description

LetterTileModel

LetterTileController.getModel()

Methods in com.example.project.controllers.tiles with parameters of type LetterTileModel

Modifier and Type

Method

Description

void

LetterTileController.bind(LetterTileModel tile)

LetterTileController

TileControllerFactory.createLetterTileController(LetterTileModel lt)

Uses of LetterTileModel in com.example.project.models.gameScreens

Methods in com.example.project.models.gameScreens that return types with arguments of type LetterTileModel

Modifier and Type

Method

Description

javafx.beans.property.ReadOnlyListProperty<LetterTileModel>

LevelModel.getRedrawWindowTilesProperty()

javafx.beans.property.ReadOnlyListProperty<LetterTileModel>

LevelModel.getTileRackTilesProperty()

```
javafx.beans.property.ReadOnlyListProperty<LetterTileModel>
```

```
LevelModel.getWordWindowTilesProperty()
```

Methods in com.example.project.models.gameScreens with parameters of type LetterTileModel

Modifier and Type

Method

Description

protected void

```
LevelModel.addTileToRack(LetterTileModel tile)
```

protected void

```
LevelModel.addTileToRedrawWindow(LetterTileModel tile)
```

protected void

```
LevelModel.addTileToWordWindow(LetterTileModel tile)
```

void

```
LevelModel.addToCombo(LetterTileModel tile)
```

add combo sum and multiCombo

boolean

```
LevelModel.tryMoveTile(LetterTileModel tile)
```

determines where tile should go and moves it

Uses of LetterTileModel in com.example.project.models.tileGroups

Constructor parameters in com.example.project.models.tileGroups with type arguments of type LetterTileModel

Modifier

Constructor

Description

```
LetterTileGroup(int numberOfEmptyTileSlots, javafx.scene.layout.Pane container,  
javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList, Consumer<  
<LetterTileController> onClickAction)
```

Constructor

```
LetterTileGroup(int numberOfEmptyTileSlots, javafx.scene.layout.Pane container,  
javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList, Consumer<  
<LetterTileController> onClickHandler, List<Runnable> afterSyncActions)
```

Constructor

protected

```
LetterTileGroup(int numberOfEmptyTileSlots, javafx.scene.layout.Pane container,  
javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList, Consumer<  
<LetterTileController> onClickHandler, List<Runnable> afterSyncActions, TileControllerFactory factory)
```

Uses of LetterTileModel in com.example.project.models.tiles

Methods in com.example.project.models.tiles that return LetterTileModel

Modifier and Type

Method**Description**

LetterTileModel

EmptyTileSlotModel.getTile()

get letter tile in slot.

Methods in com.example.project.models.tiles with parameters of type LetterTileModel

Modifier and Type**Method****Description**

void

EmptyTileSlotModel.setTile(LetterTileModel tile)

Set a new tile.

Uses of Record Class

com.example.project.models.tiles.ScrabbleTileProvider.ScrabbleTileData

No usage of com.example.project.models.tiles.ScrabbleTileProvider.ScrabbleTileData

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.models.tiles.ScrabbleTileProvider

No usage of com.example.project.models.tiles.ScrabbleTileProvider

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.models.tiles.TileModel

Packages that use TileModel

Package

Description

com.example.project.controllers.tiles

com.example.project.models.tileGroups

com.example.project.models.tiles

Uses of TileModel in com.example.project.controllers.tiles

Classes in com.example.project.controllers.tiles with type parameters of type TileModel

Modifier and Type

Class

Description

class

TileController<T extends TileModel>

Parent class of TileControllers.

Fields in com.example.project.controllers.tiles declared as TileModel

Modifier and Type

Field

Description

protected T

TileController.model

Methods in com.example.project.controllers.tiles with type parameters of type TileModel

Modifier and Type

Method

Description

<C extends TileController<T>, T extends TileModel>
C

TileControllerFactory.createTileController(T tile, Class<?> controllerType)

Returns controller of type.

Uses of TileModel in com.example.project.models.tileGroups

Classes in com.example.project.models.tileGroups with type parameters of type TileModel

Modifier and Type

Class

Description

class

TileGroup<modelType extends TileModel, controllerType extends TileController<modelType>>

Tile Group abstract class holds a row or column of tiles.

Uses of *TileModel* in *com.example.project.models.tiles*

Subclasses of *TileModel* in *com.example.project.models.tiles*

Modifier and Type

Class

Description

class

[EmptyTileSlotModel](#)

An empty tile slot model.

class

[LetterTileModel](#)

Represents the letter tiles the player plays holds, redraws.

class

[UpgradeTileModel](#)

Represents the upgrade tiles sold at the shop.

Uses of Class **com.example.project.models.tiles.UpgradeEffects**

No usage of com.example.project.models.tiles.UpgradeEffects

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder

Packages that use UpgradeTileModel.UpgradeBuilder

Package

Description

com.example.project.models.tiles

Uses of UpgradeTileModel.UpgradeBuilder in com.example.project.models.tiles

Methods in com.example.project.models.tiles that return UpgradeTileModel.UpgradeBuilder

Modifier and Type

Method

Description

UpgradeTileModel.UpgradeBuilder

UpgradeTileModel.UpgradeBuilder.cost(double cost)

upgrade cost builder

UpgradeTileModel.UpgradeBuilder

UpgradeTileModel.UpgradeBuilder.description(String[✉] description)

upgrade description builder

UpgradeTileModel.UpgradeBuilder

UpgradeTileModel.UpgradeBuilder.imagePath(String[✉] imagePath)

upgrade image path builder

UpgradeTileModel.UpgradeBuilder

UpgradeTileModel.UpgradeBuilder.name(String[✉] name)

upgrade name builder

UpgradeTileModel.UpgradeBuilder

UpgradeTileModel.UpgradeBuilder.upgradeEffect(Consumer[✉]<LevelModel> upgradeEffect)

upgrade effect builder

Constructors in com.example.project.models.tiles with parameters of type UpgradeTileModel.UpgradeBuilder

Modifier

Constructor

Description

UpgradeTileModel(UpgradeTileModel.UpgradeBuilder builder)

public upgrade constructor.

Uses of Class com.example.project.models.tiles.UpgradeTileModel

Packages that use UpgradeTileModel

Package

Description

com.example.project.controllers.tiles

com.example.project.models.gameScreens

com.example.project.models.tileGroups

com.example.project.models.tiles

com.example.project.services

com.example.project.services.shopItems

Uses of UpgradeTileModel in com.example.project.controllers.tiles

Methods in com.example.project.controllers.tiles with parameters of type UpgradeTileModel

Modifier and Type

Method

Description

void

`UpgradeTileController.bind(UpgradeTileModel tileModel)`

Uses of UpgradeTileModel in com.example.project.models.gameScreens

Methods in com.example.project.models.gameScreens that return types with arguments of type UpgradeTileModel

Modifier and Type

Method

Description

`javafx.beans.property.ListProperty<UpgradeTileModel>`

`ShopModel.getCurrentShopItemsProperty()`

Current items in the shop row that you can buy.

Methods in com.example.project.models.gameScreens with parameters of type UpgradeTileModel

Modifier and Type

Method

Description

void

`ShopModel.tryPurchase(UpgradeTileModel tileClickedOn)`

This should attempt to purchase an upgrade tile from the shop.

Uses of UpgradeTileModel in com.example.project.models.tileGroups

Constructor parameters in com.example.project.models.tileGroups with type arguments of type UpgradeTileModel

Modifier

Constructor

Description

UpgradeTileGroup(javafx.scene.layout.Pane container,
javafx.beans.property.ReadOnlyListProperty<UpgradeTileModel> observedList)

Constructor with no additional sync action parameter.

UpgradeTileGroup(javafx.scene.layout.Pane container,
javafx.beans.property.ReadOnlyListProperty<UpgradeTileModel> observedList, Consumer<
<UpgradeTileController> onClickAction)

Constructor.

Uses of UpgradeTileModel in com.example.project.models.tiles

Methods in com.example.project.models.tiles that return UpgradeTileModel

Modifier and Type

Method

Description

UpgradeTileModel

UpgradeTileModel.UpgradeBuilder.build()

build upgrade

Uses of UpgradeTileModel in com.example.project.services

Methods in com.example.project.services that return types with arguments of type UpgradeTileModel

Modifier and Type

Method

Description

javafx.beans.property.ReadOnlyListProperty<UpgradeTileModel>

Session.getPlayersUpgradesProperty()

gets upgrade tile property

Methods in com.example.project.services with parameters of type UpgradeTileModel

Modifier and Type

Method

Description

void

Session.addUpgrade(UpgradeTileModel upgrade)

Adds an upgrade tile to the player's collection.

Constructor parameters in com.example.project.services with type arguments of type UpgradeTileModel

Modifier

Constructor

Description

protected

Session(int newHandSize, int newWordViewSize, int newRedrawWindowSize,
javafx.collections.ObservableList<UpgradeTileModel> newUpgrades, User newUser, int newMoney,
int newLevelsBeaten, int currentLevelRequirement, int newFirstLevelsRequirement, int newInitialMoney)

Uses of `UpgradeTileModel` in `com.example.project.services.shopItems`

Methods in `com.example.project.services.shopItems` that return `UpgradeTileModel`

Modifier and Type

Method

Description

static `UpgradeTileModel`

`UpgradeTiles.getRandomUpgradeTile()`

Gets random upgrade tile.

static `UpgradeTileModel`

`UpgradeTiles.getUpgradeByName(String✓ name)`

Gets upgrade by name.

Package com.example.project.models.tiles

package com.example.project.models.tiles

Related Packages

Package

Description

[com.example.project.models](#)

[com.example.project.models.gameScreens](#)

[com.example.project.models.popups](#)

[com.example.project.models.tileGroups](#)

All Classes and Interfaces

Classes

Record Classes

Class

Description

[EmptyTileSlotModel](#)

An empty tile slot model.

[LetterTileModel](#)

Represents the letter tiles the player plays holds, redraws.

[ScrabbleTileProvider](#)

Static class to store the scrabble base letter value.

[ScrabbleTileProvider.ScrabbleTileData](#)

[TileModel](#)

Parent tile class for objects in the scene that are tiles.

[UpgradeEffects](#)

upgrade effect methods

[UpgradeTileModel](#)

Represents the upgrade tiles sold at the shop.

[UpgradeTileModel.UpgradeBuilder](#)

builder class for the upgrades

Hierarchy For Package com.example.project.models.tiles

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#)
 - [com.example.project.models.tiles.ScrabbleTileProvider](#)
 - [com.example.project.models.tiles.TileModel](#)
 - [com.example.project.models.tiles.EmptyTileSlotModel](#)
 - [com.example.project.models.tiles.LetterTileModel](#)
 - [com.example.project.models.tiles.UpgradeTileModel](#)
 - [com.example.project.models.tiles.UpgradeEffects](#)
 - [com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder](#)

Record Class Hierarchy

- [java.lang.Object](#)
 - [java.lang.Record](#)
 - [com.example.project.models.tiles.ScrabbleTileProvider.ScrabbleTileData](#)

Copyright © 2025. All rights reserved.

Uses of Package com.example.project.models.tiles

Packages that use com.example.project.models.tiles

Package

Description

com.example.project.controllers.tiles

com.example.project.models.gameScreens

com.example.project.models.tileGroups

com.example.project.models.tiles

com.example.project.services

com.example.project.services.shopItems

Classes in com.example.project.models.tiles used by com.example.project.controllers.tiles

Class

Description

EmptyTileSlotModel

An empty tile slot model.

LetterTileModel

Represents the letter tiles the player plays holds, redraws.

TileModel

Parent tile class for objects in the scene that are tiles.

UpgradeTileModel

Represents the upgrade tiles sold at the shop.

Classes in com.example.project.models.tiles used by com.example.project.models.gameScreens

Class

Description

LetterTileModel

Represents the letter tiles the player plays holds, redraws.

UpgradeTileModel

Represents the upgrade tiles sold at the shop.

Classes in com.example.project.models.tiles used by com.example.project.models.tileGroups

Class

Description

LetterTileModel

Represents the letter tiles the player plays holds, redraws.

TileModel

Parent tile class for objects in the scene that are tiles.

UpgradeTileModel

Represents the upgrade tiles sold at the shop.

Classes in com.example.project.models.tiles used by com.example.project.models.tiles

Class

Description

LetterTileModel

Represents the letter tiles the player plays holds, redraws.

TileModel

Parent tile class for objects in the scene that are tiles.

UpgradeTileModel

Represents the upgrade tiles sold at the shop.

UpgradeTileModel.UpgradeBuilder

builder class for the upgrades

Classes in com.example.project.models.tiles used by com.example.project.services

Class

Description

UpgradeTileModel

Represents the upgrade tiles sold at the shop.

Classes in com.example.project.models.tiles used by com.example.project.services.shopItems

Class

Description

UpgradeTileModel

Represents the upgrade tiles sold at the shop.

Module com.example.project

Package com.example.project.controllers.gameScreens

Class LoginController

```
java.lang.Object
  com.example.project.controllers.gameScreens.GameScreenController
    com.example.project.controllers.gameScreens.LoginController
```

```
public class LoginController
extends GameScreenController
```

Controller for the login scene.

Nested Class Summary

Nested classes/interfaces inherited from class com.example.project.controllers.gameScreens.GameScreenController

```
GameScreenController.SidebarLoaded
```

Field Summary

Fields inherited from class com.example.project.controllers.gameScreens.GameScreenController

```
logger
```

Constructor Summary

Constructors

Constructor

Description

```
LoginController()
```

No arg constructor.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

```
protected void
```

```
onLoginButtonClick()
```

```
void
```

```
onSceneChangedToThis()
```

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

```
protected void
```

```
onSignupButtonClick()
```

```
void
```

```
setup(Session session, SceneManager sceneManager)
```

create models and inject session and scene manager.

Methods inherited from class com.example.project.controllers.gameScreens.GameScreenController

loadSidebar

Methods inherited from class java.lang.Object

clone[✉], equals[✉], finalize[✉], getClass[✉], hashCode[✉], notify[✉], notifyAll[✉], toString[✉], wait[✉], wait[✉], wait[✉]

Constructor Details

LoginController

public LoginController()

No arg constructor.

Method Details

onSceneChangedToThis

public void onSceneChangedToThis()

Description copied from class: GameScreenController

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

Specified by:

onSceneChangedToThis in class GameScreenController

setup

public void setup(Session session,
 SceneManager sceneManager)

Description copied from class: GameScreenController

create models and inject session and scene manager.

Specified by:

setup in class GameScreenController

Parameters:

session - session.

sceneManager - scene manager.

onLoginButtonClick

protected void onLoginButtonClick()

onSignupButtonClick

protected void onSignupButtonClick()

Module com.example.project

Package com.example.project

package com.example.project

Related Packages

Package

Description

[com.example.project.controllers](#)

[com.example.project.models](#)

[com.example.project.services](#)

Classes

Class

Description

Application

The entry point of the application.

Hierarchy For Package com.example.project

Package Hierarchies:

All Packages

Class Hierarchy

- [java.lang.Object](#) ↗
 - [javafx.application.Application](#)
 - [com.example.project.Application](#)

Uses of Package com.example.project

No usage of com.example.project

Copyright © 2025. All rights reserved.

Module com.example.project
Package com.example.project.services

Class FXMLPageLoader

java.lang.Object²
 com.example.project.services.FXMLPageLoader

All Implemented Interfaces:

PageLoader

```
public class FXMLPageLoader
extends Object2
implements PageLoader
```

FXML Loader wrapper class for the project to load the game screen FXML pages.

Constructor Summary

Constructors

Constructor

Description

FXMLPageLoader()

constructor.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

<T> T

getController()

Get the .fxml pages controller

javafx.scene.Parent

load(String² fxmlPath)

Load method to load fxml page.

Methods inherited from class java.lang.Object²

clone², equals², finalize², getClass², hashCode², notify², notifyAll², toString², wait², wait², wait²

Constructor Details

FXMLPageLoader

```
public FXMLPageLoader()
constructor.
```

Method Details

load

```
public javafx.scene.Parent load(String2 fxmlPath)
```

```
throws IOException
```

Description copied from interface: PageLoader

Load method to load fxml page.

Specified by:

[load](#) in interface PageLoader

Parameters:

FXMLPath - path to .fxml mfile.

Returns:

returns the fxml file root node.

Throws:

IOException - exception on failing.

getController

```
public <T> T getController()
```

Description copied from interface: PageLoader

Get the .fxml pages controller

Specified by:

[getController](#) in interface PageLoader

Type Parameters:

T - controller type.

Returns:

page's controller.

Module com.example.project
Package com.example.project.services

Enum Class GameScene

java.lang.Object
 java.lang.Enum<GameScene>
 com.example.project.services.GameScene

All Implemented Interfaces:

Serializable, Comparable<GameScene>, Constable

```
public enum GameScene
extends Enum<GameScene>
```

Game Scenes enum.

Nested Class Summary

Nested classes/interfaces inherited from class java.lang.Enum

```
Enum.EnumDesc<E> extends Enum<E>>
```

Enum Constant Summary

Enum Constants

Enum Constant

Description

DAILY_REWARD

Daily Reward Spinner Screen.

LEVEL

level Screen

LOGIN

Login Screen.

MAINMENU

Main Menu Screen.

SHOP

Shop screen.

Method Summary

All Methods

Static Methods

Concrete Methods

Modifier and Type

Method

Description

```
static GameScene
```

```
valueOf(String name)
```

Returns the enum constant of this class with the specified name.

```
static GameScene[]
```

```
values()
```

Returns an array containing the constants of this enum class, in the order they are declared.

Methods inherited from class java.lang.Enum

clone², compareTo², describeConstable², equals², finalize², getDeclaringClass², hashCode², name², ordinal²,
toString², valueOf²

Methods inherited from class java.lang.Object²

getClass², notify², notifyAll², wait², wait², wait²

Enum Constant Details

LOGIN

public static final GameScene LOGIN

Login Screen.

MAINMENU

public static final GameScene MAINMENU

Main Menu Screen.

DAILY_REWARD

public static final GameScene DAILY_REWARD

Daily Reward Spinner Screen.

LEVEL

public static final GameScene LEVEL

level Screen

SHOP

public static final GameScene SHOP

Shop screen.

Method Details

values

public static GameScene[] values()

Returns an array containing the constants of this enum class, in the order they are declared.

Returns:

an array containing the constants of this enum class, in the order they are declared

valueOf

public static GameScene valueOf(String² name)

Returns the enum constant of this class with the specified name. The string must match *exactly* an identifier used to declare an enum constant in this class. (Extraneous whitespace characters are not permitted.)

Parameters:

name - the name of the enum constant to be returned.

Returns:

the enum constant with the specified name

Throws:

IllegalArgumentException² - if this enum class has no constant with the specified name

[NullPointerException](#) - if the argument is null

Module com.example.project
Package com.example.project.services

Class Logger

java.lang.Object[✉]
 com.example.project.services.Logger

```
public class Logger  
extends Object✉
```

com.example.project.services.Logger for Application and to show up in test and build CI workflow.

Constructor Summary

Constructors

Modifier

Constructor

Description

`Logger()`

Default constructor writes to console does not capture.

`Logger(ByteArrayOutputStream✉ capturedErrStream, ByteArrayOutputStream✉ capturedOutStream)`

Constructor for unit tests.

protected

`Logger(ByteArrayOutputStream✉ capturedErrStream, ByteArrayOutputStream✉ capturedOutStream, PrintStream✉
mockRealErrOutput, PrintStream✉ mockRealStdOutput)`

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

`clearLogs()`

Clears captured logs use in tests teardown.

`String✉`

`getErrorLogs()`

`String✉`

`getLogs()`

void

`logError(String✉ message)`

Logs an error message to standard error.

void

`logMessage(String✉ message)`

Log message to System.out.

```
void  
setPrintToConsole(boolean value)
```

Methods inherited from class java.lang.Object

```
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait
```

Constructor Details

Logger

```
public Logger()
```

Default constructor writes to console does not capture. For the project files. Use below for unit tests.

Logger

```
public Logger(ByteArrayOutputStream capturedErrStream,  
             ByteArrayOutputStream capturedOutStream)
```

Constructor for unit tests. Logger with constructor to input the byte array output stream to write to. (for mocking a log to check get methods.)

Parameters:

`capturedErrStream` - byte array to store error logs.

`capturedOutStream` - byte array to store standard output logs.

Logger

```
protected Logger(ByteArrayOutputStream capturedErrStream,  
                 ByteArrayOutputStream capturedOutStream,  
                 PrintStream mockRealErrOutput,  
                 PrintStream mockRealStdOutput)
```

Method Details

setPrintToConsole

```
public void setPrintToConsole(boolean value)
```

Parameters:

`value` - if this logger will also print to the console.

getErrorLogs

```
public String getErrorLogs()
```

Returns:

Gets the error log messages.

getLogs

```
public String getLogs()
```

Returns:

returns the standard log messages.

logError

```
public void logError(String2 message)
```

Logs an error message to standard error. And adds a newline.

The message can include format specifiers like in `String.format(String, Object...)`.

Parameters:

message - the error message format string (e.g., "Failed to connect to %s")

clearLogs

```
public void clearLogs()
```

Clears captured logs use in tests teardown.

logMessage

```
public void logMessage(String2 message)
```

Log message to System.out.

Parameters:

message - message.

Module com.example.project
Package com.example.project.services

Interface PageLoader

All Known Implementing Classes:

FXMLPageLoader

public interface PageLoader

Interface for page loading.

Method Summary

[All Methods](#) [Instance Methods](#) [Abstract Methods](#)

Modifier and Type

Method

Description

<T> T

getController()

Get the .fxml pages controller

javafx.scene.Parent

load(String[✉] fxmlPath)

Load method to load fxml page.

Method Details

load

```
javafx.scene.Parent load(String✉ fxmlPath)
    throws IOException
```

Load method to load fxml page.

Parameters:

fxmlPath - path to .fxml mfile.

Returns:

returns the fxml file root node.

Throws:

IOException[✉] - exception on failing.

getController

<T> T getController()

Get the .fxml pages controller

Type Parameters:

T - controller type.

Returns:

page's controller.

Module com.example.project
Package com.example.project.services

Class PasswordHasher

java.lang.Object
 com.example.project.services.PasswordHasher

```
public class PasswordHasher  
extends Object
```

Hashes passwords.

Constructor Summary

Constructors

Modifier

Constructor

Description

PasswordEncoder()

public constructor.

protected

PasswordHasher(Logger logger)

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

boolean

doesPasswordMatch(String candidate, String hashed)

Verifies a candidate password against a hashed password.

String

hashPassword(String rawPassword)

Hashes a raw password using BCrypt.

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

PasswordEncoder

```
public PasswordHasher()
```

public constructor.

PasswordEncoder

```
protected PasswordHasher(Logger logger)
```

Method Details

hashPassword

```
public String2 hashPassword(String2 rawPassword)
```

Hashes a raw password using BCrypt.

Parameters:

rawPassword - the plain text password

Returns:

the hashed password string

doesPasswordMatch

```
public boolean doesPasswordMatch(String2 candidate,  
                                String2 hashed)
```

Verifies a candidate password against a hashed password.

Parameters:

candidate - the plain text password entered by the user

hashed - the hashed password stored in the database

Returns:

true if the password matches, false otherwise

Module com.example.project
Package com.example.project.services

Class PopupLoader

java.lang.Object
com.example.project.services.PopupLoader

```
public class PopupLoader  
extends Object
```

class to load the popup and initialize it with a controller

Constructor Summary

Constructors

Modifier

Constructor

Description

PopupLoader()

Constructor.

protected

PopupLoader(FXMLLoader loader)

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

<C extends PopupController<P>, P extends PopupModel>

C

createPopupController(P popupModel)

create popup controller.

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

PopupLoader

protected PopupLoader(FXMLLoader loader)

PopupLoader

public PopupLoader()

Constructor.

Method Details

createPopupController

```
public <C extends PopupController<P>,
      P extends PopupModel>
C createPopupController(P popupModel)
```

create popup controller.

Type Parameters:

C - class of popup controller.

P - class of popup.

Parameters:

popupModel - popup object.

Returns:

returns controller of the tile.

Module com.example.project
Package com.example.project.services

Class SVGIcons

java.lang.Object²
com.example.project.services.SVGIcons

```
public class SVGIcons  
extends Object2
```

a static class to hold some icons for the application.

Constructor Summary

Constructors

Constructor

Description

SVGIcons()

Method Summary

All Methods

Static Methods

Concrete Methods

Modifier and Type

Method

Description

static javafx.scene.shape.SVGPath

getCogIcon()

gets a cog icon.

Methods inherited from class java.lang.Object²

clone², equals², finalize², getClass², hashCode², notify², notifyAll², toString², wait², wait², wait²

Constructor Details

SVGIcons

```
public SVGIcons()
```

Method Details

getCogIcon

```
public static javafx.scene.shape.SVGPath getCogIcon()
```

gets a cog icon.

Returns:

icon SVG.

Module com.example.project

Package com.example.project.controllers.gameScreens

Class MainMenuController

java.lang.Object ↗
 com.example.project.controllers.gameScreens.GameScreenController
 com.example.project.controllers.gameScreens.MainMenuController

```
public class MainMenuController  
extends GameScreenController
```

controller for the main menu.

Nested Class Summary

Nested classes/interfaces inherited from class com.example.project.controllers.gameScreens.GameScreenController

GameScreenController.SidebarLoaded

Field Summary

Fields inherited from class com.example.project.controllers.gameScreens.GameScreenController

logger

Constructor Summary

Constructors

Constructor

Description

MainMenuController()

No arg constructor.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

protected void

onDailyRewardClicked()

protected void

onFastForwardClick()

protected void

onLoadButtonClick()

protected void

onLogoutButtonClick()

```
void  
onSceneChangedToThis()
```

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

```
protected void  
onStartButtonClick()
```

```
void  
setup(Session session, SceneManager sceneManager)
```

create models and inject session and scene manager.

Methods inherited from class com.example.project.controllers.gameScreens.GameScreenController

```
loadSidebar
```

Methods inherited from class java.lang.Object

```
clone(), equals(), finalize(), getClass(), hashCode(), notify(), notifyAll(), toString(), wait(), wait(), wait()
```

Constructor Details

MainMenuController

```
public MainMenuController()
```

No arg constructor.

Method Details

onSceneChangedToThis

```
public void onSceneChangedToThis()
```

Description copied from class: GameScreenController

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

Specified by:

onSceneChangedToThis in class GameScreenController

setup

```
public void setup(Session session,  
                 SceneManager sceneManager)
```

Description copied from class: GameScreenController

create models and inject session and scene manager.

Specified by:

setup in class GameScreenController

Parameters:

session - session.

sceneManager - scene manager.

onStartButtonClick

```
protected void onStartButtonClick()
```

onLoadButtonClick

```
protected void onLoadButtonClick()
```

onLogoutButtonClick

```
protected void onLogoutButtonClick()
```

onDailyRewardClicked

```
protected void onDailyRewardClicked()
```

onFastForwardClick

```
protected void onFastForwardClick()
```

Module com.example.project
Package com.example.project.services

Class SceneManager

java.lang.Object[✉]
 com.example.project.services.SceneManager

```
public class SceneManager  
extends Object✉
```

Represents the scene manager class.

Constructor Summary

Constructors

Constructor

Description

`SceneManager(RootLayoutController newRootController, Map✉<GameScene, GameScreenController> controllersToUse,
Map✉<GameScene, javafx.scene.Parent> pagesToUse)`

Constructor with injection for tests

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

GameScene

`getCurrentScene()`

get current scene.

`void`

`switchScene(GameScene type)`

Switch between scenes specify scene type of type from GameScene.

Methods inherited from class java.lang.Object[✉]

`clone✉, equals✉, finalize✉, getClass✉, hashCode✉, notify✉, notifyAll✉, toString✉, wait✉, wait✉, wait✉`

Constructor Details

SceneManager

```
public SceneManager(RootLayoutController newRootController,  
                  Map✉<GameScene, GameScreenController> controllersToUse,  
                  Map✉<GameScene, javafx.scene.Parent> pagesToUse)
```

Constructor with injection for tests

Parameters:

`newRootController` - root controller

`controllersToUse` - controllers

`pagesToUse` - pages

Method Details

switchScene

```
public void switchScene(GameScene type)
```

Switch between scenes specify scene type of type from GameScene.

Parameters:

type - scene.

getCurrentScene

```
public GameScene getCurrentScene()
```

get current scene.

Returns:

scene.

Module com.example.project
Package com.example.project.services

Class Session

java.lang.Object[✉]
com.example.project.services.Session

```
public class Session  
extends Object✉
```

Game Session. holds info of the current session.

Constructor Summary

Constructors

Modifier

Constructor

Description

Session()

Default constructor.

protected

**Session(int newHandSize, int newWordViewSize, int newRedrawWindowSize,
javafx.collections.ObservableList<UpgradeTileModel> newUpgrades, User newUser, int newMoney,
int newLevelsBeaten, int currentLevelRequirement, int newFirstLevelsRequirement, int newInitialMoney)**

Constructor for injecting values in for unit test.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

addUpgrade(UpgradeTileModel upgrade)

Adds an upgrade tile to the player's collection.

javafx.beans.property.ReadOnlyIntegerWrapper

getCurrentPlays()

gets the current plays.

javafx.beans.property.ReadOnlyIntegerWrapper

getCurrentRedraws()

gets the redraws property.

int

getHandSize()

gets hand size.

javafx.beans.property.ReadOnlyIntegerWrapper

getLevelRequirement()

protected int

getLevelsBeaten()

```
javafx.beans.property.DoubleProperty
```

getMoneyProperty()

Returns the read-only money property for binding to UI components.

```
javafx.beans.property.ReadOnlyListProperty<UpgradeTileModel>
```

getPlayersUpgradesProperty()

gets upgrade tile property

```
Integer
```

getRedrawWindowSize()

gets redraw window size (number of slots)

```
User
```

getUser()

Returns logged in user.

```
int
```

getWordWindowSize()

gets word size.

```
boolean
```

hasClaimedRewardToday()

Checks if the player already claimed today's reward.

```
void
```

load()

Load logged in users data.

```
void
```

modifyMoney(double amount)

Adds or remove money to the player's balance.

```
void
```

resetGame()

Resets the current session when you lose

```
void
```

resetMoney()

Resets the player's money to the initial state (e.g.

```
void
```

resetPlaysRedraws()

Reset the plays and redraws.

```
void
```

Save()

will save a copy of this session data to local drive.

```
void
```

setLastRewardDate(LocalDate date)

Sets the date the daily reward was last claimed.

```
void
```

setUser(User newUser)

set new user.

```
void
```

updateLevelInfo()

Increments how many points are required to beat the level.

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

Constructor Details

Session

```
protected Session(int newHandSize,  
                 int newWordViewSize,  
                 int newRedrawWindowSize,  
                 javafx.collections.ObservableList<UpgradeTileModel> newUpgrades,  
                 User newUser,  
                 int newMoney,  
                 int newLevelsBeaten,  
                 int currentLevelRequirement,  
                 int newFirstLevelsRequirement,  
                 int newInitialMoney)
```

Constructor for injecting values in for unit test.

Parameters:

`newHandSize` - hand size.

`newWordViewSize` - word length allowed.

`newRedrawWindowSize` - redraw window size.

`newUpgrades` - upgrade tiles.

`newUser` - user.

`newMoney` - money.

`newLevelsBeaten` - levels beaten.

`currentLevelRequirement` - current level requirement.

`newFirstLevelsRequirement` - first level requirement.

Session

```
public Session()
```

Default constructor.

Method Details

getLevelRequirement

```
public javafx.beans.property.ReadOnlyIntegerWrapper getLevelRequirement()
```

Returns:

points required for the play to score at least to beat the level.

getLevelsBeaten

```
protected int getLevelsBeaten()
```

getMoneyProperty

```
public javafx.beans.property.DoubleProperty getMoneyProperty()
```

Returns the read-only money property for binding to UI components. This allows UI elements to automatically update when the players money changes.

Returns:

ReadOnlyIntegerProperty representing the player's current money amount

addUpgrade

```
public void addUpgrade(UpgradeTileModel upgrade)
```

Adds an upgrade tile to the player's collection. This will automatically update all UI displays bound to the upgrades property.

Parameters:

upgrade - this upgrades the tile to add it to the players collection

hasClaimedRewardToday

```
public boolean hasClaimedRewardToday()
```

Checks if the player already claimed today's reward.

Returns:

true if already claimed today

setUser

```
public void setUser(User newUser)
```

set new user.

Parameters:

newUser - user that logged in.

getUser

```
public User getUser()
```

Returns logged in user.

Returns:

user.

getHandSize

```
public int getHandSize()
```

gets hand size.

Returns:

returns number of tiles allowed in hand.

getWordWindowSize

```
public int getWordWindowSize()
```

gets word size.

Returns:

return int word size.

getPlayersUpgradesProperty

```
public javafx.beans.property.ReadOnlyListProperty<UpgradeTileModel> getPlayersUpgradesProperty()
```

gets upgrade tile property

Returns:

upgrade tiles model list

updateLevelInfo

```
public void updateLevelInfo()
```

Increments how many points are required to beat the level.

resetGame

```
public void resetGame()
```

Resets the current session when you lose

getRedrawWindowSize

```
public Integer getRedrawWindowSize()
```

gets redraw window size (number of slots)

Returns:

return int redraw window size.

getCurrentPlays

```
public javafx.beans.property.ReadOnlyIntegerWrapper getCurrentPlays()
```

gets the current plays.

Returns:

current plays remaining.

getCurrentRedraws

```
public javafx.beans.property.ReadOnlyIntegerWrapper getCurrentRedraws()
```

gets the redraws property.

Returns:

the current redraws.

resetPlaysRedraws

```
public void resetPlaysRedraws()
```

Reset the plays and redraws.

modifyMoney

```
public void modifyMoney(double amount)
```

Adds or remove money to the player's balance.

Parameters:

amount - amount to add

setLastRewardDate

```
public void setLastRewardDate(LocalDate date)
```

Sets the date the daily reward was last claimed.

Parameters:

date - LocalDate of the reward claim

resetMoney

```
public void resetMoney()
```

Resets the player's money to the initial state (e.g. 0).

Save

```
public void Save()
```

will save a copy of this session data to local drive.

Load

```
public void load()
```

Load logged in users data.

Module com.example.project
Package com.example.project.services

Class SessionData

java.lang.Object[↳]
com.example.project.services.SessionData

```
public class SessionData
extends Object↳
```

Session data.

Field Summary

Fields

Modifier and Type

Field

Description

int

currentInitialPlays

current max plays.

int

currentInitialRedraws

current max redraws.

String[↳]

lastRewardDate

last reward date.

int

levelRequirement

level requirement.

int

levelsBeaten

levels beaten.

double

money

current money.

List[↳]<String[↳]>

upgradeNames

upgrade names.

String[↳]

username

username.

Constructor Summary

Constructors

Constructor

Description

SessionData()

Method Summary

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

Field Details

money

`public double money`

current money.

levelsBeaten

`public int levelsBeaten`

levels beaten.

levelRequirement

`public int levelRequirement`

level requirement.

currentInitialPlays

`public int currentInitialPlays`

current max plays.

currentInitialRedraws

`public int currentInitialRedraws`

current max redraws.

lastRewardDate

`public String lastRewardDate`

last reward date.

username

`public String username`

username.

upgradeNames

`public List<String> upgradeNames`

upgrade names.

Constructor Details

SessionData

```
public SessionData()
```

Uses of Class com.example.project.services.FXMLPageLoader

Packages that use FXMLPageLoader

Package

Description

com.example.project.controllers.gameScreens

com.example.project.controllers.tiles

com.example.project.services

Uses of FXMLPageLoader in com.example.project.controllers.gameScreens

Methods in com.example.project.controllers.gameScreens with parameters of type FXMLPageLoader

Modifier and Type

Method

Description

void

`GameScreenFactory.loadGameScreens(RootLayoutController rootController, FXMLPageLoader loader)`

Load all main game screens.

Uses of FXMLPageLoader in com.example.project.controllers.tiles

Constructors in com.example.project.controllers.tiles with parameters of type FXMLPageLoader

Modifier

Constructor

Description

protected

`TileControllerFactory(FXMLPageLoader loader)`

Uses of FXMLPageLoader in com.example.project.services

Constructors in com.example.project.services with parameters of type FXMLPageLoader

Modifier

Constructor

Description

protected

`PopupLoader(FXMLPageLoader loader)`

Uses of Enum Class

com.example.project.services.GameScene

Packages that use GameScene

Package

Description

com.example.project.services

Uses of GameScene in com.example.project.services

Methods in com.example.project.services that return GameScene

Modifier and Type

Method

Description

GameScene

SceneManager.getCurrentScene()

get current scene.

static GameScene

GameScene.valueOf(String name)

Returns the enum constant of this class with the specified name.

static GameScene[]

GameScene.values()

Returns an array containing the constants of this enum class, in the order they are declared.

Methods in com.example.project.services with parameters of type GameScene

Modifier and Type

Method

Description

void

SceneManager.switchScene(GameScene type)

Switch between scenes specify scene type of type from GameScene.

Constructor parameters in com.example.project.services with type arguments of type GameScene

Modifier

Constructor

Description

SceneManager(RootLayoutController newRootController, Map<GameScene, GameScreenController> controllersToUse, Map<GameScene, javafx.scene.Parent> pagesToUse)

Constructor with injection for tests

Uses of Class com.example.project.services.Logger

Packages that use Logger

Package

Description

com.example.project.controllers.gameScreens

com.example.project.models.gameScreens

com.example.project.services

com.example.project.services.sound

com.example.project.services.sqlite.dAOs

Uses of Logger in com.example.project.controllers.gameScreens

Fields in com.example.project.controllers.gameScreens declared as Logger

Modifier and Type

Field

Description

protected `Logger`

`GameScreenController.logger`

Constructors in com.example.project.controllers.gameScreens with parameters of type Logger

Modifier

Constructor

Description

protected

`ShopController(ShopModel model, UpgradeTileGroup players, UpgradeTileGroup shopItems, Logger logger)`

protected constructor for unit testing with mock model injection.

Uses of Logger in com.example.project.models.gameScreens

Fields in com.example.project.models.gameScreens declared as Logger

Modifier and Type

Field

Description

protected `Logger`

`GameScreenModel.logger`

Constructors in com.example.project.models.gameScreens with parameters of type Logger

Modifier

Constructor

Description

protected
`LevelModel(Session session, Logger logger, SceneManager sceneManager)`

protected
`ShopModel(Session session, SceneManager sceneManager, Logger logger)`
Constructor for tests.

Uses of `Logger` in `com.example.project.services`

Constructors in `com.example.project.services` with parameters of type `Logger`

Modifier

Constructor

Description

protected
`PasswordHasher(Logger logger)`

Uses of `Logger` in `com.example.project.services.sound`

Constructors in `com.example.project.services.sound` with parameters of type `Logger`

Modifier

Constructor

Description

protected
`GameSoundPlayer(String filePath, Logger logger)`

protected
`GameSoundPlayer(String filePath, Logger logger, float gainAmount)`

Uses of `Logger` in `com.example.project.services.sqlite.dAOs`

Constructors in `com.example.project.services.sqlite.dAOs` with parameters of type `Logger`

Modifier

Constructor

Description

`DictionaryDAO(Connection connection, Logger logger)`
constructor with injection for tests.

protected
`UsersDAO(PasswordHasher hasher, Connection connection, Logger logger)`

`UsersDAO(Connection connection, Logger logger)`
Constructor with injection for unit tests.

Uses of Interface com.example.project.services.PageLoader

Packages that use PageLoader

Package

Description

com.example.project.services

Uses of PageLoader in com.example.project.services

Classes in com.example.project.services that implement PageLoader

Modifier and Type

Class

Description

class

FXMLPageLoader

FXML Loader wrapper class for the project to load the game screen FXML pages.

Uses of Class com.example.project.services.PasswordHasher

Packages that use PasswordHasher

Package

Description

com.example.project.models.gameScreens

com.example.project.services.sqlite.dAOs

Uses of PasswordHasher in com.example.project.models.gameScreens

Constructors in com.example.project.models.gameScreens with parameters of type PasswordHasher

Modifier

Constructor

Description

`LoginModel(Session session, SceneManager sceneManager, UsersDAO dao, PasswordHasher passwordHasher)`
constructor.

Uses of PasswordHasher in com.example.project.services.sqlite.dAOs

Constructors in com.example.project.services.sqlite.dAOs with parameters of type PasswordHasher

Modifier

Constructor

Description

protected

`UsersDAO(PasswordHasher hasher, Connection✉ connection, Logger logger)`

Uses of Class com.example.project.services.PopupLoader

No usage of com.example.project.services.PopupLoader

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.services.SVGIcons

No usage of com.example.project.services.SVGIcons

Copyright © 2025. All rights reserved.

Module com.example.project

Package com.example.project.controllers.gameScreens

Class ShopController

java.lang.Object
 com.example.project.controllers.gameScreens.GameScreenController
 com.example.project.controllers.gameScreens.ShopController

```
public class ShopController  
extends GameScreenController
```

Shop view controller.

Nested Class Summary

Nested classes/interfaces inherited from class com.example.project.controllers.gameScreens.GameScreenController

GameScreenController.SidebarLoaded

Field Summary

Fields inherited from class com.example.project.controllers.gameScreens.GameScreenController

logger

Constructor Summary

Constructors

Modifier

Constructor

Description

ShopController()

no arg constructor.

protected

ShopController(ShopModel model, UpgradeTileGroup players, UpgradeTileGroup shopItems, Logger logger)

protected constructor for unit testing with mock model injection.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

protected void

onNextLevelPressed()

void

onSceneChangedToThis()

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

protected void

```
onUpgradeClicked(UpgradeTileController controller)
```

```
protected void
```

```
save()
```

```
void
```

```
setup(Session session, SceneManager sceneManager)
```

```
create models and inject session and scene manager.
```

Methods inherited from class com.example.project.controllers.gameScreens.GameScreenController

```
loadSidebar
```

Methods inherited from class java.lang.Object

```
clone(), equals(), finalize(), getClass(), hashCode(), notify(), notifyAll(), toString(), wait(), wait(), wait()
```

Constructor Details

ShopController

```
public ShopController()
```

```
no arg constructor.
```

ShopController

```
protected ShopController(ShopModel model,
                       UpgradeTileGroup players,
                       UpgradeTileGroup shopItems,
                       Logger logger)
```

```
protected constructor for unit testing with mock model injection.
```

Method Details

setup

```
public void setup(Session session,
                  SceneManager sceneManager)
```

Description copied from class: GameScreenController

```
create models and inject session and scene manager.
```

Specified by:

```
setup in class GameScreenController
```

Parameters:

```
session - session.
```

```
sceneManager - scene manager.
```

onSceneChangedToThis

```
public void onSceneChangedToThis()
```

Description copied from class: GameScreenController

```
Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.
```

Specified by:

```
onSceneChangedToThis in class GameScreenController
```

onUpgradeClicked

```
protected void onUpgradeClicked(UpgradeTileController controller)
```

Parameters:

controller - upgrade tile ui element clicked on.

onNextLevelPressed

```
protected void onNextLevelPressed()
```

save

```
protected void save()
```

Uses of Class com.example.project.services.SceneManager

Packages that use SceneManager

Package

Description

com.example.project.controllers

com.example.project.controllers.gameScreens

com.example.project.models.gameScreens

Uses of SceneManager in com.example.project.controllers

Methods in com.example.project.controllers with parameters of type SceneManager

Modifier and Type

Method

Description

void

RootLayoutController.setSceneManager(SceneManager sceneManager)

Set scene manager to use.

Uses of SceneManager in com.example.project.controllers.gameScreens

Methods in com.example.project.controllers.gameScreens with parameters of type SceneManager

Modifier and Type

Method

Description

void

DailyRewardController.setup(Session session, SceneManager sceneManager)

Initialises the daily reward view by resetting the reward label.

abstract void

GameScreenController.setup(Session session, SceneManager sceneManager)

create models and inject session and scene manager.

void

LevelController.setup(Session session, SceneManager sceneManager)

void

LoginController.setup(Session session, SceneManager sceneManager)

void

MainMenuController.setup(Session session, SceneManager sceneManager)

void

ShopController.setup(Session session, SceneManager sceneManager)

Uses of SceneManager in com.example.project.models.gameScreens

Fields in com.example.project.models.gameScreens declared as SceneManager

Modifier and Type

Field

Description

protected final SceneManager

GameScreenModel.sceneManager

Methods in com.example.project.models.gameScreens that return SceneManager

Modifier and Type

Method

Description

SceneManager

GameScreenModel.getSceneManager()

get scene manager

Constructors in com.example.project.models.gameScreens with parameters of type SceneManager

Modifier

Constructor

Description

DailyRewardModel(Session session, SceneManager sceneManager)

Constructor.

protected

GameScreenModel(Session session, SceneManager sceneManager)

protected

LevelModel(Session session, Logger logger, SceneManager sceneManager)

LevelModel(Session session, SceneManager sceneManager)

Default constructor.

LoginModel(Session session, SceneManager sceneManager, UsersDAO dao, PasswordHasher passwordHasher)

constructor.

MainMenuModel(Session session, SceneManager sceneManager)

constructor.

ShopModel(Session session, SceneManager sceneManager)

Constructor

protected

ShopModel(Session session, SceneManager sceneManager, Logger logger)

Constructor for tests.

Uses of Class com.example.project.services.Session

Packages that use Session

Package

Description

com.example.project.controllers.gameScreens

com.example.project.models.gameScreens

Uses of Session in com.example.project.controllers.gameScreens

Methods in com.example.project.controllers.gameScreens with parameters of type Session

Modifier and Type

Method

Description

void

SidebarController.bindPersistentInfo(Session session)

Binds things used in multiple screens, money, redraws plays.

void

DailyRewardController.setup(Session session, SceneManager sceneManager)

Initialises the daily reward view by resetting the reward label.

abstract void

GameScreenController.setup(Session session, SceneManager sceneManager)

create models and inject session and scene manager.

void

LevelController.setup(Session session, SceneManager sceneManager)

void

LoginController.setup(Session session, SceneManager sceneManager)

void

MainMenuController.setup(Session session, SceneManager sceneManager)

void

ShopController.setup(Session session, SceneManager sceneManager)

Constructors in com.example.project.controllers.gameScreens with parameters of type Session

Modifier

Constructor

Description

GameScreenFactory(Session session)

Constructor.

Uses of Session in com.example.project.models.gameScreens

Fields in com.example.project.models.gameScreens declared as Session

Modifier and Type

Field

Description

protected final Session

GameScreenModel.session

Methods in com.example.project.models.gameScreens that return Session

Modifier and Type

Method

Description

Session

GameScreenModel.getSession()

Get session.

Constructors in com.example.project.models.gameScreens with parameters of type Session

Modifier

Constructor

Description

DailyRewardModel(Session session, SceneManager sceneManager)

Constructor.

protected

GameScreenModel(Session session, SceneManager sceneManager)

protected

LevelModel(Session session, Logger logger, SceneManager sceneManager)

LevelModel(Session session, SceneManager sceneManager)

Default constructor.

LoginModel(Session session, SceneManager sceneManager, UsersDAO dao, PasswordHasher passwordHasher)

constructor.

MainMenuModel(Session session, SceneManager sceneManager)

constructor.

ShopModel(Session session, SceneManager sceneManager)

Constructor

protected

ShopModel(Session session, SceneManager sceneManager, Logger logger)

Constructor for tests.

Uses of Class com.example.project.services.SessionData

No usage of com.example.project.services.SessionData

Copyright © 2025. All rights reserved.

Module com.example.project

Package com.example.project.services

package com.example.project.services

Related Packages

Package

Description

[com.example.project](#)

[com.example.project.services.shopItems](#)

[com.example.project.services.sound](#)

[com.example.project.services.sqlite](#)

[com.example.project.controllers](#)

[com.example.project.models](#)

All Classes and Interfaces

Interfaces

Classes

Enum Classes

Class

Description

FXMLPageLoader

FXML Loader wrapper class for the project to load the game screen FXML pages.

GameScene

Game Scenes enum.

Logger

com.example.project.services.Logger for Application and to show up in test and build CI workflow.

PageLoader

Interface for page loading.

PasswordHasher

Hashes passwords.

PopupLoader

class to load the popup and initialize it with a controller

SceneManager

Represents the scene manager class.

Session

Game Session.

SessionData

Session data.

SVGIcons

a static class to hold some icons for the application.

Hierarchy For Package com.example.project.services

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#)
 - [com.example.project.services.FXMLEPageLoader](#) (implements [com.example.project.services.PageLoader](#))
 - [com.example.project.services.Logger](#)
 - [com.example.project.services.PasswordHasher](#)
 - [com.example.project.services.PopupLoader](#)
 - [com.example.project.services.SceneManager](#)
 - [com.example.project.services.Session](#)
 - [com.example.project.services.SessionData](#)
 - [com.example.project.services.SVGIcons](#)

Interface Hierarchy

- [com.example.project.services.PageLoader](#)

Enum Class Hierarchy

- [java.lang.Object](#)
 - [java.lang.Enum](#)<E> (implements [java.lang.Comparable](#)<T>, [java.lang.constant.Constable](#), [java.io.Serializable](#))
 - [com.example.project.services.GameScene](#)

Uses of Package com.example.project.services

Packages that use com.example.project.services

Package	Description
com.example.project.controllers	

com.example.project.controllers.gameScreens

com.example.project.controllers.tiles

com.example.project.models.gameScreens
--

com.example.project.services

com.example.project.services.sound

com.example.project.services.sqlite.dAOs
--

Classes in com.example.project.services used by com.example.project.controllers

Class	Description
SceneManager	Represents the scene manager class.

Classes in com.example.project.services used by com.example.project.controllers.gameScreens

Class	Description
FXMLPageLoader	FXML Loader wrapper class for the project to load the game screen FXML pages.
Logger	com.example.project.services.Logger for Application and to show up in test and build CI workflow.
SceneManager	Represents the scene manager class.
Session	Game Session.

Classes in com.example.project.services used by com.example.project.controllers.tiles

Class	Description
FXMLPageLoader	FXML Loader wrapper class for the project to load the game screen FXML pages.

Classes in com.example.project.services used by com.example.project.models.gameScreens

Class

Description

Logger

com.example.project.services.Logger for Application and to show up in test and build CI workflow.

PasswordHasher

Hashes passwords.

SceneManager

Represents the scene manager class.

Session

Game Session.

Classes in com.example.project.services used by com.example.project.services

Class

Description

FXMLPageLoader

FXML Loader wrapper class for the project to load the game screen FXML pages.

GameScene

Game Scenes enum.

Logger

com.example.project.services.Logger for Application and to show up in test and build CI workflow.

PageLoader

Interface for page loading.

Classes in com.example.project.services used by com.example.project.services.sound

Class

Description

Logger

com.example.project.services.Logger for Application and to show up in test and build CI workflow.

Classes in com.example.project.services used by com.example.project.services.sqlite.dAOs

Class

Description

Logger

com.example.project.services.Logger for Application and to show up in test and build CI workflow.

PasswordHasher

Hashes passwords.

Module com.example.project
Package com.example.project.services.shopItems

Class UpgradeTiles

java.lang.Object
 com.example.project.services.shopItems.UpgradeTiles

```
public class UpgradeTiles  
extends Object
```

Static class to store all the possible upgrade tiles available in the game.

Constructor Summary

Constructors

Constructor

Description

UpgradeTiles()

Method Summary

All Methods

Static Methods

Concrete Methods

Modifier and Type

Method

Description

static UpgradeTileModel

getRandomUpgradeTile()

Gets random upgrade tile.

static UpgradeTileModel

getUpgradeByName(String name)

Gets upgrade by name.

Methods inherited from class java.lang.Object

clone(), equals(), finalize(), getClass(), hashCode(), notify(), notifyAll(), toString(), wait(), wait(), wait()

Constructor Details

UpgradeTiles

```
public UpgradeTiles()
```

Method Details

getRandomUpgradeTile

```
public static UpgradeTileModel getRandomUpgradeTile()
```

Gets random upgrade tile.

Returns:

returns upgrade tile.

getUpgradeByName

```
public static UpgradeTileModel getUpgradeByName(String name)
```

Gets upgrade by name.

Parameters:

name - name.

Returns:

tile.

Uses of Class com.example.project.services.shopItems.UpgradeTiles

No usage of com.example.project.services.shopItems.UpgradeTiles

Copyright © 2025. All rights reserved.

Module com.example.project

Package com.example.project.services.shopItems

package com.example.project.services.shopItems

Related Packages

Package

Description

[com.example.project.services](#)

[com.example.project.services.sound](#)

[com.example.project.services.sqlite](#)

Classes

Class

Description

[UpgradeTiles](#)

Static class to store all the possible upgrade tiles available in the game.

Copyright © 2025. All rights reserved.

Hierarchy For Package com.example.project.services.shopItems

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#) ↗
 - [com.example.project.services.shopItems.UpgradeTiles](#)

Copyright © 2025. All rights reserved.

Module com.example.project

Package com.example.project.controllers.gameScreens

Class SidebarController

java.lang.Object
com.example.project.controllers.gameScreens.SidebarController

```
public class SidebarController  
extends Object
```

The sidebar on shop and level with the current round info.

Constructor Summary

Constructors

Constructor

Description

SidebarController()

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

bindPersistentInfo(Session session)

Binds things used in multiple screens, money, redraws plays.

javafx.scene.control.Label

getComboLabel()

Returns combo label.

javafx.scene.control.Label

getCurrentScoreLabel()

current score label.

javafx.scene.control.Label

getMultiplierLabel()

word score multiplier label.

javafx.scene.control.Label

getRawPointsLabel()

raw points label to be multiplied by multiplier.

void

hideLevelInfo()

Only show things relevant to upgrades or the shop.

void

setupProperties(LevelModel levelModel)

Setup sync able properties.

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

Constructor Details

SidebarController

```
public SidebarController()
```

Method Details

bindPersistentInfo

```
public void bindPersistentInfo(Session session)
```

Binds things used in multiple screens, money, redraws plays.

Parameters:

session - session.

hideLevelInfo

```
public void hideLevelInfo()
```

Only show things relevant to upgrades or the shop. Money, redraws, plays.

getComboLabel

```
public javafx.scene.control.Label getComboLabel()
```

Returns combo label.

Returns:

combo label.

setupProperties

```
public void setupProperties(LevelModel levelModel)
```

Setup sync able properties.

Parameters:

levelModel - level model.

getRawPointsLabel

```
public javafx.scene.control.Label getRawPointsLabel()
```

raw points label to be multiplied by multiplier.

Returns:

label.

getCurrentScoreLabel

```
public javafx.scene.control.Label getCurrentScoreLabel()
```

current score label.

Returns:

label.

getmultiplierLabel

```
public javafx.scene.control.Label getmultiplierLabel()
```

word score multiplier label.

Returns:

label.

Uses of Package com.example.project.services.shopItems

No usage of com.example.project.services.shopItems

Copyright © 2025. All rights reserved.

Module com.example.project
Package com.example.project.services.sound

Class GameMusicPlayer

java.lang.Object ↗
 com.example.project.services.sound.GameSoundPlayer
 com.example.project.services.sound.GameMusicPlayer

```
public class GameMusicPlayer  
extends GameSoundPlayer
```

Plays the game music track on repeat.

Field Summary

Fields inherited from class com.example.project.services.sound.GameSoundPlayer

clip

Constructor Summary

Constructors

Constructor

Description

[GameMusicPlayer\(\)](#)

Create new instance of game music player.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

[playGameMusicLoop\(\)](#)

play game music loop continuously.

Methods inherited from class com.example.project.services.sound.GameSoundPlayer

[mute](#), [replay](#), [unMute](#)

Methods inherited from class java.lang.Object ↗

[clone](#) ↗, [equals](#) ↗, [finalize](#) ↗, [getClass](#) ↗, [hashCode](#) ↗, [notify](#) ↗, [notifyAll](#) ↗, [toString](#) ↗, [wait](#) ↗, [wait](#) ↗, [wait](#) ↗

Constructor Details

GameMusicPlayer

```
public GameMusicPlayer()
```

Create new instance of game music player.

Method Details

playGameMusicLoop

```
public void playGameMusicLoop()
```

play game music loop continuously.

Module com.example.project
Package com.example.project.services.sound

Class GameSoundPlayer

java.lang.Object²
 com.example.project.services.sound.GameSoundPlayer

Direct Known Subclasses:

GameMusicPlayer

```
public class GameSoundPlayer
extends Object2
```

plays an audio clip as a sound effect for the game.

Field Summary

Fields

Modifier and Type

Field

Description

protected final Clip²

clip

Constructor Summary

Constructors

Modifier

Constructor

Description

GameSoundPlayer(String² filePath)

creates a new instance of GameSoundPlayer

GameSoundPlayer(String² filePath, float gainAmount)

creates a new instance of GameSoundPlayer

protected

GameSoundPlayer(String² filePath, Logger logger)

protected

GameSoundPlayer(String² filePath, Logger logger, float gainAmount)

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

```
mute()
```

set clip volume to mute.

```
void
```

```
replay()
```

Reset clip and then play.

```
void
```

```
unMute()
```

Set clip to its default volume.

Methods inherited from class java.lang.Object

```
clone✉, equals✉, finalize✉, getClass✉, hashCode✉, notify✉, notifyAll✉, toString✉, wait✉, wait✉, wait✉
```

Field Details

clip

```
protected final Clip✉ clip
```

Constructor Details

GameSoundPlayer

```
public GameSoundPlayer(String✉ filePath)
```

creates a new instance of GameSoundPlayer

Parameters:

filePath - filepath to sound.

GameSoundPlayer

```
protected GameSoundPlayer(String✉ filePath,  
                           Logger logger)
```

GameSoundPlayer

```
protected GameSoundPlayer(String✉ filePath,  
                           Logger logger,  
                           float gainAmount)
```

GameSoundPlayer

```
public GameSoundPlayer(String✉ filePath,  
                           float gainAmount)
```

creates a new instance of GameSoundPlayer

Parameters:

filePath - filepath to sound.

gainAmount - volume to set the clip at

Method Details

replay

```
public void replay()
```

Reset clip and then play.

mute

```
public void mute()
```

set clip volume to mute.

unMute

```
public void unMute()
```

Set clip to its default volume.

Uses of Class com.example.project.services.sound.GameMusicPlayer

No usage of com.example.project.services.sound.GameMusicPlayer

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.services.sound.GameSoundPlayer

Packages that use GameSoundPlayer

Package

Description

com.example.project.models.popups

com.example.project.models.tiles

com.example.project.services.sound

Uses of GameSoundPlayer in com.example.project.models.popups

Fields in com.example.project.models.popups declared as GameSoundPlayer

Modifier and Type

Field

Description

protected final GameSoundPlayer

PopupModel.paperSoundPlayer

protected final GameSoundPlayer

PopupModel.reversePaperSoundPlayer

Methods in com.example.project.models.popups that return GameSoundPlayer

Modifier and Type

Method

Description

GameSoundPlayer

PopupModel.getPaperSoundPlayer()

gets paper sound player

GameSoundPlayer

PopupModel.getReversePaperSoundPlayer()

gets reversed paper sound player

Uses of GameSoundPlayer in com.example.project.models.tiles

Fields in com.example.project.models.tiles declared as GameSoundPlayer

Modifier and Type

Field

Description

protected final GameSoundPlayer

TileModel.clackSoundPlayer

protected final GameSoundPlayer

TileModel.hoverSoundPlayer

Methods in com.example.project.models.tiles that return GameSoundPlayer

Modifier and Type

Method

Description

GameSoundPlayer

TileModel.getClickSoundPlayer()

gets the sound player that plays the click sound.

GameSoundPlayer

TileModel.getHoverSoundPlayer()

gets the hover sound player

Uses of GameSoundPlayer in com.example.project.services.sound

Subclasses of GameSoundPlayer in com.example.project.services.sound

Modifier and Type

Class

Description

class

GameMusicPlayer

Plays the game music track on repeat.

Module com.example.project

Package com.example.project.services.sound

package com.example.project.services.sound

Related Packages

Package

Description

[com.example.project.services](#)

[com.example.project.services.shopItems](#)

[com.example.project.services.sqlite](#)

Classes

Class

Description

[GameMusicPlayer](#)

Plays the game music track on repeat.

[GameSoundPlayer](#)

plays an audio clip as a sound effect for the game.

Copyright © 2025. All rights reserved.

Hierarchy For Package com.example.project.services.sound

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#) ↗
 - [com.example.project.services.sound.GameSoundPlayer](#)
 - [com.example.project.services.sound.GameMusicPlayer](#)

Uses of Package com.example.project.services.sound

Packages that use com.example.project.services.sound

Package

Description

com.example.project.models.popups

com.example.project.models.tiles

com.example.project.services.sound

Classes in com.example.project.services.sound used by com.example.project.models.popups

Class

Description

GameSoundPlayer

plays an audio clip as a sound effect for the game.

Classes in com.example.project.services.sound used by com.example.project.models.tiles

Class

Description

GameSoundPlayer

plays an audio clip as a sound effect for the game.

Classes in com.example.project.services.sound used by com.example.project.services.sound

Class

Description

GameSoundPlayer

plays an audio clip as a sound effect for the game.

Module com.example.project
Package com.example.project.services.sqlite

Class SQLiteConnection

java.lang.Object[↳]
 com.example.project.services.sqlite.SQLiteConnection

Direct Known Subclasses:

SQLiteDictionaryConnection, SQLiteUsersConnection

```
public abstract class SQLiteConnection
extends Object↳
```

Abstract SQLiteConnection class.

Constructor Summary

Constructors

Constructor

Description

SQLiteConnection()

Method Summary

All Methods

Instance Methods

Abstract Methods

Concrete Methods

Modifier and Type

Method

Description

protected abstract String[↳]

getDatabasePath()

Each subclass provides its database path.

Connection[↳]

getInstance()

Gets the database connection from an existing readonly resource .db

protected abstract Connection[↳]

getSQLiteInstance()

protected abstract void

setSQLiteInstance(Connection[↳] newInstance)

Methods inherited from class java.lang.Object[↳]

clone[↳], equals[↳], finalize[↳], getClass[↳], hashCode[↳], notify[↳], notifyAll[↳], toString[↳], wait[↳], wait[↳], wait[↳]

Constructor Details

SQLiteConnection

public SQLiteConnection()

Method Details

getSQLLiteInstance

```
protected abstract Connection2 getSQLLiteInstance()
```

setSQLLiteInstance

```
protected abstract void setSQLLiteInstance(Connection2 newInstance)
```

getDatabasePath

```
protected abstract String2 getDatabasePath()
```

Each subclass provides its database path.

getInstance

```
public Connection2 getInstance()
```

Gets the database connection from an existing readonly resource .db

Returns:

returns the connection is already made or creates new one.

Module com.example.project

Package com.example.project.services.sqlite

Class SQLiteDictionaryConnection

```
java.lang.Object
    com.example.project.services.sqlite.SQLiteConnection
        com.example.project.services.sqlite.SQLiteDictionaryConnection
```

```
public class SQLiteDictionaryConnection
extends SQLiteConnection
```

Connection to the dictionary.db

Constructor Summary

Constructors

Constructor

Description

`SQLiteDictionaryConnection()`

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

`protected String` [getDatabasePath\(\)](#)

`getSQLiteInstance()`

Each subclass provides its database path.

`protected Connection` [setSQLiteInstance\(Connection newInstance\)](#)

```
protected void
setSQLiteInstance(Connection newInstance)
```

Methods inherited from class com.example.project.services.sqlite.SQLiteConnection

`getInstance()`

Methods inherited from class java.lang.Object

`clone(), equals(), finalize(), getClass(), hashCode(), notify(), notifyAll(), toString(), wait(), wait(), wait()`

Constructor Details

SQLiteDictionaryConnection

```
public SQLiteDictionaryConnection()
```

Method Details

getSQLLiteInstance

```
protected Connection2 getSQLLiteInstance()
```

Specified by:

[getSQLLiteInstance](#) in class [SQLiteConnection](#)

setSQLLiteInstance

```
protected void setSQLLiteInstance(Connection2 newInstance)
```

Specified by:

[setSQLLiteInstance](#) in class [SQLiteConnection](#)

getDatabasePath

```
protected String2 getDatabasePath()
```

Description copied from class: [SQLiteConnection](#)

Each subclass provides its database path.

Specified by:

[getDatabasePath](#) in class [SQLiteConnection](#)

Module com.example.project

Package com.example.project.controllers.gameScreens

Enum Class TooltipSetup.Element

java.lang.Object
 java.lang.Enum<TooltipSetup.Element>
 com.example.project.controllers.gameScreens.TooltipSetup.Element

All Implemented Interfaces:

Serializable, Comparable<TooltipSetup.Element>, Constable

Enclosing class:

TooltipSetup

```
public static enum TooltipSetup.Element  
extends Enum<TooltipSetup.Element>
```

different types of elements that require a tooltip

Nested Class Summary

Nested classes/interfaces inherited from class java.lang.Enum

```
Enum.EnumDesc<E> extends Enum<E>>
```

Enum Constant Summary

Enum Constants

Enum Constant

Description

DAILY

tooltip for daily rewards

FUNDS

tooltip for game funds label

ROUNDSCORE

tooltip for round score label

SCORETOBEAT

tooltip for target score label

UPGRADE

tooltip for upgrade tiles

Method Summary

All Methods

Static Methods

Concrete Methods

Modifier and Type

Method

Description

```
static TooltipSetup.Element
```

```
valueOf(String name)
```

Returns the enum constant of this class with the specified name.

```
static TooltipSetup.Element[]
```

```
values()
```

Returns an array containing the constants of this enum class, in the order they are declared.

Methods inherited from class java.lang.Enum

clone, compareTo, describeConstable, equals, finalize, getDeclaringClass, hashCode, name, ordinal, toString, valueOf

Methods inherited from class java.lang.Object

getClass, notify, notifyAll, wait, wait, wait

Enum Constant Details

UPGRADE

public static final TooltipSetup.Element UPGRADE

tooltip for upgrade tiles

DAILY

public static final TooltipSetup.Element DAILY

tooltip for daily rewards

SCORETOBEAT

public static final TooltipSetup.Element SCORETOBEAT

tooltip for target score label

ROUNDSCORE

public static final TooltipSetup.Element ROUNDSCORE

tooltip for round score label

FUNDS

public static final TooltipSetup.Element FUNDS

tooltip for game funds label

Method Details

values

public static TooltipSetup.Element[] values()

Returns an array containing the constants of this enum class, in the order they are declared.

Returns:

an array containing the constants of this enum class, in the order they are declared

valueOf

public static TooltipSetup.Element valueOf(String² name)

Returns the enum constant of this class with the specified name. The string must match *exactly* an identifier used to declare an enum constant in this class. (Extraneous whitespace characters are not permitted.)

Parameters:

name - the name of the enum constant to be returned.

Returns:

the enum constant with the specified name

Throws:

[IllegalArgumentException](#) - if this enum class has no constant with the specified name

[NullPointerException](#) - if the argument is null

Module com.example.project

Package com.example.project.services.sqlite

Class SQLiteUsersConnection

```
java.lang.Object
    com.example.project.services.sqlite.SQLiteConnection
        com.example.project.services.sqlite.SQLiteUsersConnection
```

```
public class SQLiteUsersConnection
extends SQLiteConnection
```

Connection to the users.db

Constructor Summary

Constructors

Constructor

Description

`SQLiteUsersConnection()`

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

`protected String`

`getDatabasePath()`

Each subclass provides its database path.

`protected Connection`

`getSQLiteInstance()`

`protected void`

`setSQLiteInstance(Connection`

Methods inherited from class com.example.project.services.sqlite.SQLiteConnection

`getInstance`

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

Constructor Details

SQLiteUsersConnection

```
public SQLiteUsersConnection()
```

Method Details

getSQLLiteInstance

```
protected Connection2 getSQLLiteInstance()
```

Specified by:

getSQLLiteInstance in class [SQLiteConnection](#)

setSQLLiteInstance

```
protected void setSQLLiteInstance(Connection2 newInstance)
```

Specified by:

setSQLLiteInstance in class [SQLiteConnection](#)

getDatabasePath

```
protected String2 getDatabasePath()
```

Description copied from class: [SQLiteConnection](#)

Each subclass provides its database path.

Specified by:

getDatabasePath in class [SQLiteConnection](#)

Uses of Class com.example.project.services.sqlite.SQLiteConnection

Packages that use `SQLiteConnection`

Package

Description

[com.example.project.services.sqlite](#)

Uses of `SQLiteConnection` in com.example.project.services.sqlite

Subclasses of `SQLiteConnection` in com.example.project.services.sqlite

Modifier and Type

Class

Description

class

[SQLiteDictionaryConnection](#)

Connection to the dictionary.db

class

[SQLiteUsersConnection](#)

Connection to the users.db

Uses of Class

com.example.project.services.sqlite.SQLiteDictionaryConnection

No usage of com.example.project.services.sqlite.SQLiteDictionaryConnection

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.services.sqlite.SQLiteUsersConnection

No usage of com.example.project.services.sqlite.SQLiteUsersConnection

Copyright © 2025. All rights reserved.

Module com.example.project
Package com.example.project.services.sqlite.dAOs

Class DictionaryDAO

java.lang.Object
 com.example.project.services.sqlite.dAOs.DictionaryDAO

```
public class DictionaryDAO  
extends Object
```

The SQLite Dictionary. The connection returned from SQLiteDictionaryConnection().getInstance() is always the same.

Constructor Summary

Constructors

Constructor

Description

DictionaryDAO()

Constructor for this class SQLLiteDictionary.

DictionaryDAO(Connection² connection, Logger logger)

constructor with injection for tests.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

String²

getWordDefinition(String² wordToFind)

gets the words definition.

boolean

isWordInDictionary(String² wordToCheck)

gets if word is in dictionary.

Methods inherited from class java.lang.Object²

clone², equals², finalize², getClass², hashCode², notify², notifyAll², toString², wait², wait², wait²

Constructor Details

DictionaryDAO

```
public DictionaryDAO()
```

Constructor for this class SQLLiteDictionary.

DictionaryDAO

```
public DictionaryDAO(Connection2 connection,  
                      Logger logger)
```

constructor with injection for tests.

Parameters:

connection - mock connection.

logger - a mock logger.

Method Details

getWordDefinition

```
public String2 getWordDefinition(String2 wordToFind)
```

gets the words definition.

Parameters:

wordToFind - Word to get definition of.

Returns:

Returns the definition.

isWordInDictionary

```
public boolean isWordInDictionary(String2 wordToCheck)
```

gets if word is in dictionary.

Parameters:

wordToCheck - Word to check.

Returns:

returns the boolean value indicating whether the word exists in our database.

Module com.example.project

Package com.example.project.services.sqlite.dAOs

Class UsersDAO

java.lang.Object
 com.example.project.services.sqlite.dAOs.UsersDAO

```
public class UsersDAO  
extends Object
```

SQLite Users database. with a table `users` 2 columns. 'username', 'password'. Which are both defined as unique not null Strings in sqlite.

Constructor Summary

Constructors

Modifier

Constructor

Description

UsersDAO()

Constructor for this class SQLiteDictionary.

protected

UsersDAO(PasswordHasher hasher, Connection connection, Logger logger)

UsersDAO(Connection connection, Logger logger)

Constructor with injection for unit tests.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

addUser(User user)

Adds user to the user.db.

boolean

doesUserExist(String username)

String

getSessionDataJson(String username)

Get session saved data.

User

getUser(String username)

boolean

hasSaveData(User user)

Does user have save data.

```
void  
saveSessionData(String2 username, String2 sessionJson)  
Saves the session data as JSON for a specific user.
```

Methods inherited from class java.lang.Object²

```
clone2, equals2, finalize2, getClass2, hashCode2, notify2, notifyAll2, toString2, wait2, wait2, wait2
```

Constructor Details

UsersDAO

```
public UsersDAO()  
Constructor for this class SQLiteDictionary.
```

UsersDAO

```
protected UsersDAO(PasswordHasher hasher,  
                   Connection2 connection,  
                   Logger logger)
```

UsersDAO

```
public UsersDAO(Connection2 connection,  
                  Logger logger)
```

Constructor with injection for unit tests.

Parameters:

connection - Connection

logger - logger.

Method Details

addUser

```
public void addUser(User user)  
Adds user to the user.db. password will be hashed before storing to ensure greater security (no plain text passwords)
```

Parameters:

user - user to add.

doesUserExist

```
public boolean doesUserExist(String2 username)
```

Parameters:

username - username

Returns:

returns bool indicating whether use is in database already.

getUser

```
public User getUser(String2 username)
```

Parameters:

username - username.

Returns:

returns user with matching username.

saveSessionData

```
public void saveSessionData(String2 username,  
                           String2 sessionJson)
```

Saves the session data as JSON for a specific user.

Parameters:

username - the username to save data for

sessionJson - the JSON string containing session data

getSessionDataJson

```
public String2 getSessionDataJson(String2 username)
```

Get session saved data.

Parameters:

username - user.

Returns:

returns string.

hasSaveData

```
public boolean hasSaveData(User user)
```

Does user have save data.

Parameters:

user - user.

Returns:

returns true if save data exists.

Uses of Class

com.example.project.services.sqlite.dAOs.DictionaryDAO

No usage of com.example.project.services.sqlite.dAOs.DictionaryDAO

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.services.sqlite.dAOs.UsersDAO

Packages that use UsersDAO

Package

Description

com.example.project.models.gameScreens

Uses of UsersDAO in com.example.project.models.gameScreens

Constructors in com.example.project.models.gameScreens with parameters of type UsersDAO

Modifier

Constructor

Description

`LoginModel(Session session, SceneManager sceneManager, UsersDAO dao, PasswordHasher passwordHasher)`

constructor.

Module com.example.project

Package com.example.project.services.sqlite.dAOs

package com.example.project.services.sqlite.dAOs

Related Packages

Package

Description

com.example.project.services.sqlite

Classes

Class

Description

DictionaryDAO

The SQLite Dictionary.

UsersDAO

SQLite Users database.

Hierarchy For Package com.example.project.services.sqlite.dAOs

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#)
 - [com.example.project.services.sqlite.dAOs.DictionaryDAO](#)
 - [com.example.project.services.sqlite.dAOs.UsersDAO](#)

Module com.example.project

Package com.example.project.controllers.gameScreens

Class TooltipSetup

java.lang.Object
com.example.project.controllers.gameScreens TooltipSetup

```
public class TooltipSetup  
extends Object
```

sets a tooltip for desired element

Nested Class Summary

Nested Classes

Modifier and Type

Class

Description

static enum

TooltipSetup.Element

different types of elements that require a tooltip

Constructor Summary

Constructors

Constructor

Description

TooltipSetup()

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

setupTooltip(javafx.scene.Node node, TooltipSetup.Element element, Object model)

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

TooltipSetup

```
public TooltipSetup()
```

Method Details

setupTooltip

```
public void setupTooltip(javafx.scene.Node node,  
                        TooltipSetup.Element element,  
                        Object model)
```

Parameters:

node - Node to attach tooltip to

element - Element type

model - Model associated with element

Uses of Package `com.example.project.services.sqlite.dAOs`

Packages that use `com.example.project.services.sqlite.dAOs`

Package

Description

`com.example.project.models.gameScreens`

Classes in `com.example.project.services.sqlite.dAOs` used by `com.example.project.models.gameScreens`

Class

Description

`UsersDAO`

SQLite Users database.

Module com.example.project

Package com.example.project.services.sqlite

package com.example.project.services.sqlite

Related Packages

Package

Description

[com.example.project.services](#)

[com.example.project.services.sqlite.dAOs](#)

[com.example.project.services.shopItems](#)

[com.example.project.services.sound](#)

Classes

Class

Description

[SQLiteConnection](#)

Abstract SQLiteConnection class.

[SQLiteDictionaryConnection](#)

Connection to the dictionary.db

[SQLiteUsersConnection](#)

Connection to the users.db

Copyright © 2025. All rights reserved.

Hierarchy For Package com.example.project.services.sqlite

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#)
- [com.example.project.services.sqlite.SQLiteConnection](#)
 - [com.example.project.services.sqlite.SQLiteDictionaryConnection](#)
 - [com.example.project.services.sqlite.SQLiteUsersConnection](#)

Uses of Package com.example.project.services.sqlite

Packages that use com.example.project.services.sqlite

Package

Description

com.example.project.services.sqlite

Classes in com.example.project.services.sqlite used by com.example.project.services.sqlite

Class

Description

SQLiteDatabase

Abstract SQLiteDatabase class.

Module com.example.project

module com.example.project

project dependencies.

Packages

Exports

Package

Description

[com.example.project](#)

[com.example.project.controllers](#)

[com.example.project.controllers.gameScreens](#)

[com.example.project.controllers.gameScreens.animations](#)

[com.example.project.controllers.popupControllers](#)

[com.example.project.controllers.tiles](#)

[com.example.project.models](#)

[com.example.project.models.gameScreens](#)

[com.example.project.models.popups](#)

[com.example.project.models.tileGroups](#)

[com.example.project.models.tiles](#)

[com.example.project.services](#)

[com.example.project.services.shopItems](#)

[com.example.project.services.sound](#)

[com.example.project.services.sqlite](#)

[com.example.project.services.sqlite.dAOs](#)

Constant Field Values

Contents

com.example.*

com.example.*

com.example.project.Application

Modifier and Type

Constant Field

Value

public static final int

HEIGHT

700

public static final String

TITLE

"WordPlay"

public static final int

WIDTH

1300

com.example.project.models.gameScreens.ShopModel

Modifier and Type

Constant Field

Value

protected final int

numberOfShopItems

3

com.example.project.models.tiles.TileModel

Modifier and Type

Constant Field

Value

public static final int

CORNER_RADIUS

20

JavaDoc Help

- Navigation:
 - Search
- Kinds of Pages:
 - Module
 - Package
 - Class or Interface
 - Other Files
 - Use
 - Tree (Class Hierarchy)
 - Constant Field Values
 - All Packages
 - All Classes and Interfaces
 - Index

Navigation

Starting from the [Overview](#) page, you can browse the documentation using the links in each page, and in the navigation bar at the top of each page. The [Index](#) and [Search](#) box allow you to navigate to specific declarations and summary pages, including: [All Packages](#), [All Classes and Interfaces](#)

Search

You can search for definitions of modules, packages, types, fields, methods, system properties and other terms defined in the API. These items can be searched using part or all of the name, optionally using "camelCase" abbreviations, or multiple search terms separated by whitespace. Some examples:

- "j.l.obj" matches "java.lang.Object"
- "InpStr" matches "java.io.InputStream"
- "math exact long" matches "java.lang.Math.absExact(long)"

Refer to the [Javadoc Search Specification](#) for a full description of search features.

Kinds of Pages

The following sections describe the different kinds of pages in this collection.

Module

Each module has a page that contains a list of its packages, dependencies on other modules, and services, with a summary for each. These pages may contain the following categories:

- Packages
- Modules
- Services

Package

Each package has a page that contains a list of its classes and interfaces, with a summary for each. These pages may contain the following categories:

- Interfaces
- Classes
- Enum Classes
- Exception Classes
- Annotation Interfaces

Class or Interface

Each class, interface, nested class and nested interface has its own separate page. Each of these pages has three sections consisting of a declaration and description, member summary tables, and detailed member descriptions. Entries in each of these sections are omitted if they are empty or not applicable.

- Class Inheritance Diagram
- Direct Subclasses
- All Known Subinterfaces
- All Known Implementing Classes
- Class or Interface Declaration
- Class or Interface Description

- Nested Class Summary
- Enum Constant Summary
- Field Summary
- Property Summary
- Constructor Summary
- Method Summary
- Required Element Summary
- Optional Element Summary

- Enum Constant Details
- Field Details
- Property Details
- Constructor Details
- Method Details
- Element Details

Note: Annotation interfaces have required and optional elements, but not methods. Only enum classes have enum constants. The components of a record class are displayed as part of the declaration of the record class. Properties are a feature of JavaFX.

The summary entries are alphabetical, while the detailed descriptions are in the order they appear in the source code. This preserves the logical groupings established by the programmer.

Other Files

Packages and modules may contain pages with additional information related to the declarations nearby.

Use

Each documented package, class and interface has its own Use page. This page describes what packages, classes, methods, constructors and fields use any part of the given class or package. Given a class or interface A, its Use page includes subclasses of A, fields declared as A, methods that return A, and methods and constructors with parameters of type A. You can access this page by first going to the package, class or interface, then clicking on the USE link in the navigation bar.

Tree (Class Hierarchy)

There is a [Class Hierarchy](#) page for all packages, plus a hierarchy for each package. Each hierarchy page contains a list of classes and a list of interfaces. Classes are organized by inheritance structure starting with `java.lang.Object`. Interfaces do not inherit from `java.lang.Object`.

- When viewing the Overview page, clicking on TREE displays the hierarchy for all packages.
- When viewing a particular package, class or interface page, clicking on TREE displays the hierarchy for only that package.

Constant Field Values

The [Constant Field Values](#) page lists the static final fields and their values.

All Packages

The [All Packages](#) page contains an alphabetic index of all packages contained in the documentation.

All Classes and Interfaces

The [All Classes and Interfaces](#) page contains an alphabetic index of all classes and interfaces contained in the documentation, including annotation interfaces, enum classes, and record classes.

Index

The [Index](#) contains an alphabetic index of all classes, interfaces, constructors, methods, and fields in the documentation, as well as summary pages such as [All Packages](#), [All Classes and Interfaces](#).

This help file applies to API documentation generated by the standard doclet.

Index

A B C D E F G H I L M N O P R S T U V W

All Classes and Interfaces | All Packages | Constant Field Values

A

addTileToRack(LetterTileModel) - Method in class com.example.project.models.gameScreens.LevelModel

addTileToRedrawWindow(LetterTileModel) - Method in class com.example.project.models.gameScreens.LevelModel

addTileToWordWindow(LetterTileModel) - Method in class com.example.project.models.gameScreens.LevelModel

addToCombo(LetterTileModel) - Method in class com.example.project.models.gameScreens.LevelModel

 add combo sum and multiCombo

addUpgrade(UpgradeTileModel) - Method in class com.example.project.services.Session

 Adds an upgrade tile to the player's collection.

addUser(User) - Method in class com.example.project.services.sqlite.dAOs.UsersDAO

 Adds user to the user.db.

animateTotalScore(int, int, Label, long) - Method in class com.example.project.controllers.gameScreens.animations.ScoreTimeline

AnimationWrapper - Class in com.example.project.controllers.gameScreens.animations

 Animation wrapper class for our projects animations that get used.

AnimationWrapper() - Constructor for class com.example.project.controllers.gameScreens.animations.AnimationWrapper

Application - Class in com.example.project

 The entry point of the application.

Application() - Constructor for class com.example.project.Application

apply(Node, double) - Method in class com.example.project.controllers.gameScreens.animations.InfiniteFloatingAnimation

 apply to node.

applyReward(DailyRewardType) - Method in class com.example.project.models.gameScreens.DailyRewardModel

 Applies the effect of the given reward to the session and marks it as claimed.

B

bind(EmptyTileSlotModel) - Method in class com.example.project.controllers.tiles.EmptyTileSlotController

bind(LetterTileModel) - Method in class com.example.project.controllers.tiles.LetterTileController

bind(UpgradeTileModel) - Method in class com.example.project.controllers.tiles.UpgradeTileController

bind(T) - Method in class com.example.project.controllers.tiles.TileController

 Binds tile to the controller as its model.

bindPersistentInfo(Session) - Method in class com.example.project.controllers.gameScreens.SidebarController

 Binds things used in multiple screens, money, redraws plays.

braceletEffect(LevelModel) - Static method in class com.example.project.models.tiles.UpgradeEffects

 Add +1 to score multiplier for every consecutive letter alphabetical order.

build() - Method in class com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder

 build upgrade

buttonEffect(LevelModel) - Static method in class com.example.project.models.tiles.UpgradeEffects

 adds 5 to the word score for every x in the tile rack.

C

calcTotalWordScore() - Method in class com.example.project.models.gameScreens.LevelModel

ClackSoundPlayer - Variable in class com.example.project.models.tiles.TileModel

clearLogs() - Method in class com.example.project.services.Logger

 Clears captured logs use in tests teardown.

clip - Variable in class com.example.project.services.sound.GameSoundPlayer

coinEffect(LevelModel) - Static method in class com.example.project.models.tiles.UpgradeEffects

 20% Chance the total word score is doubled

com.example.project - module com.example.project

 project dependencies.

com.example.project - package com.example.project

com.example.project.controllers - package com.example.project.controllers

com.example.project.controllers.gameScreens - package com.example.project.controllers.gameScreens

com.example.project.controllers.gameScreens.animations - package com.example.project.controllers.gameScreens.animations

com.example.project.controllers.popupControllers - package com.example.project.controllers.popupControllers

com.example.project.controllers.tiles - package com.example.project.controllers.tiles
com.example.project.models - package com.example.project.models
com.example.project.models.gameScreens - package com.example.project.models.gameScreens
com.example.project.models.popups - package com.example.project.models.popups
com.example.project.models.tileGroups - package com.example.project.models.tileGroups
com.example.project.models.tiles - package com.example.project.models.tiles
com.example.project.services - package com.example.project.services
com.example.project.services.shopItems - package com.example.project.services.shopItems
com.example.project.services.sound - package com.example.project.services.sound
com.example.project.services.sqlite - package com.example.project.services.sqlite
com.example.project.services.sqlite.dAOs - package com.example.project.services.sqlite.dAOs

ConfettiAnimation - Class in com.example.project.controllers.gameScreens.animations

 class to play confetti animation.

ConfettiAnimation() - Constructor for class com.example.project.controllers.gameScreens.animations.[ConfettiAnimation](#)

container - Variable in class com.example.project.models.tileGroups.[TileGroup](#)

controller() - Method in record class com.example.project.controllers.gameScreens.GameScreenController.SidebarLoaded
 Returns the value of the controller record component.

CORNER_RADIUS - Static variable in class com.example.project.models.tiles.TileModel
 corner radius (rounded corners).

cost(double) - Method in class com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder
 upgrade cost builder

countText - Variable in class com.example.project.controllers.tiles.UpgradeTileController

createLetterTileController(LetterTileModel) - Method in class com.example.project.controllers.tiles.[TileControllerFactory](#)

createPopupController(P) - Method in class com.example.project.services.PopupLoader
 create popup controller.

createTileController(T, Class<C>) - Method in class com.example.project.controllers.tiles.[TileControllerFactory](#)
 Returns controller of type.

currentInitialPlays - Variable in class com.example.project.services.SessionData
 current max plays.

currentInitialRedraws - Variable in class com.example.project.services.SessionData
 current max redraws.

D

DAILY - Enum constant in enum class com.example.project.controllers.gameScreens.TooltipSetup.Element
 tooltip for daily rewards

DAILY_REWARD - Enum constant in enum class com.example.project.services.GameScene
 Daily Reward Spinner Screen.

Daily_Reward_Won_1Dollar - Enum constant in enum class com.example.project.models.gameScreens.DailyRewardType
 Player wins \$1

Daily_Reward_Won_5Dollars - Enum constant in enum class com.example.project.models.gameScreens.DailyRewardType
 Player wins \$5

Daily_Reward_Won_NOTHING - Enum constant in enum class com.example.project.models.gameScreens.DailyRewardType
 Player wins nothing

DailyRewardController - Class in com.example.project.controllers.gameScreens
 Controller for the daily reward popup screen.

DailyRewardController() - Constructor for class com.example.project.controllers.gameScreens.DailyRewardController

DailyRewardModel - Class in com.example.project.models.gameScreens
 Model for handling daily reward logic and state.

DailyRewardModel(Session, SceneManager) - Constructor for class com.example.project.models.gameScreens.DailyRewardModel
 Constructor.

DailyRewardType - Enum Class in com.example.project.models.gameScreens
 Enum representing the possible daily reward outcomes.

DefinitionController - Class in com.example.project.controllers.popupControllers
 Controller for definition popup

DefinitionController() - Constructor for class com.example.project.controllers.popupControllers.DefinitionController

DefinitionPopup - Class in com.example.project.models.popups
 Represents Definition window called when a word is played

DefinitionPopup() - Constructor for class com.example.project.models.popups.DefinitionPopup

definitionProperty() - Method in class com.example.project.models.popups.DefinitionPopup

description(String) - Method in class com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder
upgrade description builder

DEV_BUTTONS_ON - Static variable in class com.example.project.Application
dev buttons should be on or not.

DevButton - Class in com.example.project.controllers
wrapper class for dev buttons to toggle off or on when we want.

DevButton() - Constructor for class com.example.project.controllers.DevButton
Constructor.

diceEffect(LevelModel) - Static method in class com.example.project.models.tiles.UpgradeEffects
Value is doubled for a random letter in the played word

DictionaryDAO - Class in com.example.project.services.sqlite.dAOs
The SQLite Dictionary.

DictionaryDAO() - Constructor for class com.example.project.services.sqlite.dAOs.DictionaryDAO
Constructor for this class SQLLiteDictionary.

DictionaryDAO(Connection, Logger) - Constructor for class com.example.project.services.sqlite.dAOs.DictionaryDAO
constructor with injection for tests.

doesPasswordMatch(String, String) - Method in class com.example.project.services.PasswordHasher
Verifies a candidate password against a hashed password.

doesUserExist(String) - Method in class com.example.project.services.sqlite.dAOs.UsersDAO

drawRandomTile() - Method in class com.example.project.models.tiles.ScrabbleTileProvider

E

EmptyTileSlotController - Class in com.example.project.controllers.tiles
Empty Tile controller for EmptyTile view.

EmptyTileSlotController() - Constructor for class com.example.project.controllers.tiles.EmptyTileSlotController

EmptyTileSlotModel - Class in com.example.project.models.tiles
An empty tile slot model.

EmptyTileSlotModel() - Constructor for class com.example.project.models.tiles.EmptyTileSlotModel

equals(Object) - Method in record class com.example.project.controllers.gameScreens.GameScreenController SidebarLoaded
Indicates whether some other object is "equal to" this one.

equals(Object) - Method in record class com.example.project.models.tiles.ScrabbleTileProvider.ScrabbleTileData
Indicates whether some other object is "equal to" this one.

F

frequency() - Method in record class com.example.project.models.tiles.ScrabbleTileProvider.ScrabbleTileData
Returns the value of the frequency record component.

FUNDS - Enum constant in enum class com.example.project.controllers.gameScreens.TooltipSetup.Element
tooltip for game funds label

FXMLPageLoader - Class in com.example.project.services
FXML Loader wrapper class for the project to load the game screen FXML pages.

FXMLPageLoader() - Constructor for class com.example.project.services.FXMLPageLoader
constructor.

G

GameMusicPlayer - Class in com.example.project.services.sound
Plays the game music track on repeat.

GameMusicPlayer() - Constructor for class com.example.project.services.sound.GameMusicPlayer
Create new instance of game music player.

GameScene - Enum Class in com.example.project.services
Game Scenes enum.

GameScreenController - Class in com.example.project.controllers.gameScreens
Game screen controller that has some startup on screen thing todo.

GameScreenController() - Constructor for class com.example.project.controllers.gameScreens.GameScreenController

GameScreenController.SidebarLoaded - Record Class in com.example.project.controllers.gameScreens

GameScreenFactory - Class in com.example.project.controllers.gameScreens
create game screen controllers.

GameScreenFactory(Session) - Constructor for class com.example.project.controllers.gameScreens.GameScreenFactory
Constructor.

GameScreenModel - Class in com.example.project.models.gameScreens
Game Screen Model.

GameScreenModel(Session, SceneManager) - Constructor for class com.example.project.models.gameScreens.GameScreenModel

GameSoundPlayer - Class in com.example.project.services.sound
plays an audio clip as a sound effect for the game.

GameSoundPlayer(String) - Constructor for class com.example.project.services.sound.GameSoundPlayer
creates a new instance of GameSoundPlayer

GameSoundPlayer(String, float) - Constructor for class com.example.project.services.sound.GameSoundPlayer
creates a new instance of GameSoundPlayer

GameSoundPlayer(String, Logger) - Constructor for class com.example.project.services.sound.GameSoundPlayer

GameSoundPlayer(String, Logger, float) - Constructor for class com.example.project.services.sound.GameSoundPlayer

getAbilityImagePath() - Method in class com.example.project.models.tiles.UpgradeTileModel
gets upgrade tile image path.

getChildren() - Method in class com.example.project.controllers.gameScreens.animations.AnimationWrapper
returns animations children.

getClickSoundPlayer() - Method in class com.example.project.models.tiles.TileModel
gets the sound player that plays the click sound.

getCogIcon() - Static method in class com.example.project.services.SVGIcons
gets a cog icon.

getComboLabel() - Method in class com.example.project.controllers.gameScreens.SidebarController
Returns combo label.

getController() - Method in class com.example.project.services.FXMLPageLoader

getController() - Method in interface com.example.project.services.PageLoader
Get the .fxml pages controller

getControllers() - Method in class com.example.project.models.tileGroups.TileGroup
Gets the groups tile controllers.

getCost() - Method in class com.example.project.models.tiles.UpgradeTileModel
gets the cost

getCurrentPlays() - Method in class com.example.project.services.Session
gets the current plays.

getCurrentRedraws() - Method in class com.example.project.services.Session
gets the redraws property.

getCurrentScene() - Method in class com.example.project.services.SceneManager
get current scene.

getCurrentScoreLabel() - Method in class com.example.project.controllers.gameScreens.SidebarController
current score label.

getCurrentShopItemsProperty() - Method in class com.example.project.models.gameScreens.ShopModel
Current items in the shop row that you can buy.

getCurrentWord() - Method in class com.example.project.models.gameScreens.LevelModel
Gets the current word formed by tiles in the word area

getDatabasePath() - Method in class com.example.project.services.sqlite.SQLiteConnection
Each subclass provides its database path.

getDatabasePath() - Method in class com.example.project.services.sqlite.SQLiteDictionaryConnection

getDatabasePath() - Method in class com.example.project.services.sqlite.SQLiteUsersConnection

getDescription() - Method in class com.example.project.models.tiles.UpgradeTileModel
gets the description.

getErrorLogs() - Method in class com.example.project.services.Logger

getFXMLPath() - Method in class com.example.project.models.popups.DefinitionPopup

getFXMLPath() - Method in class com.example.project.models.popups.PopupModel
gets FXML path

getFXMLPath() - Method in class com.example.project.models.tiles.EmptyTileSlotModel

getFXMLPath() - Method in class com.example.project.models.tiles.LetterTileModel

getFXMLPath() - Method in class com.example.project.models.tiles.TileModel
gets the fxml path.

getFXMLPath() - Method in class com.example.project.models.tiles.UpgradeTileModel

getHandSize() - Method in class com.example.project.services.Session
gets hand size.

getHighscore() - Method in class com.example.project.models.User
get highscore.

getHoverSoundPlayer() - Method in class com.example.project.models.tiles.TileModel
gets the hover sound player

getInstance() - Method in class com.example.project.services.sqlite.SQLiteConnection
Gets the database connection from an existing readonly resource .db

getIsDefinitionActive() - Method in class com.example.project.models.popups.DefinitionPopup

getIsRedrawActive() - Method in class com.example.project.models.gameScreens.LevelModel
gets the redraw property.

getLetter() - Method in class com.example.project.models.tiles.LetterTileModel

getLevelRequirement() - Method in class com.example.project.services.Session

getLevelsBeaten() - Method in class com.example.project.services.Session

getLogs() - Method in class com.example.project.services.Logger

getModel() - Method in class com.example.project.controllers.popupControllers.DefinitionController

getModel() - Method in class com.example.project.controllers.popupControllers.PopupController
gets the popup model.

getModel() - Method in class com.example.project.controllers.tiles.LetterTileController

getModel() - Method in class com.example.project.controllers.tiles.TileController
gets the tile model.

getMoneyProperty() - Method in class com.example.project.services.Session
Returns the read-only money property for binding to UI components.

getMultiplierLabel() - Method in class com.example.project.controllers.gameScreens.SidebarController
word score multiplier label.

getName() - Method in class com.example.project.models.tiles.UpgradeTileModel
gets the name.

getPaperSoundPlayer() - Method in class com.example.project.models.popups.PopupModel
gets paper sound player

getPassword() - Method in class com.example.project.models.User
get password.

getPlayersCurrentPoints() - Method in class com.example.project.models.gameScreens.LevelModel

getPlayersTotalPoints() - Method in class com.example.project.models.gameScreens.LevelModel

getPlayersUpgradesProperty() - Method in class com.example.project.services.Session
gets upgrade tile property

getRandomUpgradeTile() - Static method in class com.example.project.services.shopItems.UpgradeTiles
Gets random upgrade tile.

getRawPointsLabel() - Method in class com.example.project.controllers.gameScreens.SidebarController
raw points label to be multiplied by multiplier.

getRedrawWindowSize() - Method in class com.example.project.services.Session
gets redraw window size (number of slots)

getRedrawWindowTilesProperty() - Method in class com.example.project.models.gameScreens.LevelModel

getReversePaperSoundPlayer() - Method in class com.example.project.models.popups.PopupModel
gets reversed paper sound player

getRoot() - Method in class com.example.project.controllers.tiles.EmptyTileSlotController

getRoot() - Method in class com.example.project.controllers.tiles.LetterTileController

getRoot() - Method in class com.example.project.controllers.tiles.TileController
root ui node.

getRoot() - Method in class com.example.project.controllers.tiles.UpgradeTileController

getSceneManager() - Method in class com.example.project.models.gameScreens.GameScreenModel
get scene manager

getSession() - Method in class com.example.project.models.gameScreens.GameScreenModel
Get session.

getSessionDataJson(String) - Method in class com.example.project.services.sqlite.dAOs.UsersDAO
Get session saved data.

getSQLiteInstance() - Method in class com.example.project.services.sqlite.SQLiteConnection

getSQLiteInstance() - Method in class com.example.project.services.sqlite.SQLiteDictionaryConnection

getSQLiteInstance() - Method in class com.example.project.services.sqlite.SQLiteUsersConnection

getStack() - Method in class com.example.project.controllers.popupControllers.DefinitionController

getStack() - Method in class com.example.project.controllers.popupControllers.PopupController
root ui node.

getTile() - Method in class com.example.project.models.tiles.EmptyTileSlotModel
get letter tile in slot.

getTileRackTilesProperty() - Method in class com.example.project.models.gameScreens.LevelModel

getTileScoreSoundPlayer() - Method in class com.example.project.models.gameScreens.LevelModel
Gets the tile score sound effect player.

getUpgradeByName(String) - Static method in class com.example.project.services.shopItems.UpgradeTiles
Gets upgrade by name.

getUser() - Method in class com.example.project.services.Session
Returns logged in user.

getUser(String) - Method in class com.example.project.services.sqlite.dAOs.UsersDAO

getUsername() - Method in class com.example.project.models.User
get username.

getValue() - Method in class com.example.project.models.tiles.LetterTileModel

getValue(Character) - Method in class com.example.project.models.tiles.ScrabbleTileProvider

Returns Integer of the letter according to scrabble

getWelcomeTextProperty() - Method in class com.example.project.models.gameScreens.LoginModel

Gets the info text property.

getWordDefinition(String) - Method in class com.example.project.services.sqlite.dAOs.DictionaryDAO

gets the words definition.

getWordWindowSize() - Method in class com.example.project.services.Session

gets word size.

getWordWindowTilesProperty() - Method in class com.example.project.models.gameScreens.LevelModel

glassesEffect(LevelModel) - Static method in class com.example.project.models.tiles.UpgradeEffects

Adds +2 to the score multiplier for every identical pair of letters next to each other

H

hasClaimedRewardToday() - Method in class com.example.project.services.Session

Checks if the player already claimed today's reward.

hashCode() - Method in record class com.example.project.controllers.gameScreens.GameScreenController SidebarLoaded

Returns a hash code value for this object.

hashCode() - Method in record class com.example.project.models.tiles.ScrabbleTileProvider.ScrabbleTileData

Returns a hash code value for this object.

hashPassword(String) - Method in class com.example.project.services.PasswordHasher

Hashes a raw password using BCrypt.

hasLost() - Method in class com.example.project.models.gameScreens.LevelModel

true if player has lost

hasSaveData(User) - Method in class com.example.project.services.sqlite.dAOs.UsersDAO

Does user have save data.

hasWon() - Method in class com.example.project.models.gameScreens.LevelModel

returns true if player has won.

HEIGHT - Static variable in class com.example.project.Application

hideLevelInfo() - Method in class com.example.project.controllers.gameScreens.SidebarController

Only show things relevant to upgrades or the shop.

hoverSoundPlayer - Variable in class com.example.project.models.tiles.TileModel

I

imagePath(String) - Method in class com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder

upgrade image path builder

imageView - Variable in class com.example.project.controllers.tiles.UpgradeTileController

InfiniteFloatingAnimation - Class in com.example.project.controllers.gameScreens.animations

floating tile animation.

InfiniteFloatingAnimation() - Constructor for class

com.example.project.controllers.gameScreens.animations.InfiniteFloatingAnimation

initialize(DefinitionPopup) - Method in class com.example.project.controllers.popupControllers.DefinitionController

initialize(P) - Method in class com.example.project.controllers.popupControllers.PopupController

sets elements of the ui

isCurrentWordValid() - Method in class com.example.project.models.gameScreens.LevelModel

returns true if word is in dictionary.

isWordInDictionary(String) - Method in class com.example.project.services.sqlite.dAOs.DictionaryDAO

gets if word is in dictionary.

L

lastRewardDate - Variable in class com.example.project.services.SessionData

last reward date.

LetterTileController - Class in com.example.project.controllers.tiles

Controls the layout of the letterUIModel.

LetterTileController() - Constructor for class com.example.project.controllers.tiles.LetterTileController

LetterTileGroup - Class in com.example.project.models.tileGroups

tile group that observes an observable list and updates the ui Tile Controller's nodes into their EmptyTileSlotController nodes.

LetterTileGroup(int, Pane, ReadOnlyListProperty<LetterTileModel>, Consumer<LetterTileController>) - Constructor for class com.example.project.models.tileGroups.LetterTileGroup

Constructor

LetterTileGroup(int, Pane, ReadOnlyListProperty<LetterTileModel>, Consumer<LetterTileController>, List<Runnable>) - Constructor for class com.example.project.models.tileGroups.LetterTileGroup

Constructor

LetterTileGroup(int, Pane, ReadOnlyListProperty<LetterTileModel>, Consumer<LetterTileController>, List<Runnable>, TileControllerFactory) - Constructor for class com.example.project.models.tileGroups.LetterTileGroup

Constructor

LetterTileModel - Class in com.example.project.models.tiles

Represents the letter tiles the player plays holds, redraws.

LetterTileModel(Character) - Constructor for class com.example.project.models.tiles.LetterTileModel

LEVEL - Enum constant in enum class com.example.project.services.GameScene
level Screen

LevelController - Class in com.example.project.controllers.gameScreens
Controller for the level screen.

LevelController() - Constructor for class com.example.project.controllers.gameScreens.LevelController
Constructor only called once each time application opened.

LevelController(LevelModel) - Constructor for class com.example.project.controllers.gameScreens.LevelController

LevelModel - Class in com.example.project.models.gameScreens
Represents the level model.

LevelModel(Session, Logger, SceneManager) - Constructor for class com.example.project.models.gameScreens.LevelModel

LevelModel(Session, SceneManager) - Constructor for class com.example.project.models.gameScreens.LevelModel
Default constructor.

levelRequirement - Variable in class com.example.project.services.SessionData
level requirement.

levelsBeaten - Variable in class com.example.project.services.SessionData
levels beaten.

LevelScoreSequence - Class in com.example.project.controllers.gameScreens.animations
Animates each level tile popping up and the score text increasing for every tile in the word row.

LevelScoreSequence(List<LetterTileController>, LevelModel, Label, Label) - Constructor for class
com.example.project.controllers.gameScreens.animations.LevelScoreSequence
Constructor.

load() - Method in class com.example.project.services.Session
Load logged in users data.

load(String) - Method in class com.example.project.services.FXMLPageLoader

load(String) - Method in interface com.example.project.services.PageLoader
Load method to load fxml page.

loadGameScreens(RootLayoutController, FXMLPageLoader) - Method in class
com.example.project.controllers.gameScreens.GameScreenFactory
Load all main game screens.

loadSidebar() - Method in class com.example.project.controllers.gameScreens.GameScreenController

logError(String) - Method in class com.example.project.services.Logger
Logs an error message to standard error.

logger - Variable in class com.example.project.controllers.gameScreens.GameScreenController

logger - Variable in class com.example.project.models.gameScreens.GameScreenModel

Logger - Class in com.example.project.services
com.example.project.services.Logger for Application and to show up in test and build CI workflow.

Logger() - Constructor for class com.example.project.services.Logger
Default constructor writes to console does not capture.

Logger(ByteArrayOutputStream, ByteArrayOutputStream) - Constructor for class com.example.project.services.Logger
Constructor for unit tests.

Logger(ByteArrayOutputStream, ByteArrayOutputStream, PrintStream, PrintStream) - Constructor for class
com.example.project.services.Logger

LOGIN - Enum constant in enum class com.example.project.services.GameScene
Login Screen.

LoginController - Class in com.example.project.controllers.gameScreens
Controller for the login scene.

LoginController() - Constructor for class com.example.project.controllers.gameScreens.LoginController
No arg constructor.

LoginModel - Class in com.example.project.models.gameScreens
Login model class.

LoginModel(Session, SceneManager, UsersDAO, PasswordHasher) - Constructor for class
com.example.project.models.gameScreens.LoginModel
constructor.

logMessage(String) - Method in class com.example.project.services.Logger
Log message to System.out.

M

main(String[]) - Static method in class com.example.project.Application

MAINMENU - Enum constant in enum class com.example.project.services.GameScene
Main Menu Screen.

MainMenuController - Class in com.example.project.controllers.gameScreens
controller for the main menu.

MainMenuController() - Constructor for class com.example.project.controllers.gameScreens.MainMenuController
No arg constructor.

MainMenuModel - Class in com.example.project.models.gameScreens
main menu model class

MainMenuModel(Session, SceneManager) - Constructor for class com.example.project.models.gameScreens.MainMenuModel constructor.

mirrorEffect(LevelModel) - Static method in class com.example.project.models.tiles.UpgradeEffects
If played word is a palindrome, doubles word score.

model - Variable in class com.example.project.controllers.popupControllers.PopupController

model - Variable in class com.example.project.controllers.tiles.TileController

modifyMoney(double) - Method in class com.example.project.services.Session
Adds or remove money to the player's balance.

money - Variable in class com.example.project.services.SessionData
current money.

mute() - Method in class com.example.project.services.sound.GameSoundPlayer
set clip volume to mute.

N

name(String) - Method in class com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder
upgrade name builder

node() - Method in record class com.example.project.controllers.gameScreens.GameScreenController.SidebarLoaded
Returns the value of the node record component.

numberOfShopItems - Variable in class com.example.project.models.gameScreens.ShopModel

O

onClickAction - Variable in class com.example.project.models.tileGroups.TileGroup

onConfirmRedrawButton() - Method in class com.example.project.controllers.gameScreens.LevelController
Handle redraw confirm button.

onDailyRewardClicked() - Method in class com.example.project.controllers.gameScreens.MainMenuController

onFastForwardClick() - Method in class com.example.project.controllers.gameScreens.MainMenuController

onLoadButtonClick() - Method in class com.example.project.controllers.gameScreens.MainMenuController

onLoginButtonClick() - Method in class com.example.project.controllers.gameScreens.LoginController

onLoginClicked(String, String) - Method in class com.example.project.models.gameScreens.LoginModel

onLogoutButtonClick() - Method in class com.example.project.controllers.gameScreens.MainMenuController

onLogoutClicked() - Method in class com.example.project.models.gameScreens.MainMenuModel
switches to the login screen

onLostLevel() - Method in class com.example.project.models.gameScreens.LevelModel
Called when the level has been lost.

onNextLevelPressed() - Method in class com.example.project.controllers.gameScreens.ShopController

onNextLevelPressed() - Method in class com.example.project.models.gameScreens.ShopModel
exists shop and increments level requirement for the next level.

onPlayButton() - Method in class com.example.project.controllers.gameScreens.LevelController
Handle play button

onRedrawButton() - Method in class com.example.project.controllers.gameScreens.LevelController
redraw button opens or cancels the redraw.

onSceneChangedToThis() - Method in class com.example.project.controllers.gameScreens.DailyRewardController

onSceneChangedToThis() - Method in class com.example.project.controllers.gameScreens.GameScreenController
Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

onSceneChangedToThis() - Method in class com.example.project.controllers.gameScreens.LevelController

onSceneChangedToThis() - Method in class com.example.project.controllers.gameScreens.LoginController

onSceneChangedToThis() - Method in class com.example.project.controllers.gameScreens.MainMenuController

onSceneChangedToThis() - Method in class com.example.project.controllers.gameScreens.ShopController

onSignupButtonClick() - Method in class com.example.project.controllers.gameScreens.LoginController

onSignUpClicked(String, String) - Method in class com.example.project.models.gameScreens.LoginModel
Adds user to database.

onSkipButton() - Method in class com.example.project.controllers.gameScreens.LevelController

onStartButtonClick() - Method in class com.example.project.controllers.gameScreens.MainMenuController

onStartClicked() - Method in class com.example.project.models.gameScreens.MainMenuModel
switches to the level screen

onUpgradeClicked(UpgradeTileController) - Method in class com.example.project.controllers.gameScreens.ShopController

onWonLevel() - Method in class com.example.project.models.gameScreens.LevelModel

Called when level has been won.

P

PageLoader - Interface in com.example.project.services

Interface for page loading.

paperSoundPlayer - Variable in class com.example.project.models.popups.PopupModel

PasswordHasher - Class in com.example.project.services

Hashes passwords.

PasswordHasher() - Constructor for class com.example.project.services.PasswordHasher
public constructor.

PasswordHasher(Logger) - Constructor for class com.example.project.services.PasswordHasher

play() - Method in class com.example.project.controllers.gameScreens.animations.AnimationWrapper
play.

playConfetti(Pane) - Static method in class com.example.project.controllers.gameScreens.animations.ConfettiAnimation
play animation.

playGameMusicLoop() - Method in class com.example.project.services.sound.GameMusicPlayer
play game music loop continuously.

playNextNote() - Method in class com.example.project.models.gameScreens.ScoreChimePlayer
plays the note then increments the int index.

playTiles() - Method in class com.example.project.models.gameScreens.LevelModel
clears the word row tiles.

PopupController<P> - Class in com.example.project.controllers.popupControllers
Parent class for PopupControllers

PopupController() - Constructor for class com.example.project.controllers.popupControllers.PopupController

PopupLoader - Class in com.example.project.services
class to load the popup and initialize it with a controller

PopupLoader() - Constructor for class com.example.project.services.PopupLoader
Constructor.

PopupLoader(FXMLLoader) - Constructor for class com.example.project.services.PopupLoader

PopupModel - Class in com.example.project.models.popups
Parent class for popup windows

PopupModel() - Constructor for class com.example.project.models.popups.PopupModel

R

redrawTiles() - Method in class com.example.project.models.gameScreens.LevelModel
redraws tiles into the tile rack and removes from redraw window.

regenerateShopItems() - Method in class com.example.project.models.gameScreens.ShopModel
create new shop items.

replay() - Method in class com.example.project.services.sound.GameSoundPlayer
Reset clip and then play.

reset() - Method in class com.example.project.models.gameScreens.ScoreChimePlayer
resets back to 0.

resetCombo() - Method in class com.example.project.models.gameScreens.LevelModel
resets counts for sum and multi in combo

resetGame() - Method in class com.example.project.services.Session
Resets the current session when you lose

resetMoney() - Method in class com.example.project.services.Session
Resets the player's money to the initial state (e.g.

resetPlaysRedraws() - Method in class com.example.project.services.Session
Reset the plays and redraws.

returnRedrawTilesToTheRack() - Method in class com.example.project.models.gameScreens.LevelModel
sends the selected redraw tiles back to the rack

reversePaperSoundPlayer - Variable in class com.example.project.models.popups.PopupModel

rollReward() - Method in class com.example.project.models.gameScreens.DailyRewardModel
Randomly selects a daily reward.

root - Variable in class com.example.project.controllers.tiles.EmptyTileSlotController

root - Variable in class com.example.project.controllers.tiles.UpgradeTileController

RootLayoutController - Class in com.example.project.controllers
Root layout that remains the root scene of the application to switch scenes within.

RootLayoutController() - Constructor for class com.example.project.controllers.RootLayoutController

ROUNDSCORE - Enum constant in enum class com.example.project.controllers.gameScreens.TooltipSetup.Element
tooltip for round score label

runUpgradeEffect(LevelModel) - Method in class com.example.project.models.tiles.UpgradeTileModel
gets the effect for this tile.

S

save() - Method in class com.example.project.controllers.gameScreens.ShopController

Save() - Method in class com.example.project.services.Session
will save a copy of this session data to local drive.

saveSessionData(String, String) - Method in class com.example.project.services.sqlite.dAOs.UsersDAO
Saves the session data as JSON for a specific user.

sceneManager - Variable in class com.example.project.models.gameScreens.GameScreenModel

SceneManager - Class in com.example.project.services
Represents the scene manager class.

SceneManager(RootLayoutController, Map<GameScene, GameScreenController>, Map<GameScene, Parent>) -
Constructor for class com.example.project.services.SceneManager
Constructor with injection for tests

ScoreChimePlayer - Class in com.example.project.models.gameScreens
plays a note from the F major scale ascending in pitch each time for a nice score combo sound.

ScoreChimePlayer() - Constructor for class com.example.project.models.gameScreens.ScoreChimePlayer

ScoreTimeline - Class in com.example.project.controllers.gameScreens.animations
Class for total score counter animation

ScoreTimeline() - Constructor for class com.example.project.controllers.gameScreens.animations.ScoreTimeline

SCORETOBEAT - Enum constant in enum class com.example.project.controllers.gameScreens.TooltipSetup.Element
tooltip for target score label

ScrabbleTileData(int, int) - Constructor for record class com.example.project.models.tiles.ScrabbleTileProvider.ScrabbleTileData
Creates an instance of a ScrabbleTileData record class.

ScrabbleTileProvider - Class in com.example.project.models.tiles
Static class to store the scrabble base letter value.

ScrabbleTileProvider() - Constructor for class com.example.project.models.tiles.ScrabbleTileProvider
Constructor.

ScrabbleTileProvider.ScrabbleTileData - Record Class in com.example.project.models.tiles

seedRandomNumberGenerator(long) - Static method in class com.example.project.models.tiles.ScrabbleTileProvider

sequentialAnimation - Variable in class com.example.project.controllers.gameScreens.animations.AnimationWrapper

session - Variable in class com.example.project.models.gameScreens.GameScreenModel

Session - Class in com.example.project.services
Game Session.

Session() - Constructor for class com.example.project.services.Session
Default constructor.

Session(int, int, int, ObservableList<UpgradeTileModel>, User, int, int, int, int, int) - Constructor for class
com.example.project.services.Session
Constructor for injecting values in for unit test.

SessionData - Class in com.example.project.services
Session data.

SessionData() - Constructor for class com.example.project.services.SessionData

setContent(Parent) - Method in class com.example.project.controllers.RootLayoutController

setIsDefinitionActive(boolean) - Method in class com.example.project.models.popups.DefinitionPopup
toggle isDefinitionActive

setIsRedrawActive(boolean) - Method in class com.example.project.models.gameScreens.LevelModel
set redraw active.

setLastRewardDate(LocalDate) - Method in class com.example.project.services.Session
Sets the date the daily reward was last claimed.

setLetter(LetterTileController) - Method in class com.example.project.controllers.tiles.EmptyTileSlotController
updates the tile slot with a new letter tile controller.

setModel(T) - Method in class com.example.project.controllers.tiles.TileController
Set the model this controller will observe.

setOnFinished(EventHandler<ActionEvent>) - Method in class
com.example.project.controllers.gameScreens.animations.AnimationWrapper
Set on finished.

setPopup(String) - Method in class com.example.project.models.popups.DefinitionPopup

setPrintToConsole(boolean) - Method in class com.example.project.services.Logger

setSceneManager(SceneManager) - Method in class com.example.project.controllers.RootLayoutController
Set scene manager to use.

setSQLiteInstance(Connection) - Method in class com.example.project.services.sqlite.SQLiteConnection

setSQLiteInstance(Connection) - Method in class com.example.project.services.sqlite.SQLiteDictionaryConnection

setSQLiteInstance(Connection) - Method in class com.example.project.services.sqlite.SQLiteUsersConnection

setTile(LetterTileModel) - Method in class com.example.project.models.tiles.EmptyTileSlotModel
Set a new tile.

setTotalScore(int) - Method in class com.example.project.models.gameScreens.LevelModel

setup(Session, SceneManager) - Method in class com.example.project.controllers.gameScreens.DailyRewardController
Initialises the daily reward view by resetting the reward label.

setup(Session, SceneManager) - Method in class com.example.project.controllers.gameScreens.GameScreenController
create models and inject session and scene manager.

setup(Session, SceneManager) - Method in class com.example.project.controllers.gameScreens.LevelController

setup(Session, SceneManager) - Method in class com.example.project.controllers.gameScreens.LoginController

setup(Session, SceneManager) - Method in class com.example.project.controllers.gameScreens.MainMenuController

setup(Session, SceneManager) - Method in class com.example.project.controllers.gameScreens.ShopController

setupNewLevel() - Method in class com.example.project.models.gameScreens.LevelModel
Initialise new level.

setupProperties(LevelModel) - Method in class com.example.project.controllers.gameScreens.SidebarController
Setup sync able properties.

setupTooltip(Node, TooltipSetup.Element, Object) - Method in class com.example.project.controllers.gameScreens.TooltipSetup

setUser(User) - Method in class com.example.project.services.Session
set new user.

setWordMulti(int) - Method in class com.example.project.models.gameScreens.LevelModel
sets the current word multiplier

setWordPoints(int) - Method in class com.example.project.models.gameScreens.LevelModel
sets the current word points before multipliers

SHOP - Enum constant in enum class com.example.project.services.GameScene
Shop screen.

ShopController - Class in com.example.project.controllers.gameScreens
Shop view controller.

ShopController() - Constructor for class com.example.project.controllers.gameScreens.ShopController
no arg constructor.

ShopController(ShopModel, UpgradeTileGroup, UpgradeTileGroup, Logger) - Constructor for class com.example.project.controllers.gameScreens.ShopController
protected constructor for unit testing with mock model injection.

ShopModel - Class in com.example.project.models.gameScreens
Shop Model.

ShopModel(Session, SceneManager) - Constructor for class com.example.project.models.gameScreens.ShopModel
Constructor

ShopModel(Session, SceneManager, Logger) - Constructor for class com.example.project.models.gameScreens.ShopModel
Constructor for tests.

SidebarController - Class in com.example.project.controllers.gameScreens
The sidebar on shop and level with the current round info.

SidebarController() - Constructor for class com.example.project.controllers.gameScreens.SidebarController

SidebarLoaded(Parent, SidebarController) - Constructor for record class com.example.project.controllers.gameScreens.GameScreenController.SidebarLoaded
Creates an instance of a SidebarLoaded record class.

slotForLetterTile - Variable in class com.example.project.controllers.tiles.EmptyTileSlotController

SQLiteConnection - Class in com.example.project.services.sqlite
Abstract SQLiteConnection class.

SQLiteConnection() - Constructor for class com.example.project.services.sqlite.SQLiteConnection

SQLiteDictionaryConnection - Class in com.example.project.services.sqlite
Connection to the dictionary.db

SQLiteDictionaryConnection() - Constructor for class com.example.project.services.sqlite.SQLiteDictionaryConnection

SQLiteUsersConnection - Class in com.example.project.services.sqlite
Connection to the users.db

SQLiteUsersConnection() - Constructor for class com.example.project.services.sqlite.SQLiteUsersConnection

start(Stage) - Method in class com.example.project.Application

SVGIcons - Class in com.example.project.services
a static class to hold some icons for the application.

SVGIcons() - Constructor for class com.example.project.services.SVGIcons

switchScene(GameScene) - Method in class com.example.project.services.SceneManager
Switch between scenes specify scene type of type from GameScene.

syncTiles() - Method in class com.example.project.models.tileGroups.TileGroup
Sync tiles in this tile groups controller.

TextEmphasisAnimation - Class in com.example.project.controllers.gameScreens.animations

An animation to quickly enlarge text and then return it to its original scale.

TextEmphasisAnimation(Label, Paint, Paint, Duration) - Constructor for class

com.example.project.controllers.gameScreens.animations.TextEmphasisAnimation

create the animations for text growing then shrinking

TileController<T> - Class in com.example.project.controllers.tiles

Parent class of TileControllers.

TileController() - Constructor for class com.example.project.controllers.tiles.TileController

tileControllerFactory - Variable in class com.example.project.models.tileGroups.TileGroup

TileControllerFactory - Class in com.example.project.controllers.tiles

class to load the tile model controller for that tile model type.

TileControllerFactory() - Constructor for class com.example.project.controllers.tiles.TileControllerFactory

Creates instance of TileControllerFactory.

TileControllerFactory(FXMLLoaderPageLoader) - Constructor for class com.example.project.controllers.tiles.TileControllerFactory

tileControllers - Variable in class com.example.project.models.tileGroups.TileGroup

TileGroup<modelType,controllerType> - Class in com.example.project.models.tileGroups

Tile Group abstract class holds a row or column of tiles.

TileModel - Class in com.example.project.models.tiles

Parent tile class for objects in the scene that are tiles.

TileModel() - Constructor for class com.example.project.models.tiles.TileModel

TITLE - Static variable in class com.example.project.Application

TooltipSetup - Class in com.example.project.controllers.gameScreens

sets a tooltip for desired element

TooltipSetup() - Constructor for class com.example.project.controllers.gameScreens.TooltipSetup

TooltipSetup.Element - Enum Class in com.example.project.controllers.gameScreens

different types of elements that require a tooltip

toString() - Method in record class com.example.project.controllers.gameScreens.GameScreenController SidebarLoaded

Returns a string representation of this record class.

toString() - Method in record class com.example.project.models.tiles.ScrabbleTileProvider.ScrabbleTileData

Returns a string representation of this record class.

trackDuplicates(List<T>) - Static method in class com.example.project.models.tileGroups.UpgradeTileGroup

Makes hashmap that tracks the count of each element in list

tryMoveTile(LetterTileModel) - Method in class com.example.project.models.gameScreens.LevelModel

determines where tile should go and moves it

tryPurchase(UpgradeTileModel) - Method in class com.example.project.models.gameScreens.ShopModel

This should attempt to purchase an upgrade tile from the shop.

U

unMute() - Method in class com.example.project.services.sound.GameSoundPlayer

Set clip to its default volume.

updateCount(int) - Method in class com.example.project.controllers.tiles.UpgradeTileController

updates upgrade # subscript

updateLevelInfo() - Method in class com.example.project.services.Session

Increments how many points are required to beat the level.

updateVisuals() - Method in class com.example.project.models.tileGroups.LetterTileGroup

updateVisuals() - Method in class com.example.project.models.tileGroups.TileGroup

updateVisuals() - Method in class com.example.project.models.tileGroups.UpgradeTileGroup

UPGRADE - Enum constant in enum class com.example.project.controllers.gameScreens.TooltipSetup.Element

tooltip for upgrade tiles

UpgradeBuilder() - Constructor for class com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder

upgradeEffect(Consumer<LevelModel>) - Method in class com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder

upgrade effect builder

UpgradeEffects - Class in com.example.project.models.tiles

upgrade effect methods

UpgradeEffects() - Constructor for class com.example.project.models.tiles.UpgradeEffects

upgradeNames - Variable in class com.example.project.services.SessionData

upgrade names.

UpgradeTileController - Class in com.example.project.controllers.tiles

Controls the upgrade tile view fxml file.

UpgradeTileController() - Constructor for class com.example.project.controllers.tiles.UpgradeTileController

UpgradeTileGroup - Class in com.example.project.models.tileGroups

tile group that observes an observable list and updates the ui nodes for some game tiles.

UpgradeTileGroup(Pane, ReadOnlyListProperty<UpgradeTileModel>) - Constructor for class

[com.example.project.models.tileGroups.UpgradeTileGroup](#)

Constructor with no additional sync action parameter.

UpgradeTileGroup(Pane, ReadOnlyListProperty<UpgradeTileModel>, Consumer<UpgradeTileController>) - Constructor for class [com.example.project.models.tileGroups.UpgradeTileGroup](#)

Constructor.

UpgradeTileModel - Class in [com.example.project.models.tiles](#)

Represents the upgrade tiles sold at the shop.

UpgradeTileModel(UpgradeTileModel.UpgradeBuilder) - Constructor for class [com.example.project.models.tiles.UpgradeTileModel](#)

public upgrade constructor.

UpgradeTileModel.UpgradeBuilder - Class in [com.example.project.models.tiles](#)

builder class for the upgrades

UpgradeTiles - Class in [com.example.project.services.shopItems](#)

Static class to store all the possible upgrade tiles available in the game.

UpgradeTiles() - Constructor for class [com.example.project.services.shopItems.UpgradeTiles](#)

User - Class in [com.example.project.models](#)

Represents a user in the application that can log in.

User(String, String, int) - Constructor for class [com.example.project.models.User](#)

Constructor.

username - Variable in class [com.example.project.services.SessionData](#)

username.

UsersDAO - Class in [com.example.project.services.sqlite.dAOs](#)

SQLite Users database.

UsersDAO() - Constructor for class [com.example.project.services.sqlite.dAOs.UsersDAO](#)

Constructor for this class SQLiteDictionary.

UsersDAO(PasswordHasher, Connection, Logger) - Constructor for class [com.example.project.services.sqlite.dAOs.UsersDAO](#)

Constructor with injection for unit tests.

V

value() - Method in record class [com.example.project.models.tiles.ScrabbleTileProvider.ScrabbleTileData](#)

Returns the value of the **value** record component.

valueOf(String) - Static method in enum class [com.example.project.controllers.gameScreens.TooltipSetup.Element](#)

Returns the enum constant of this class with the specified name.

valueOf(String) - Static method in enum class [com.example.project.models.gameScreens.DailyRewardType](#)

Returns the enum constant of this class with the specified name.

valueOf(String) - Static method in enum class [com.example.project.services.GameScene](#)

Returns the enum constant of this class with the specified name.

values() - Static method in enum class [com.example.project.controllers.gameScreens.TooltipSetup.Element](#)

Returns an array containing the constants of this enum class, in the order they are declared.

values() - Static method in enum class [com.example.project.models.gameScreens.DailyRewardType](#)

Returns an array containing the constants of this enum class, in the order they are declared.

values() - Static method in enum class [com.example.project.services.GameScene](#)

Returns an array containing the constants of this enum class, in the order they are declared.

W

WIDTH - Static variable in class [com.example.project.Application](#)

wordMultiProperty() - Method in class [com.example.project.models.gameScreens.LevelModel](#)

word multiplier.

wordPointsProperty() - Method in class [com.example.project.models.gameScreens.LevelModel](#)

wordProperty() - Method in class [com.example.project.models.popups.DefinitionPopup](#)

A B C D E F G H I L M N O P R S T U V W

All Classes and Interfaces | All Packages | Constant Field Values

Module com.example.project

module com.example.project

project dependencies.

Packages

Exports

Package

Description

[com.example.project](#)

[com.example.project.controllers](#)

[com.example.project.controllers.gameScreens](#)

[com.example.project.controllers.gameScreens.animations](#)

[com.example.project.controllers.popupControllers](#)

[com.example.project.controllers.tiles](#)

[com.example.project.models](#)

[com.example.project.models.gameScreens](#)

[com.example.project.models.popups](#)

[com.example.project.models.tileGroups](#)

[com.example.project.models.tiles](#)

[com.example.project.services](#)

[com.example.project.services.shopItems](#)

[com.example.project.services.sound](#)

[com.example.project.services.sqlite](#)

[com.example.project.services.sqlite.dAOs](#)

Hierarchy For All Packages

Package Hierarchies:

com.example.project, com.example.project.controllers, com.example.project.controllers.gameScreens, com.example.project.controllers.gameScreens.animations, com.example.project.controllers.popupControllers, com.example.project.controllers.tiles, com.example.project.models, com.example.project.models.gameScreens, com.example.project.models.popups, com.example.project.models.tileGroups, com.example.project.models.tiles, com.example.project.services, com.example.project.services.shopItems, com.example.project.services.sound, com.example.project.services.sqlite, com.example.project.services.sqlite.dAOs

Class Hierarchy

- java.lang.Object
 - com.example.project.controllers.gameScreens.animations.AnimationWrapper
 - com.example.project.controllers.gameScreens.animations.LevelScoreSequence
 - com.example.project.controllers.gameScreens.animations.TextEmphasisAnimation
 - javafx.application.Application
 - com.example.project.Application
 - com.example.project.controllers.gameScreens.animations.ConfettiAnimation
 - com.example.project.services.sqlite.dAOs.DictionaryDAO
 - com.example.project.services.FXMLPageLoader (implements com.example.project.services.PageLoader)
 - com.example.project.controllers.gameScreens.GameScreenController
 - com.example.project.controllers.gameScreens.DailyRewardController
 - com.example.project.controllers.gameScreens.LevelController
 - com.example.project.controllers.gameScreens.LoginController
 - com.example.project.controllers.gameScreens.MainMenuController
 - com.example.project.controllers.gameScreens.ShopController
 - com.example.project.controllers.gameScreens.GameScreenFactory
 - com.example.project.models.gameScreens.GameScreenModel
 - com.example.project.models.gameScreens.DailyRewardModel
 - com.example.project.models.gameScreens.LevelModel
 - com.example.project.models.gameScreens.LoginModel
 - com.example.project.models.gameScreens.MainMenuModel
 - com.example.project.models.gameScreens.ShopModel
 - com.example.project.services.sound.GameSoundPlayer
 - com.example.project.services.sound.GameMusicPlayer
 - com.example.project.controllers.gameScreens.animations.InfiniteFloatingAnimation
 - com.example.project.services.Logger
 - javafx.scene.Node (implements javafx.event.EventTarget, javafx.css.Styleable)
 - javafx.scene.Parent
 - javafx.scene.layout.Region
 - javafx.scene.control.Control (implements javafx.scene.control.Skinnable)
 - javafx.scene.control.Labeled
 - javafx.scene.control.ButtonBase
 - javafx.scene.control.Button
 - com.example.project.controllers.DevButton
 - com.example.project.services.PasswordHasher
 - com.example.project.controllers.popupControllers.PopupController<P>
 - com.example.project.controllers.popupControllers.DefinitionController
 - com.example.project.services.PopupLoader
 - com.example.project.models.popups.PopupModel
 - com.example.project.models.popups.DefinitionPopup
 - com.example.project.controllers.RootLayoutController
 - com.example.project.services.SceneManager
 - com.example.project.models.gameScreens.ScoreChimePlayer
 - com.example.project.controllers.gameScreens.animations.ScoreTimeline
 - com.example.project.models.tiles.ScrabbleTileProvider
 - com.example.project.services.Session
 - com.example.project.services.SessionData
 - com.example.project.controllers.gameScreens SidebarController
 - com.example.project.services.sqlite.SQLiteConnection
 - com.example.project.services.sqlite.SQLiteDictionaryConnection
 - com.example.project.services.sqlite.SQLiteUsersConnection
 - com.example.project.services.SVGIcons
 - com.example.project.controllers.tiles.TileController<T>
 - com.example.project.controllers.tiles.EmptyTileSlotController
 - com.example.project.controllers.tiles.LetterTileController
 - com.example.project.controllers.tiles.UpgradeTileController
 - com.example.project.controllers.tiles.TileControllerFactory
 - com.example.project.models.tileGroups.TileGroup<modelType, controllerType>
 - com.example.project.models.tileGroups.LetterTileGroup
 - com.example.project.models.tileGroups.UpgradeTileGroup
 - com.example.project.models.tiles.TileModel
 - com.example.project.models.tiles.EmptyTileSlotModel
 - com.example.project.models.tiles.LetterTileModel
 - com.example.project.models.tiles.UpgradeTileModel
 - com.example.project.controllers.gameScreens TooltipSetup
 - com.example.project.models.tiles.UpgradeEffects
 - com.example.project.models.tiles.UpgradeTileModel.UpgradeBuilder
 - com.example.project.services.shopItems.UpgradeTiles

- com.example.project.models.**User**
- com.example.project.services.sqlite.dAOs.**UsersDAO**

Interface Hierarchy

- com.example.project.services.**PageLoader**

Enum Class Hierarchy

- java.lang.**Object**
 - java.lang.**Enum**<E> (implements java.lang.Comparable<T>, java.lang.constant.Constable, java.io.Serializable)
 - com.example.project.models.gameScreens.**DailyRewardType**
 - com.example.project.services.**GameScene**
 - com.example.project.controllers.gameScreens.**TooltipSetup.Element**

Record Class Hierarchy

- java.lang.**Object**
 - java.lang.**Record**
 - com.example.project.controllers.gameScreens.**GameScreenController-sidebarLoaded**
 - com.example.project.models.tiles.**ScrabbleTileProvider-ScrabbleTileData**

Copyright © 2025. All rights reserved.

Module com.example.project

Package com.example.project.controllers.gameScreens.animations

Class AnimationWrapper

java.lang.Object[↳]
com.example.project.controllers.gameScreens.animations.AnimationWrapper

Direct Known Subclasses:

LevelScoreSequence, TextEmphasisAnimation

```
public abstract class AnimationWrapper  
extends Object↳
```

Animation wrapper class for our projects animations that get used.

Field Summary

Fields

Modifier and Type

Field

Description

protected final javafx.animation.SequentialTransition

sequentialAnimation

Constructor Summary

Constructors

Modifier

Constructor

Description

protected

AnimationWrapper()

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

javafx.collections.ObservableList<javafx.animation.Animation>

getChildren()

returns animations children.

void

play()

play.

void

setOnFinished(javafx.event.EventHandler<javafx.event.ActionEvent> handler)

Set on finished.

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Details

sequentialAnimation

```
protected final javafx.animation.SequentialTransition sequentialAnimation
```

Constructor Details

AnimationWrapper

```
protected AnimationWrapper()
```

Method Details

play

```
public void play()
```

play.

setOnFinished

```
public void setOnFinished(javafx.event.EventHandler<javafx.event.ActionEvent> handler)
```

Set on finished.

Parameters:

handler - actions to do.

getChildren

```
public javafx.collections.ObservableList<javafx.animation.Animation> getChildren()
```

returns animations children.

Returns:

list of animations.

Search

Reset

► Additional resources

Loading search index...

Copyright © 2025. All rights reserved.

Module com.example.project

Package com.example.project

Class Application

```
java.lang.Object
    javafx.application.Application
        com.example.project.Application
```

```
public class Application
extends javafx.application.Application
```

The entry point of the application.

Nested Class Summary

Nested classes/interfaces inherited from class javafx.application.Application

```
javafx.application.Application.Parameters
```

Field Summary

Fields

Modifier and Type

Field

Description

```
static boolean
```

DEV_BUTTONS_ON

dev buttons should be on or not.

```
static final int
```

HEIGHT

```
static final String
```

TITLE

```
static final int
```

WIDTH

Fields inherited from class javafx.application.Application

```
STYLESSHEET_CASPIAN, STYLESSHEET_MODENA
```

Constructor Summary

Constructors

Constructor

Description

[Application\(\)](#)

Method Summary

[All Methods](#)[Static Methods](#)[Instance Methods](#)[Concrete Methods](#)

Modifier and Type

Method

Description

```
static void
```

```
main(String[] args)
```

```
void
```

```
start(javafx.stage.Stage stage)
```

Methods inherited from class javafx.application.Application

```
getHostServices, getParameters, getUserAgentStylesheet, init, launch, launch, notifyPreloader,  
setUserAgentStylesheet, stop
```

Methods inherited from class java.lang.Object

```
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait
```

Field Details

TITLE

```
public static final String TITLE
```

See Also:

[Constant Field Values](#)

WIDTH

```
public static final int WIDTH
```

See Also:

[Constant Field Values](#)

HEIGHT

```
public static final int HEIGHT
```

See Also:

[Constant Field Values](#)

DEV_BUTTONS_ON

```
public static boolean DEV_BUTTONS_ON
```

dev buttons should be on or not.

Constructor Details

Application

```
public Application()
```

Method Details

start

```
public void start(javafx.stage.Stage stage)
    throws IOException
```

Specified by:

start in class javafx.application.Application

Throws:

IOException

main

```
public static void main(String[] args)
```

Parameters:

args - the command-line arguments passed to your program when it starts.

Module com.example.project

Package com.example.project.controllers.gameScreens.animations

Class ConfettiAnimation

java.lang.Object
com.example.project.controllers.gameScreens.animations.ConfettiAnimation

```
public class ConfettiAnimation  
extends Object
```

class to play confetti animation.

Constructor Summary

Constructors

Constructor

Description

`ConfettiAnimation()`

Method Summary

All Methods

Static Methods

Concrete Methods

Modifier and Type

Method

Description

`static void`

`playConfetti(javafx.scene.layout.Pane confettiLayer)`

play animation.

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

Constructor Details

ConfettiAnimation

```
public ConfettiAnimation()
```

Method Details

playConfetti

```
public static void playConfetti(javafx.scene.layout.Pane confettiLayer)
```

play animation.

Parameters:

`confettiLayer` - pane to play confetti on.

Module com.example.project

Package com.example.project.controllers.gameScreens.animations

Class InfiniteFloatingAnimation

java.lang.Object
com.example.project.controllers.gameScreens.animations.InfiniteFloatingAnimation

```
public class InfiniteFloatingAnimation  
extends Object
```

floating tile animation.

Constructor Summary

Constructors

Constructor

Description

`InfiniteFloatingAnimation()`

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

`apply(javafx.scene.Node node, double intervalSeconds)`

apply to node.

Methods inherited from class java.lang.Object

`clone(), equals(), finalize(), getClass(), hashCode(), notify(), notifyAll(), toString(), wait(), wait(), wait()`

Constructor Details

InfiniteFloatingAnimation

```
public InfiniteFloatingAnimation()
```

Method Details

apply

```
public void apply(javafx.scene.Node node,  
                  double intervalSeconds)
```

apply to node.

Parameters:

node - node.

intervalSeconds - time between changing directions.

Module com.example.project

Package com.example.project.controllers.gameScreens.animations

Class LevelScoreSequence

```
java.lang.Object
    com.example.project.controllers.gameScreens.animations.AnimationWrapper
        com.example.project.controllers.gameScreens.animations.LevelScoreSequence
```

```
public class LevelScoreSequence
extends AnimationWrapper
```

Animates each level tile popping up and the score text increasing for every tile in the word row.

Field Summary

Fields inherited from

class com.example.project.controllers.gameScreens.animations.AnimationWrapper

sequentialAnimation

Constructor Summary

Constructors

Constructor

Description

LevelScoreSequence(List<LetterTileController> wordTileControllers, **LevelModel** levelModel, javafx.scene.control.Label comboCountLabel, javafx.scene.control.Label multiplierLabel)

Constructor.

Method Summary

Methods inherited from

class com.example.project.controllers.gameScreens.animations.AnimationWrapper

getChildren, play, setOnFinished

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

LevelScoreSequence

```
public LevelScoreSequence(List<LetterTileController> wordTileControllers,
                           LevelModel levelModel,
                           javafx.scene.control.Label comboCountLabel,
                           javafx.scene.control.Label multiplierLabel)
```

Constructor.

Parameters:

wordTileControllers - tiles to animate.

levelModel - level model.

comboCountLabel - the text label to add the sum to.

multiplierLabel - the text label to add the multi to.

Module com.example.project

Package com.example.project.controllers.gameScreens.animations

Class ScoreTimeline

java.lang.Object
com.example.project.controllers.gameScreens.animations.ScoreTimeline

```
public class ScoreTimeline  
extends Object
```

Class for total score counter animation

Constructor Summary

Constructors

Constructor

Description

`ScoreTimeline()`

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

`javafx.animation.Timeline`

`animateTotalScore(int startScore, int endScore, javafx.scene.control.Label currentScoreLabel,
long totalDurationMillis)`

Methods inherited from class java.lang.Object

`clone(), equals(), finalize(), getClass(), hashCode(), notify(), notifyAll(), toString(), wait(), wait(), wait()`

Constructor Details

ScoreTimeline

```
public ScoreTimeline()
```

Method Details

animateTotalScore

```
public javafx.animation.Timeline animateTotalScore(int startScore,  
                                                 int endScore,  
                                                 javafx.scene.control.Label currentScoreLabel,  
                                                 long totalDurationMillis)
```

Parameters:

`startScore` - int from current total score

`endScore` - int from calculated current score

`currentScoreLabel` - Label for total score

`totalDurationMillis` - total duration

Returns:

timeline of total score counter

Module com.example.project

Package com.example.project.controllers.gameScreens.animations

Class TextEmphasisAnimation

```
java.lang.Object
  com.example.project.controllers.gameScreens.animations.AnimationWrapper
    com.example.project.controllers.gameScreens.animations.TextEmphasisAnimation
```

```
public class TextEmphasisAnimation
extends AnimationWrapper
```

An animation to quickly enlarge text and then return it to its original scale.

Field Summary

Fields inherited from

class com.example.project.controllers.gameScreens.animations.AnimationWrapper

sequentialAnimation

Constructor Summary

Constructors

Constructor

Description

TextEmphasisAnimation(javafx.scene.control.Label textToAnimate, javafx.scene.paint.Paint colorAtStart, javafx.scene.paint.Paint changeColourAtEnd, javafx.util.Duration timePauseAfterAnim)

create the animations for text growing then shrinking

Method Summary

Methods inherited from

class com.example.project.controllers.gameScreens.animations.AnimationWrapper

getChildren, play, setOnFinished

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

TextEmphasisAnimation

```
public TextEmphasisAnimation(javafx.scene.control.Label textToAnimate,
                            javafx.scene.paint.Paint colorAtStart,
                            javafx.scene.paint.Paint changeColourAtEnd,
                            javafx.util.Duration timePauseAfterAnim)
```

create the animations for text growing then shrinking

Parameters:

textToAnimate - Label.

colorAtStart - initial colour change.

changeColourAtEnd - colour change after finished.

timePauseAfterAnim - time delay after animation until animation finished.

Uses of Class

com.example.project.controllers.gameScreens.animations.AnimationWrapper

Packages that use AnimationWrapper

Package

Description

[com.example.project.controllers.gameScreens.animations](#)

Uses of AnimationWrapper in com.example.project.controllers.gameScreens.animations

Subclasses of AnimationWrapper in com.example.project.controllers.gameScreens.animations

Modifier and Type

Class

Description

class

LevelScoreSequence

Animates each level tile popping up and the score text increasing for every tile in the word row.

class

TextEmphasisAnimation

An animation to quickly enlarge text and then return it to its original scale.

Uses of Class

com.example.project.controllers.gameScreens.animations.ConfettiAnimation

No usage of com.example.project.controllers.gameScreens.animations.ConfettiAnimation

Copyright © 2025. All rights reserved.

Uses of Class

com.example.project.controllers.gameScreens.animations.InfiniteFloatingAnimation

No usage of com.example.project.controllers.gameScreens.animations.InfiniteFloatingAnimation

Copyright © 2025. All rights reserved.

Uses of Class

com.example.project.controllers.gameScreens.animations.LevelScoreSequence

No usage of com.example.project.controllers.gameScreens.animations.LevelScoreSequence

Copyright © 2025. All rights reserved.

Uses of Class

com.example.project.controllers.gameScreens.animations.ScoreTimeline

No usage of com.example.project.controllers.gameScreens.animations.ScoreTimeline

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.Application

No usage of com.example.project.Application

Copyright © 2025. All rights reserved.

Uses of Class

com.example.project.controllers.gameScreens.animations.TextEmphasisAnimation

No usage of com.example.project.controllers.gameScreens.animations.TextEmphasisAnimation

Copyright © 2025. All rights reserved.

Module com.example.project

Package com.example.project.controllers.gameScreens.animations

package com.example.project.controllers.gameScreens.animations

Related Packages

Package

Description

com.example.project.controllers.gameScreens

Classes

Class

Description

AnimationWrapper

Animation wrapper class for our projects animations that get used.

ConfettiAnimation

class to play confetti animation.

InfiniteFloatingAnimation

floating tile animation.

LevelScoreSequence

Animates each level tile popping up and the score text increasing for every tile in the word row.

ScoreTimeline

Class for total score counter animation

TextEmphasisAnimation

An animation to quickly enlarge text and then return it to its original scale.

Copyright © 2025. All rights reserved.

Hierarchy For Package com.example.project.controllers.gameScreens.animations

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#)
 - [com.example.project.controllers.gameScreens.animations.AnimationWrapper](#)
 - [com.example.project.controllers.gameScreens.animations.LevelScoreSequence](#)
 - [com.example.project.controllers.gameScreens.animations.TextEmphasisAnimation](#)
 - [com.example.project.controllers.gameScreens.animations.ConfettiAnimation](#)
 - [com.example.project.controllers.gameScreens.animations.InfiniteFloatingAnimation](#)
 - [com.example.project.controllers.gameScreens.animations.ScoreTimeline](#)

Uses of Package `com.example.project.controllers.gameScreens.animations`

Packages that use `com.example.project.controllers.gameScreens.animations`

Package

Description

`com.example.project.controllers.gameScreens.animations`

Classes in `com.example.project.controllers.gameScreens.animations` used by `com.example.project.controllers.gameScreens.animations`

Class

Description

`AnimationWrapper`

Animation wrapper class for our projects animations that get used.

Uses of Class

com.example.project.controllers.gameScreens.DailyRewardController

No usage of com.example.project.controllers.gameScreens.DailyRewardController

Copyright © 2025. All rights reserved.

Uses of Record Class

[com.example.project.controllers.gameScreens.GameScreenController.SidebarLoaded](#)

Packages that use GameScreenController.SidebarLoaded

Package

Description

[com.example.project.controllers.gameScreens](#)

Uses of GameScreenController.SidebarLoaded in com.example.project.controllers.gameScreens

Methods in com.example.project.controllers.gameScreens that return GameScreenController.SidebarLoaded

Modifier and Type

Method

Description

protected [GameScreenController.SidebarLoaded](#)

[GameScreenController.loadSidebar\(\)](#)

Uses of Class com.example.project.controllers.gameScreens.GameScreenController

Packages that use GameScreenController

Package

Description

com.example.project.controllers.gameScreens

com.example.project.services

Uses of GameScreenController in com.example.project.controllers.gameScreens

Subclasses of GameScreenController in com.example.project.controllers.gameScreens

Modifier and Type

Class

Description

class

DailyRewardController

Controller for the daily reward popup screen.

class

LevelController

Controller for the level screen.

class

LoginController

Controller for the login scene.

class

MainMenuController

controller for the main menu.

class

ShopController

Shop view controller.

Uses of GameScreenController in com.example.project.services

Constructor parameters in com.example.project.services with type arguments of type GameScreenController

Modifier

Constructor

Description

`SceneManager(RootLayoutController newRootController, Map<GameScene, GameScreenController> controllersToUse, Map<GameScene, javafx.scene.Parent> pagesToUse)`

Constructor with injection for tests

Uses of Class

com.example.project.controllers.gameScreens.GameScreenFactory

No usage of com.example.project.controllers.gameScreens.GameScreenFactory

Copyright © 2025. All rights reserved.

Uses of Class

com.example.project.controllers.gameScreens.LevelController

No usage of com.example.project.controllers.gameScreens.LevelController

Copyright © 2025. All rights reserved.

Uses of Class

com.example.project.controllers.gameScreens.LoginController

No usage of com.example.project.controllers.gameScreens.LoginController

Copyright © 2025. All rights reserved.

Module com.example.project
Package com.example.project.controllers

Class DevButton

```
java.lang.Object
  javafx.scene.Node
    javafx.scene.Parent
      javafx.scene.layout.Region
        javafx.scene.control.Control
          javafx.scene.control.Labeled
            javafx.scene.control.ButtonBase
              javafx.scene.control.Button
                com.example.project.controllers.DevButton
```

All Implemented Interfaces:

javafx.css.Styleable, javafx.event.EventTarget, javafx.scene.control.Skinnable

```
public class DevButton
extends javafx.scene.control.Button
```

wrapper class for dev buttons to toggle off or on when we want.

Property Summary

Properties inherited from class javafx.scene.control.Button

cancelButton, defaultButton

Properties inherited from class javafx.scene.control.ButtonBase

armed, onAction

Properties inherited from class javafx.scene.control.Labeled

alignment, contentDisplay, ellipsisString, font, graphic, graphicTextGap, labelPadding, lineSpacing, mnemonicParsing, textAlignment, textFill, textOverrun, text, underline, wrapText

Properties inherited from class javafx.scene.control.Control

contextMenu, skin, tooltip

Properties inherited from class javafx.scene.layout.Region

background, border, cacheShape, centerShape, height, insets, maxHeight, maxWidth, minHeight, minWidth, opaqueInsets, padding, prefHeight, prefWidth, scaleShape, shape, snapToPixel, width

Properties inherited from class javafx.scene.Parent

needsLayout

Properties inherited from class javafx.scene.Node

accessibleHelp, accessibleRoleDescription, accessibleRole, accessibleText, blendMode, boundsInLocal, boundsInParent, cacheHint, cache, clip, cursor, depthTest, disabled, disable, effectiveNodeOrientation, effect, eventDispatcher, focused, focusTraversable, focusVisible, focusWithin, hover, id, inputMethodRequests, layoutBounds, layoutX, layoutY, localToParentTransform, localToSceneTransform, managed, mouseTransparent, nodeOrientation, onContextMenuRequested, onDragDetected, onDragDone, onDragDropped, onDragEntered, onDragExited, onDragOver, onInputMethodTextChanged, onKeyPressed, onKeyReleased, onKeyTyped, onMouseClicked, onMouseDragEntered, onMouseDragExited, onMouseDragged, onMouseDragOver, onMouseDragReleased, onMouseEntered, onMouseExited, onMouseMoved, onMousePressed, onMouseReleased, onRotate, onRotationFinished, onRotationStarted, onScrollFinished, onScroll, onScrollStarted, onSwipeDown, onSwipeLeft, onSwipeRight, onSwipeUp, onTouchMoved, onTouchPressed, onTouchReleased, onTouchStationary, onZoomFinished, onZoom, onZoomStarted, opacity, parent, pickOnBounds, pressed, rotate, rotationAxis, scaleX, scaleY, scaleZ, scene, style, translateX, translateY, translateZ, viewOrder, visible

Field Summary

Fields inherited from class javafx.scene.layout.Region

USE_COMPUTED_SIZE, USE_PREF_SIZE

Fields inherited from class javafx.scene.Node

BASELINE_OFFSET_SAME_AS_HEIGHT

Constructor Summary

Constructors

Constructor

Description

DevButton()

Constructor.

Method Summary

Methods inherited from class javafx.scene.control.Button

cancelButtonProperty, createDefaultSkin, defaultButtonProperty, fire, isCancelButton, isDefaultButton, setCancelButton, setDefaultButton

Methods inherited from class javafx.scene.control.ButtonBase

arm, armedProperty, disarm, executeAccessibleAction, getOnAction, isArmed, onActionProperty, setOnAction

Methods inherited from class javafx.scene.control.Labeled

alignmentProperty, contentDisplayProperty, ellipsisStringProperty, fontProperty, getAlignment, getClassCssMetaData, getContentBias, getContentDisplay, getControlCssMetaData, getEllipsisString, getFont, getGraphic, getGraphicTextGap, getInitialAlignment, getLabelPadding, getLineSpacing, getText, getTextAlignment, getTextFill, getTextOverrun, graphicProperty, graphicTextGapProperty, isMnemonicParsing, isUnderline, isWrapText, labelPaddingProperty, lineSpacingProperty, mnemonicParsingProperty, setAlignment, setContentDisplay, setEllipsisString, setFont, setGraphic, setGraphicTextGap, setLineSpacing, setMnemonicParsing, setText, setTextAlignment, setTextFill, setTextOverrun, setUnderline, setWrapText, textAlignmentProperty, textFillProperty, textOverrunProperty, textProperty, toString, underlineProperty, wrapTextProperty

Methods inherited from class javafx.scene.control.Control

computeMaxHeight, computeMaxWidth, computeMinHeight, computeMinWidth, computePrefHeight, computePrefWidth, contextMenuProperty, getBaselineOffset, getContextMenu, getCssMetaData, getInitialFocusTraversable, getSkin, getTooltip, isResizable, layoutChildren, queryAccessibleAttribute, setContextMenu, setSkin, setTooltip, skinProperty, tooltipProperty

Methods inherited from class javafx.scene.layout.Region

backgroundProperty, borderProperty, cacheShapeProperty, centerShapeProperty, getBackground, getBorder, getHeight, getInsets, getMaxHeight, getMaxWidth, getMinHeight, getMinWidth, getOpaqueInsets, getPadding, getPrefHeight, getPrefWidth, getShape, getUserAgentStylesheet, getWidth, heightProperty, insetsProperty, isCacheShape, isCenterShape, isScaleShape, isSnapToPixel, layoutInArea, layoutInArea, layoutInArea, layoutInArea, maxHeight, maxHeightProperty, maxWidth, maxWidthProperty, minHeight, minHeightProperty, minWidth, minWidthProperty, opaqueInsetsProperty, paddingProperty, positionInArea, positionInArea, prefHeight, prefHeightProperty, prefWidth, prefWidthProperty, resize, scaleShapeProperty, setBackground, setBorder, setCacheShape, setCenterShape, setHeight, setMaxHeight, setMaxSize, setMaxWidth, setMinHeight, setMinSize, setMinWidth, setOpaqueInsets, setPadding, setPrefHeight, setPreferredSize, setPrefWidth, setScaleShape, setShape, setSnapToPixel, setWidth, shapeProperty, snappedBottomInset, snappedLeftInset, snappedRightInset, snappedTopInset, snapPosition, snapPositionX, snapPositionY, snapSize, snapSizeX, snapSizeY, snapSpace, snapSpaceX, snapSpaceY, snapToPixelProperty, widthProperty

Methods inherited from class javafx.scene.Parent

getChildren, getChildrenUnmodifiable, getManagedChildren, getStylesheets, isNeedsLayout, layout, lookup, needsLayoutProperty, requestLayout, requestParentLayout, setNeedsLayout, updateBounds

Methods inherited from class javafx.scene.Node

accessibleHelpProperty, accessibleRoleDescriptionProperty, accessibleRoleProperty, accessibleTextProperty,

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `wait`, `wait`, `wait`

Methods inherited from interface javafx.css.Styleable

getStyleableNode

Constructor Details

DevButton

```
public DevButton()
```


Uses of Class

com.example.project.controllers.gameScreens.MainMenuController

No usage of com.example.project.controllers.gameScreens.MainMenuController

Copyright © 2025. All rights reserved.

Uses of Class

com.example.project.controllers.gameScreens.ShopController

No usage of com.example.project.controllers.gameScreens.ShopController

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.controllers.gameScreens.SidebarController

Packages that use SidebarController

Package

Description

com.example.project.controllers.gameScreens

Uses of SidebarController in com.example.project.controllers.gameScreens

Methods in com.example.project.controllers.gameScreens that return SidebarController

Modifier and Type

Method

Description

SidebarController

GameScreenController.SidebarLoaded.controller()

Returns the value of the controller record component.

Constructors in com.example.project.controllers.gameScreens with parameters of type SidebarController

Modifier

Constructor

Description

protected

SidebarLoaded(javafx.scene.Parent node, SidebarController controller)

Creates an instance of a SidebarLoaded record class.

Uses of Enum Class

com.example.project.controllers.gameScreens.TooltipSetup.Element

Packages that use TooltipSetup.Element

Package

Description

com.example.project.controllers.gameScreens

Uses of TooltipSetup.Element in com.example.project.controllers.gameScreens

Methods in com.example.project.controllers.gameScreens that return TooltipSetup.Element

Modifier and Type

Method

Description

static TooltipSetup.Element

TooltipSetup.Element.valueOf(String[✉] name)

Returns the enum constant of this class with the specified name.

static TooltipSetup.Element[]

TooltipSetup.Element.values()

Returns an array containing the constants of this enum class, in the order they are declared.

Methods in com.example.project.controllers.gameScreens with parameters of type TooltipSetup.Element

Modifier and Type

Method

Description

void

TooltipSetup.setupTooltip(javafx.scene.Node node, TooltipSetup.Element element, Object[✉] model)

Uses of Class

com.example.project.controllers.gameScreens TooltipSetup

No usage of com.example.project.controllers.gameScreens.TooltipSetup

Copyright © 2025. All rights reserved.

Package com.example.project.controllers.gameScreens

package com.example.project.controllers.gameScreens

Related Packages

Package

Description

[com.example.project.controllers](#)

[com.example.project.controllers.gameScreens.animations](#)

[com.example.project.controllers.popupControllers](#)

[com.example.project.controllers.tiles](#)

All Classes and Interfaces

Classes

Enum Classes

Record Classes

Class

Description

DailyRewardController

Controller for the daily reward popup screen.

GameScreenController

Game screen controller that has some startup on screen thing todo.

GameScreenController.SidebarLoaded

GameScreenFactory

create game screen controllers.

LevelController

Controller for the level screen.

LoginController

Controller for the login scene.

MainMenuController

controller for the main menu.

ShopController

Shop view controller.

SidebarController

The sidebar on shop and level with the current round info.

TooltipSetup

sets a tooltip for desired element

TooltipSetup.Element

different types of elements that require a tooltip

Hierarchy For Package com.example.project.controllers.gameScreens

Package Hierarchies:

All Packages

Class Hierarchy

- [java.lang.Object](#)
 - [com.example.project.controllers.gameScreens.GameScreenController](#)
 - [com.example.project.controllers.gameScreens.DailyRewardController](#)
 - [com.example.project.controllers.gameScreens.LevelController](#)
 - [com.example.project.controllers.gameScreens.LoginController](#)
 - [com.example.project.controllers.gameScreens.MainMenuController](#)
 - [com.example.project.controllers.gameScreens.ShopController](#)
 - [com.example.project.controllers.gameScreens.GameScreenFactory](#)
 - [com.example.project.controllers.gameScreens.SidebarController](#)
 - [com.example.project.controllers.gameScreens.TooltipSetup](#)

Enum Class Hierarchy

- [java.lang.Object](#)
 - [java.lang.Enum](#)<E> (implements [java.lang.Comparable](#)<T>, [java.lang.constant.Constable](#), [java.io.Serializable](#))
 - [com.example.project.controllers.gameScreens.TooltipSetup.Element](#)

Record Class Hierarchy

- [java.lang.Object](#)
 - [java.lang.Record](#)
 - [com.example.project.controllers.gameScreens.GameScreenController SidebarLoaded](#)

Uses of Package com.example.project.controllers.gameScreens

Packages that use com.example.project.controllers.gameScreens

Package

Description

com.example.project.controllers.gameScreens

com.example.project.services

Classes in com.example.project.controllers.gameScreens used by com.example.project.controllers.gameScreens

Class

Description

GameScreenController

Game screen controller that has some startup on screen thing todo.

GameScreenController.SidebarLoaded

SidebarController

The sidebar on shop and level with the current round info.

TooltipSetup.Element

different types of elements that require a tooltip

Classes in com.example.project.controllers.gameScreens used by com.example.project.services

Class

Description

GameScreenController

Game screen controller that has some startup on screen thing todo.

Module com.example.project

Package com.example.project.controllers

package com.example.project.controllers

Related Packages

Package

Description

[com.example.project](#)

[com.example.project.controllers.gameScreens](#)

[com.example.project.controllers.popupControllers](#)

[com.example.project.controllers.tiles](#)

[com.example.project.models](#)

[com.example.project.services](#)

Classes

Class

Description

[DevButton](#)

wrapper class for dev buttons to toggle off or on when we want.

[RootLayoutController](#)

Root layout that remains the root scene of the application to switch scenes within.

Copyright © 2025. All rights reserved.

Hierarchy For Package com.example.project.controllers

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#)
- [javafx.scene.Node](#) (implements [javafx.event.EventTarget](#), [javafx.css.Styleable](#))
 - [javafx.scene.Parent](#)
 - [javafx.scene.layout.Region](#)
 - [javafx.scene.control.Control](#) (implements [javafx.scene.control.Skinnable](#))
 - [javafx.scene.control.Labeled](#)
 - [javafx.scene.control.ButtonBase](#)
 - [javafx.scene.control.Button](#)
 - [com.example.project.controllers.RootLayoutController](#)

Module com.example.project
Package com.example.project.controllers

Class RootLayoutController

java.lang.Object
 com.example.project.controllers.RootLayoutController

```
public class RootLayoutController  
extends Object
```

Root layout that remains the root scene of the application to switch scenes within.

Constructor Summary

Constructors

Constructor

Description

RootLayoutController()

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

setContent(javafx.scene.Parent page)

void

setSceneManager(SceneManager sceneManager)

Set scene manager to use.

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

RootLayoutController

```
public RootLayoutController()
```

Method Details

setContent

```
public void setContent(javafx.scene.Parent page)
```

Parameters:

page - Set page content to a game scene.

setSceneManager

```
public void setSceneManager(SceneManager sceneManager)
```

Set scene manager to use.

Parameters:

sceneManager - scene manager.

Uses of Package com.example.project.controllers

Packages that use com.example.project.controllers

Package

Description

com.example.project.controllers.gameScreens

com.example.project.services

Classes in com.example.project.controllers used by com.example.project.controllers.gameScreens

Class

Description

RootLayoutController

Root layout that remains the root scene of the application to switch scenes within.

Classes in com.example.project.controllers used by com.example.project.services

Class

Description

RootLayoutController

Root layout that remains the root scene of the application to switch scenes within.

Module com.example.project

Package com.example.project.controllers.popupControllers

Class DefinitionController

```
java.lang.Object
  com.example.project.controllers.popupControllers.PopupController<DefinitionPopup>
    com.example.project.controllers.popupControllers.DefinitionController
```

```
public class DefinitionController
extends PopupController<DefinitionPopup>
```

Controller for definition popup

Field Summary

Fields inherited from class com.example.project.controllers.popupControllers.PopupController

model

Constructor Summary

Constructors

Constructor

Description

DefinitionController()

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

DefinitionPopup

getModel()

gets the popup model.

javafx.scene.Node

getStack()

root ui node.

void

initialize(DefinitionPopup model)

sets elements of the ui

Methods inherited from class java.lang.Object

clone[✉], equals[✉], finalize[✉], getClass[✉], hashCode[✉], notify[✉], notifyAll[✉], toString[✉], wait[✉], wait[✉], wait[✉]

Constructor Details

DefinitionController

```
public DefinitionController()
```

Method Details

getStack

```
public javafx.scene.Node getStack()
```

Description copied from class: PopupController

root ui node.

Specified by:

[getStack](#) in class [PopupController<DefinitionPopup>](#)

Returns:

returns Node

getModel

```
public DefinitionPopup getModel()
```

Description copied from class: PopupController

gets the popup model.

Overrides:

[getModel](#) in class [PopupController<DefinitionPopup>](#)

Returns:

model.

initialize

```
public void initialize(DefinitionPopup model)
```

Description copied from class: PopupController

sets elements of the ui

Specified by:

[initialize](#) in class [PopupController<DefinitionPopup>](#)

Parameters:

model - popup to initialize

Module com.example.project

Package com.example.project.controllers.popupControllers

Class PopupController<P extends PopupModel>

java.lang.Object
com.example.project.controllers.PopupController<P>

Type Parameters:

P - Popup model type

Direct Known Subclasses:

DefinitionController

```
public abstract class PopupController<P extends PopupModel>
extends Object
```

Parent class for PopupControllers

Field Summary

Fields

Modifier and Type

Field

Description

protected P

model

Constructor Summary

Constructors

Constructor

Description

PopupController()

Method Summary

All Methods

Instance Methods

Abstract Methods

Concrete Methods

Modifier and Type

Method

Description

P

getModel()

gets the popup model.

abstract javafx.scene.Node

getStack()

root ui node.

abstract void

initialize(P popup)

sets elements of the ui

Methods inherited from class java.lang.Object

```
clone2, equals2, finalize2, getClass2, hashCode2, notify2, notifyAll2, toString2, wait2, wait2, wait2
```

Field Details

model

```
protected P extends PopupModel model
```

Constructor Details

PopupController

```
public PopupController()
```

Method Details

getStack

```
public abstract javafx.scene.Node getStack()
```

root ui node.

Returns:

root ui Node

initialize

```
public abstract void initialize(P popup)
```

sets elements of the ui

Parameters:

popup - popup to initialize

getModel

```
public P getModel()
```

gets the popup model.

Returns:

model.

Uses of Class

com.example.project.controllers.popupControllers.DefinitionController

No usage of com.example.project.controllers.popupControllers.DefinitionController

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.controllers.popupControllers.PopupController

Packages that use PopupController

Package

Description

com.example.project.controllers.popupControllers

com.example.project.services

Uses of PopupController in com.example.project.controllers.popupControllers

Subclasses of PopupController in com.example.project.controllers.popupControllers

Modifier and Type

Class

Description

class

DefinitionController

Controller for definition popup

Uses of PopupController in com.example.project.services

Methods in com.example.project.services with type parameters of type PopupController

Modifier and Type

Method

Description

<C extends PopupController<P>, P extends PopupModel>

C

PopupLoader.createPopupController(P popupModel)

create popup controller.

Module com.example.project

Package com.example.project.controllers.popupControllers

package com.example.project.controllers.popupControllers

Related Packages

Package

Description

[com.example.project.controllers](#)

[com.example.project.controllers.gameScreens](#)

[com.example.project.controllers.tiles](#)

Classes

Class

Description

[DefinitionController](#)

Controller for definition popup

[PopupController<P extends PopupModel>](#)

Parent class for PopupControllers

Hierarchy For Package com.example.project.controllers.popupControllers

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#)
- [com.example.project.controllers.popupControllers.PopupController<P>](#)
 - [com.example.project.controllers.DefinitionController](#)

Uses of Package com.example.project.controllers.popupControllers

Packages that use com.example.project.controllers.popupControllers

Package	Description
com.example.project.controllers.popupControllers	
com.example.project.services	

Classes in com.example.project.controllers.popupControllers used by com.example.project.controllers.popupController

Class	Description
PopupController	Parent class for PopupControllers

Classes in com.example.project.controllers.popupControllers used by com.example.project.services

Class	Description
PopupController	Parent class for PopupControllers

Module com.example.project
Package com.example.project.controllers.tiles

Class EmptyTileSlotController

java.lang.Object
 com.example.project.controllers.tiles.TileController<EmptyTileSlotModel>
 com.example.project.controllers.tiles.EmptyTileSlotController

```
public class EmptyTileSlotController  
extends TileController<EmptyTileSlotModel>
```

Empty Tile controller for EmptyTile view.

Field Summary

Fields

Modifier and Type

Field

Description

protected javafx.scene.layout.StackPane
root

protected javafx.scene.layout.StackPane
slotForLetterTile

Fields inherited from class com.example.project.controllers.tiles.TileController

model

Constructor Summary

Constructors

Constructor

Description

EmptyTileSlotController()

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

bind(EmptyTileSlotModel modelToUse)

Binds tile to the controller as its model.

javafx.scene.Node

getRoot()

root ui node.

void

setLetter(LetterTileController letterController)

updates the tile slot with a new letter tile controller.

Methods inherited from class com.example.project.controllers.tiles.TileController

getModel, setModel

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Details

root

protected javafx.scene.layout.StackPane root

slotForLetterTile

protected javafx.scene.layout.StackPane slotForLetterTile

Constructor Details

EmptyTileSlotController

public EmptyTileSlotController()

Method Details

bind

public void bind(EmptyTileSlotModel modelToUse)

Description copied from class: TileController

Binds tile to the controller as its model.

Specified by:

bind in class TileController<EmptyTileSlotModel>

Parameters:

modelToUse - tile to bind.

getRoot

public javafx.scene.Node getRoot()

Description copied from class: TileController

root ui node.

Specified by:

getRoot in class TileController<EmptyTileSlotModel>

Returns:

root ui Node

setLetter

public void setLetter(LetterTileController letterController)

updates the tile slot with a new letter tile controller.

Parameters:

letterController - the letter tiles controller.

Copyright © 2025. All rights reserved.

Module com.example.project
Package com.example.project.controllers.tiles

Class LetterTileController

java.lang.Object ↗
 com.example.project.controllers.tiles.TileController<LetterTileModel>
 com.example.project.controllers.tiles.LetterTileController

```
public class LetterTileController  
extends TileController<LetterTileModel>
```

Controls the layout of the letterUIModel. Which is a letter tile.

Field Summary

Fields inherited from class com.example.project.controllers.tiles.TileController

model

Constructor Summary

Constructors

Constructor

Description

`LetterTileController()`

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

`bind(LetterTileModel tile)`

Binds tile to the controller as its model.

`LetterTileModel`

`getModel()`

gets the tile model.

`javafx.scene.Node`

`getRoot()`

root ui node.

Methods inherited from class com.example.project.controllers.tiles.TileController

`setModel`

Methods inherited from class java.lang.Object ↗

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

Constructor Details

LetterTileController

```
public LetterTileController()
```

Method Details

getRoot

```
public javafx.scene.Node getRoot()
```

Description copied from class: [TileController](#)

root ui node.

Specified by:

[getRoot](#) in class [TileController<LetterTileModel>](#)

Returns:

root ui Node

getModel

```
public LetterTileModel getModel()
```

Description copied from class: [TileController](#)

gets the tile model.

Overrides:

[getModel](#) in class [TileController<LetterTileModel>](#)

Returns:

model.

bind

```
public void bind(LetterTileModel tile)
```

Description copied from class: [TileController](#)

Binds tile to the controller as its model.

Specified by:

[bind](#) in class [TileController<LetterTileModel>](#)

Parameters:

tile - tile to bind.

Uses of Class com.example.project.controllers.DevButton

No usage of com.example.project.controllers.DevButton

Copyright © 2025. All rights reserved.

Module com.example.project

Package com.example.project.controllers.tiles

Class TileController<T extends TileModel>

java.lang.Object ↗
com.example.project.controllers.tiles.TileController<T>

Type Parameters:

T - tile model type.

Direct Known Subclasses:

EmptyTileSlotController, LetterTileController, UpgradeTileController

```
public abstract class TileController<T extends TileModel>
extends Object ↗
```

Parent class of TileControllers.

Field Summary

Fields

Modifier and Type

Field

Description

protected T

model

Constructor Summary

Constructors

Constructor

Description

TileController()

Method Summary

All Methods

Instance Methods

Abstract Methods

Concrete Methods

Modifier and Type

Method

Description

abstract void

bind(T tile)

Binds tile to the controller as its model.

T

getModel()

gets the tile model.

abstract javafx.scene.Node

getRoot()

root ui node.

void

setModel(T tile)

Set the model this controller will observe.

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

Field Details

model

`protected T extends TileModel model`

Constructor Details

TileController

`public TileController()`

Method Details

getRoot

`public abstract javafx.scene.Node getRoot()`

root ui node.

Returns:

root ui Node

bind

`public abstract void bind(T tile)`

Binds tile to the controller as its model.

Parameters:

tile - tile to bind.

setModel

`public void setModel(T tile)`

Set the model this controller will observe.

Parameters:

tile - tile model class.

getModel

`public T getModel()`

gets the tile model.

Returns:

model.

Module com.example.project
Package com.example.project.controllers.tiles

Class TileControllerFactory

java.lang.Object
 com.example.project.controllers.tiles.TileControllerFactory

```
public class TileControllerFactory  
extends Object
```

class to load the tile model controller for that tile model type.

Constructor Summary

Constructors

Modifier

Constructor

Description

`TileControllerFactory()`

Creates instance of `TileControllerFactory`.

protected

`TileControllerFactory(FXMLLoader loader)`

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

`LetterTileController`

`createLetterTileController(LetterTileModel lt)`

`<C extends TileController<T>, T extends TileModel>`
C

`createTileController(T tile, Class<?> controllerType)`

Returns controller of type.

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

Constructor Details

TileControllerFactory

`public TileControllerFactory()`

Creates instance of `TileControllerFactory`.

TileControllerFactory

`protected TileControllerFactory(FXMLLoader loader)`

Method Details

createTileController

```
public <C extends TileController<T>,
      T extends TileModel>
C createTileController(T tile,
                      Class<?> controllerType)
```

Returns controller of type.

Type Parameters:

C - controller type.

T - tile type.

Parameters:

tile - tile model.

controllerType - controller type.

Returns:

return controller.

createLetterTileController

```
public LetterTileController createLetterTileController(LetterTileModel lt)
```

Parameters:

lt - letter tile model.

Returns:

returns letter tile controller.

Module com.example.project
Package com.example.project.controllers.tiles

Class UpgradeTileController

```
java.lang.Object
    com.example.project.controllers.tiles.TileController<UpgradeTileModel>
        com.example.project.controllers.tiles.UpgradeTileController
```

```
public class UpgradeTileController
extends TileController<UpgradeTileModel>
```

Controls the upgrade tile view fxml file.

Field Summary

Fields

Modifier and Type

Field

Description

protected javafx.scene.control.Label

countText

protected javafx.scene.image.ImageView

imageView

protected javafx.scene.layout.StackPane

root

Fields inherited from class com.example.project.controllers.tiles.TileController

model

Constructor Summary

Constructors

Constructor

Description

UpgradeTileController()

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

bind(UpgradeTileModel tileModel)

Binds tile to the controller as its model.

javafx.scene.Node

getRoot()

```
root ui node.  
void  
updateCount(int count)  
updates upgrade # subscript
```

Methods inherited from class com.example.project.controllers.tiles.TileController

```
getModel, setModel
```

Methods inherited from class java.lang.Object

```
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait
```

Field Details

root

```
protected javafx.scene.layout.StackPane root
```

imageView

```
protected javafx.scene.image.ImageView imageView
```

countText

```
protected javafx.scene.control.Label countText
```

Constructor Details

UpgradeTileController

```
public UpgradeTileController()
```

Method Details

getRoot

```
public javafx.scene.Node getRoot()
```

Description copied from class: TileController

root ui node.

Specified by:

`getRoot` in class `TileController<UpgradeTileModel>`

Returns:

root ui Node

bind

```
public void bind(UpgradeTileModel tileModel)
```

Description copied from class: TileController

Binds tile to the controller as its model.

Specified by:

`bind` in class `TileController<UpgradeTileModel>`

Parameters:

`tileModel` - tile to bind.

updateCount

`public void updateCount(int count)`

updates upgrade # subscript

Parameters:

`count` - the number of duplicate upgrades

Uses of Class

com.example.project.controllers.tiles.EmptyTileSlotController

No usage of com.example.project.controllers.tiles.EmptyTileSlotController

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.controllers.tiles.LetterTileController

Packages that use LetterTileController

Package

Description

com.example.project.controllers.gameScreens.animations

com.example.project.controllers.tiles

com.example.project.models.tileGroups

Uses of LetterTileController in com.example.project.controllers.gameScreens.animations

Constructor parameters in com.example.project.controllers.gameScreens.animations with type arguments of type LetterTileController

Modifier

Constructor

Description

`LevelScoreSequence(List<LetterTileController> wordTileControllers, LevelModel levelModel, javafx.scene.control.Label comboCountLabel, javafx.scene.control.Label multiplierLabel)`

Constructor.

Uses of LetterTileController in com.example.project.controllers.tiles

Methods in com.example.project.controllers.tiles that return LetterTileController

Modifier and Type

Method

Description

`LetterTileController`

`TileControllerFactory.createLetterTileController(LetterTileModel lt)`

Methods in com.example.project.controllers.tiles with parameters of type LetterTileController

Modifier and Type

Method

Description

`void`

`EmptyTileSlotController.setLetter(LetterTileController letterController)`

updates the tile slot with a new letter tile controller.

Uses of LetterTileController in com.example.project.models.tileGroups

Constructor parameters in com.example.project.models.tileGroups with type arguments of type LetterTileController

Modifier

Constructor

Description

```
LetterTileGroup(int numberOfEmptyTileSlots, javafx.scene.layout.Pane container,  
javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList, Consumer<  
<LetterTileController> onClickAction)
```

Constructor

```
LetterTileGroup(int numberOfEmptyTileSlots, javafx.scene.layout.Pane container,  
javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList, Consumer<  
<LetterTileController> onClickHandler, List<Runnable> afterSyncActions)
```

Constructor

protected

```
LetterTileGroup(int numberOfEmptyTileSlots, javafx.scene.layout.Pane container,  
javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList, Consumer<  
<LetterTileController> onClickHandler, List<Runnable> afterSyncActions, TileControllerFactory factory)
```

Uses of Class com.example.project.controllers.tiles.TileController

Packages that use TileController

Package

Description

com.example.project.controllers.tiles

com.example.project.models.tileGroups

Uses of TileController in com.example.project.controllers.tiles

Subclasses of TileController in com.example.project.controllers.tiles

Modifier and Type

Class

Description

class

EmptyTileSlotController

Empty Tile controller for EmptyTile view.

class

LetterTileController

Controls the layout of the letterUIModel.

class

UpgradeTileController

Controls the upgrade tile view fxml file.

Methods in com.example.project.controllers.tiles with type parameters of type TileController

Modifier and Type

Method

Description

<C extends TileController<T>, T extends TileModel>

C

TileControllerFactory.createTileController(T tile, Class<?> controllerType)

Returns controller of type.

Uses of TileController in com.example.project.models.tileGroups

Classes in com.example.project.models.tileGroups with type parameters of type TileController

Modifier and Type

Class

Description

class

TileGroup<modelType extends TileModel, controllerType extends TileController<modelType>>

Tile Group abstract class holds a row or column of tiles.

Uses of Class com.example.project.controllers.tiles.TileControllerFactory

Packages that use TileControllerFactory

Package

Description

com.example.project.models.tileGroups

Uses of TileControllerFactory in com.example.project.models.tileGroups

Fields in com.example.project.models.tileGroups declared as TileControllerFactory

Modifier and Type

Field

Description

protected TileControllerFactory

TileGroup.tileControllerFactory

Constructors in com.example.project.models.tileGroups with parameters of type TileControllerFactory

Modifier

Constructor

Description

protected

LetterTileGroup(int numberEmptyTileSlots, javafx.scene.layout.Pane container, javafx.beans.property.ReadOnlyListProperty<LetterTileModel> observedList, Consumer<LetterTileController> onClickHandler, List<Runnable> afterSyncActions, TileControllerFactory factory)

Uses of Class com.example.project.controllers.tiles.UpgradeTileController

Packages that use UpgradeTileController

Package

Description

com.example.project.controllers.gameScreens

com.example.project.models.tileGroups

Uses of UpgradeTileController in com.example.project.controllers.gameScreens

Methods in com.example.project.controllers.gameScreens with parameters of type UpgradeTileController

Modifier and Type

Method

Description

protected void

`ShopController.onUpgradeClicked(UpgradeTileController controller)`

Uses of UpgradeTileController in com.example.project.models.tileGroups

Constructor parameters in com.example.project.models.tileGroups with type arguments of type UpgradeTileController

Modifier

Constructor

Description

`UpgradeTileGroup(javafx.scene.layout.Pane container,
javafx.beans.property.ReadOnlyListProperty<UpgradeTileModel> observedList, Consumer<
<UpgradeTileController> onClickAction)`

Constructor.

Module com.example.project

Package com.example.project.controllers.tiles

package com.example.project.controllers.tiles

Related Packages

Package

Description

[com.example.project.controllers](#)

[com.example.project.controllers.gameScreens](#)

[com.example.project.controllers.popupControllers](#)

Classes

Class

Description

[EmptyTileSlotController](#)

Empty Tile controller for EmptyTile view.

[LetterTileController](#)

Controls the layout of the letterUIModel.

[TileController<T extends TileModel>](#)

Parent class of TileControllers.

[TileControllerFactory](#)

class to load the tile model controller for that tile model type.

[UpgradeTileController](#)

Controls the upgrade tile view fxml file.

Copyright © 2025. All rights reserved.

Hierarchy For Package com.example.project.controllers.tiles

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#)
- [com.example.project.controllers.tiles.TileController<T>](#)
 - [com.example.project.controllers.tiles.EmptyTileSlotController](#)
 - [com.example.project.controllers.tiles.LetterTileController](#)
 - [com.example.project.controllers.tiles.UpgradeTileController](#)
- [com.example.project.controllers.tiles.TileControllerFactory](#)

Uses of Class com.example.project.controllers.RootLayoutController

Packages that use RootLayoutController

Package

Description

com.example.project.controllers.gameScreens

com.example.project.services

Uses of RootLayoutController in com.example.project.controllers.gameScreens

Methods in com.example.project.controllers.gameScreens with parameters of type RootLayoutController

Modifier and Type

Method

Description

void

`GameScreenFactory.loadGameScreens(RootLayoutController rootController, FXMLLoader loader)`

Load all main game screens.

Uses of RootLayoutController in com.example.project.services

Constructors in com.example.project.services with parameters of type RootLayoutController

Modifier

Constructor

Description

`SceneManager(RootLayoutController newRootController, Map<GameScene, GameScreenController> controllersToUse, Map<GameScene, javafx.scene.Parent> pagesToUse)`

Constructor with injection for tests

Uses of Package com.example.project.controllers.tiles

Packages that use com.example.project.controllers.tiles

Package	Description
com.example.project.controllers.gameScreens	

com.example.project.controllers.gameScreens.animations
--

com.example.project.controllers.tiles

com.example.project.models.tileGroups

Classes in com.example.project.controllers.tiles used by com.example.project.controllers.gameScreens

Class	Description
UpgradeTileController	
Controls the upgrade tile view fxml file.	

Classes in com.example.project.controllers.tiles used by com.example.project.controllers.gameScreens.animations

Class	Description
LetterTileController	
Controls the layout of the letterUIModel.	

Classes in com.example.project.controllers.tiles used by com.example.project.controllers.tiles

Class	Description
LetterTileController	
Controls the layout of the letterUIModel.	

Classes in com.example.project.controllers.tiles used by com.example.project.models.tileGroups

Class	Description
LetterTileController	
Controls the layout of the letterUIModel.	
TileController	
Parent class of TileControllers.	
TileControllerFactory	
class to load the tile model controller for that tile model type.	
UpgradeTileController	
Controls the upgrade tile view fxml file.	

Module com.example.project
Package com.example.project.models

Class User

java.lang.Object[✉]
 com.example.project.models.User

```
public class User  
extends Object✉
```

Represents a user in the application that can log in.

Constructor Summary

Constructors

Constructor

Description

User(String[✉] username, String[✉] password, int highscore)

Constructor.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

int

getHighscore()

get highscore.

String[✉]

getPassword()

get password.

String[✉]

getUsername()

get username.

Methods inherited from class java.lang.Object[✉]

clone[✉], equals[✉], finalize[✉], getClass[✉], hashCode[✉], notify[✉], notifyAll[✉], toString[✉], wait[✉], wait[✉], wait[✉]

Constructor Details

User

```
public User(String✉ username,  
          String✉ password,  
          int highscore)
```

Constructor.

Parameters:

username - username.

password - password.

highscore - highscore.

Method Details

getUsername

```
public String¶ getUsername()
```

get username.

Returns:

username.

getPassword

```
public String¶ getPassword()
```

get password.

Returns:

password.

getHighscore

```
public int getHighscore()
```

get highscore.

Returns:

returns highscore.

Uses of Class com.example.project.models.User

Packages that use User

Package

Description

com.example.project.services

com.example.project.services.sqlite.dAOs

Uses of User in com.example.project.services

Methods in com.example.project.services that return User

Modifier and Type

Method

Description

User

Session.getUser()

Returns logged in user.

Methods in com.example.project.services with parameters of type User

Modifier and Type

Method

Description

void

Session.setUser(User newUser)

set new user.

Constructors in com.example.project.services with parameters of type User

Modifier

Constructor

Description

protected

**Session(int newHandSize, int newWordViewSize, int newRedrawWindowSize,
javafx.collections.ObservableList<UpgradeTileModel> newUpgrades, User newUser, int newMoney,
int newLevelsBeaten, int currentLevelRequirement, int newFirstLevelsRequirement, int newInitialMoney)**

Constructor for injecting values in for unit test.

Uses of User in com.example.project.services.sqlite.dAOs

Methods in com.example.project.services.sqlite.dAOs that return User

Modifier and Type

Method

Description

User

UsersDAO.getUser(String² username)

Methods in com.example.project.services.sqlite.dAOs with parameters of type User

Modifier and Type

Method

Description

void

UsersDAO.addUser(User user)

Adds user to the user.db.

boolean

UsersDAO.hasSaveData(User user)

Does user have save data.

Module com.example.project

Package com.example.project.models.gameScreens

Class DailyRewardModel

java.lang.Object
 com.example.project.models.gameScreens.GameScreenModel
 com.example.project.models.gameScreens.DailyRewardModel

```
public class DailyRewardModel  
extends GameScreenModel
```

Model for handling daily reward logic and state.

Field Summary

Fields inherited from class com.example.project.models.gameScreens.GameScreenModel

logger, sceneManager, session

Constructor Summary

Constructors

Constructor

Description

DailyRewardModel(Session session, SceneManager sceneManager)

Constructor.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

applyReward(DailyRewardType reward)

Applies the effect of the given reward to the session and marks it as claimed.

DailyRewardType

rollReward()

Randomly selects a daily reward.

Methods inherited from class com.example.project.models.gameScreens.GameScreenModel

getSceneManager, getSession

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

DailyRewardModel

```
public DailyRewardModel(Session session,  
                          SceneManager sceneManager)
```

Constructor.

Parameters:

session - session.

sceneManager - scene manager.

Method Details

rollReward

```
public DailyRewardType rollReward()
```

Randomly selects a daily reward.

Returns:

a randomly selected reward

applyReward

```
public void applyReward(DailyRewardType reward)
```

Applies the effect of the given reward to the session and marks it as claimed.

Parameters:

reward - the reward to apply

Module com.example.project
Package com.example.project.models.gameScreens

Enum Class DailyRewardType

java.lang.Object
 java.lang.Enum<DailyRewardType>
 com.example.project.models.gameScreens.DailyRewardType

All Implemented Interfaces:

Serializable, Comparable<DailyRewardType>, Constable

```
public enum DailyRewardType  
extends Enum<DailyRewardType>
```

Enum representing the possible daily reward outcomes.

Nested Class Summary

Nested classes/interfaces inherited from class java.lang.Enum

Enum.EnumDesc<E> extends Enum<E>>

Enum Constant Summary

Enum Constants

Enum Constant

Description

Daily_Reward_Won_1Dollar

Player wins \$1

Daily_Reward_Won_5Dollars

Player wins \$5

Daily_Reward_Won_NOTHING

Player wins nothing

Method Summary

All Methods

Static Methods

Concrete Methods

Modifier and Type

Method

Description

static DailyRewardType

valueOf(String name)

Returns the enum constant of this class with the specified name.

static DailyRewardType[]

values()

Returns an array containing the constants of this enum class, in the order they are declared.

Methods inherited from class java.lang.Enum

clone, compareTo, describeConstable, equals, finalize, getDeclaringClass, hashCode, name, ordinal, toString, valueOf

Methods inherited from class java.lang.Object

getClass, notify, notifyAll, wait, wait, wait

Enum Constant Details

Daily_Reward_Won_1Dollar

```
public static final DailyRewardType Daily_Reward_Won_1Dollar
```

Player wins \$1

Daily_Reward_Won_5Dollars

```
public static final DailyRewardType Daily_Reward_Won_5Dollars
```

Player wins \$5

Daily_Reward_Won_NOTHING

```
public static final DailyRewardType Daily_Reward_Won_NOTHING
```

Player wins nothing

Method Details

values

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

Returns an array containing the constants of this enum class, in the order they are declared.

Returns:

an array containing the constants of this enum class, in the order they are declared

valueOf

```
public static DailyRewardType valueOf(String¶ name)
```

Returns the enum constant of this class with the specified name. The string must match *exactly* an identifier used to declare an enum constant in this class. (Extraneous whitespace characters are not permitted.)

Parameters:

name - the name of the enum constant to be returned.

Returns:

the enum constant with the specified name

Throws:

IllegalArgumentException[¶] - if this enum class has no constant with the specified name

NullPointerException[¶] - if the argument is null

Module com.example.project

Package com.example.project.models.gameScreens

Class GameScreenModel

`java.lang.Object`
com.example.project.models.gameScreens.GameScreenModel

Direct Known Subclasses:

DailyRewardModel, LevelModel, LoginModel, MainMenuModel, ShopModel

```
public abstract class GameScreenModel  
extends Object
```

Game Screen Model. extended by loginModel, shopModel, levelModel.

Field Summary

Fields

Modifier and Type

Field

Description

protected `Logger`

`logger`

protected final `SceneManager`

`sceneManager`

protected final `Session`

`session`

Constructor Summary

Constructors

Modifier

Constructor

Description

protected

`GameScreenModel(Session session, SceneManager sceneManager)`

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

`SceneManager`

`getSceneManager()`

get scene manager

`Session`

```
getSession()
```

Get session.

Methods inherited from class java.lang.Object

```
clone2, equals2, finalize2, getClass2, hashCode2, notify2, notifyAll2, toString2, wait2, wait2, wait2
```

Field Details

logger

```
protected Logger logger
```

session

```
protected final Session session
```

sceneManager

```
protected final SceneManager sceneManager
```

Constructor Details

GameScreenModel

```
protected GameScreenModel(Session session,  
                           SceneManager sceneManager)
```

Method Details

getSession

```
public Session getSession()
```

Get session.

Returns:

session.

getSceneManager

```
public SceneManager getSceneManager()
```

get scene manager

Returns:

scene manager

Module com.example.project

Package com.example.project.models.gameScreens

Class LevelModel

java.lang.Object
 com.example.project.models.gameScreens.GameScreenModel
 com.example.project.models.gameScreens.LevelModel

```
public class LevelModel  
extends GameScreenModel
```

Represents the level model.

Property Summary

Properties

Type

Property

Description

javafx.beans.property.ReadOnlyIntegerProperty

wordMulti

word multiplier.

javafx.beans.property.ReadOnlyIntegerProperty

wordPoints

Field Summary

Fields inherited from class com.example.project.models.gameScreens.GameScreenModel

logger, sceneManager, session

Constructor Summary

Constructors

Modifier

Constructor

Description

protected

LevelModel(Session session, Logger logger, SceneManager sceneManager)

LevelModel(Session session, SceneManager sceneManager)

Default constructor.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

```
protected void
addTileToRack(LetterTileModel tile)

protected void
addTileToRedrawWindow(LetterTileModel tile)

protected void
addTileToWordWindow(LetterTileModel tile)

void
addToCombo(LetterTileModel tile)
add combo sum and multiCombo

int
calcTotalWordScore()

String
getCurrentWord()
Gets the current word formed by tiles in the word area

javafx.beans.property.ReadOnlyBooleanProperty
getIsRedrawActive()
gets the redraw property.

javafx.beans.property.ReadOnlyIntegerProperty
getPlayersCurrentPoints()

javafx.beans.property.ReadOnlyIntegerProperty
getPlayersTotalPoints()

javafx.beans.property.ReadOnlyListProperty<LetterTileModel>
getRedrawWindowTilesProperty()

javafx.beans.property.ReadOnlyListProperty<LetterTileModel>
getTileRackTilesProperty()

ScoreChimePlayer
getTileScoreSoundPlayer()
Gets the tile score sound effect player.

javafx.beans.property.ReadOnlyListProperty<LetterTileModel>
getWordWindowTilesProperty()

boolean
hasLost()
true if player has lost

boolean
hasWon()
returns true if player has won.

boolean
```

isCurrentWordValid()

returns true if word is in dictionary.

void

onLostLevel()

Called when the level has been lost.

void

onWonLevel()

Called when level has been won.

void

playTiles()

clears the word row tiles.

void

redrawTiles()

redraws tiles into the tile rack and removes from redraw window.

void

resetCombo()

resets counts for sum and multi in combo

void

returnRedrawTilesToTheRack()

sends the selected redraw tiles back to the rack

void

setIsRedrawActive(boolean newValue)

set redraw active.

void

setTotalScore(int totalScore)

void

setupNewLevel()

Initialise new level.

void

setWordMulti(int newMulti)

sets the current word multiplier

void

setWordPoints(int newWordPoints)

sets the current word points before multipliers

boolean

tryMoveTile(LetterTileModel tile)

determines where tile should go and moves it

javafx.beans.property.ReadOnlyIntegerProperty

wordMultiProperty()

word multiplier.

javafx.beans.property.ReadOnlyIntegerProperty

wordPointsProperty()

Methods inherited from class com.example.project.models.gameScreens.GameScreenModel

```
getSceneManager, getSession
```

Methods inherited from class java.lang.Object

```
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait
```

Property Details

wordPoints

```
public javafx.beans.property.ReadOnlyIntegerProperty wordPointsProperty
```

See Also:

```
setWordPoints(int), wordPointsProperty()
```

wordMulti

```
public javafx.beans.property.ReadOnlyIntegerProperty wordMultiProperty
```

word multiplier.

See Also:

```
setWordMulti(int), wordMultiProperty()
```

Constructor Details

LevelModel

```
protected LevelModel(Session session,  
                    Logger logger,  
                    SceneManager sceneManager)
```

LevelModel

```
public LevelModel(Session session,  
                  SceneManager sceneManager)
```

Default constructor.

Parameters:

session - session

sceneManager - scene manager.

Method Details

getTileScoreSoundPlayer

```
public ScoreChimePlayer getTileScoreSoundPlayer()
```

Gets the tile score sound effect player.

Returns:

LevelTileScoreSoundPlayer.

getWordWindowTilesProperty

```
public javafx.beans.property.ReadOnlyListProperty<LetterTileModel> getWordWindowTilesProperty()
```

Returns:

Read-only list of tiles currently in the word area

getTileRackTilesProperty

```
public javafx.beans.property.ReadOnlyListProperty<LetterTileModel> getTileRackTilesProperty()
```

Returns:

Read-only list of tiles currently in the rack

getRedrawWindowTilesProperty

```
public javafx.beans.property.ReadOnlyListProperty<LetterTileModel> getRedrawWindowTilesProperty()
```

Returns:

Read-only list of tiles currently in the redraw window.

getPlayersTotalPoints

```
public javafx.beans.property.ReadOnlyIntegerProperty getPlayersTotalPoints()
```

Returns:

the total points property to observe.

wordPointsProperty

```
public javafx.beans.property.ReadOnlyIntegerProperty wordPointsProperty()
```

Returns:

the sum combo points property to observe.

See Also:

[setWordPoints\(int\)](#)

getPlayersCurrentPoints

```
public javafx.beans.property.ReadOnlyIntegerProperty getPlayersCurrentPoints()
```

Returns:

the players current level points property to observe.

wordMultiProperty

```
public javafx.beans.property.ReadOnlyIntegerProperty wordMultiProperty()
```

word multiplier.

Returns:

multiplier.

See Also:

[setWordMulti\(int\)](#)

getIsRedrawActive

```
public javafx.beans.property.ReadOnlyBooleanProperty getIsRedrawActive()
```

gets the redraw property.

Returns:

returns indication if redraw active.

setIsRedrawActive

```
public void setIsRedrawActive(boolean newValue)
```

set redraw active.

Parameters:

`newValue` - get if redraw window is on screen.

addTileToWordWindow

```
protected void addTileToWordWindow(LetterTileModel tile)
```

addTileToRack

```
protected void addTileToRack(LetterTileModel tile)
```

addTileToRedrawWindow

```
protected void addTileToRedrawWindow(LetterTileModel tile)
```

onLostLevel

```
public void onLostLevel()
```

Called when the level has been lost. resets the players session info and logs back out to the login screen.

onWonLevel

```
public void onWonLevel()
```

Called when level has been won. reset the per level info: redraws plays. Goes to shop window.

hasWon

```
public boolean hasWon()
```

returns true if player has won.

Returns:

value indicating if player has won.

hasLost

```
public boolean hasLost()
```

true if player has lost

Returns:

value indicating if player has lost.

tryMoveTile

```
public boolean tryMoveTile(LetterTileModel tile)
```

determines where tile should go and moves it

Parameters:

`tile` - The tile to move

Returns:

true if move was successful, false otherwise

getCurrentWord

```
public String2 getCurrentWord()
```

Gets the current word formed by tiles in the word area

Returns:

returns current word string.

isCurrentWordValid

```
public boolean isCurrentWordValid()
```

returns true if word is in dictionary.

Returns:

value indicating if word is valid.

redrawTiles

```
public void redrawTiles()
```

redraws tiles into the tile rack and removes from redraw window.

addToCombo

```
public void addToCombo(LetterTileModel tile)
```

add combo sum and multiCombo

Parameters:

tile - tile.

calcTotalWordScore

```
public int calcTotalWordScore()
```

Returns:

total score int

setWordPoints

```
public void setWordPoints(int newWordPoints)
```

sets the current word points before multipliers

Parameters:

newWordPoints - the new word points value

setWordMulti

```
public void setWordMulti(int newMulti)
```

sets the current word multiplier

Parameters:

newMulti - the new multiplier value

setTotalScore

```
public void setTotalScore(int totalScore)
```

Parameters:

totalScore - from calcTotalScore sets Total Score

playTiles

```
public void playTiles()
```

clears the word row tiles. and refills the tile rack. and decreases the plays left.

returnRedrawTilesToTheRack

```
public void returnRedrawTilesToTheRack()
```

sends the selected redraw tiles back to the rack

setupNewLevel

```
public void setupNewLevel()
```

Initialise new level. Clears word row, redraw rack. draws new tiles for the player's tile rack.

resetCombo

```
public void resetCombo()
```

resets counts for sum and multi in combo

Module com.example.project

Package com.example.project.models.gameScreens

Class LoginModel

```
java.lang.Object
  com.example.project.models.gameScreens.GameScreenModel
    com.example.project.models.gameScreens.LoginModel
```

```
public class LoginModel
extends GameScreenModel
```

Login model class.

Field Summary

Fields inherited from class com.example.project.models.gameScreens.GameScreenModel

```
logger, sceneManager, session
```

Constructor Summary

Constructors

Constructor

Description

```
LoginModel(Session session, SceneManager sceneManager, UsersDAO dao, PasswordHasher passwordHasher)
constructor.
```

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

```
javafx.beans.property.ReadOnlyStringProperty
```

```
getWelcomeTextProperty()
```

Gets the info text property.

```
void
```

```
onLoginClicked(String username, String password)
```

```
void
```

```
onSignUpClicked(String username, String password)
```

Adds user to database.

Methods inherited from class com.example.project.models.gameScreens.GameScreenModel

```
getSceneManager, getSession
```

Methods inherited from class java.lang.Object

```
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait
```

Constructor Details

LoginModel

```
public LoginModel(Session session,
                  SceneManager sceneManager,
                  UsersDAO dao,
                  PasswordHasher passwordHasher)
```

constructor.

Parameters:

session - session to use for the game.

sceneManager - scenes.

dao - users database implementation.

passwordHasher - password hasher for this login

Method Details

getWelcomeTextProperty

```
public javafx.beans.property.ReadOnlyStringProperty getWelcomeTextProperty()
```

Gets the info text property.

Returns:

ReadonlyStringProperty.

onLoginClicked

```
public void onLoginClicked(String2 username,
                           String2 password)
```

Parameters:

username - username.

password - password.

onSignUpClicked

```
public void onSignUpClicked(String2 username,
                           String2 password)
```

Adds user to database.

Parameters:

username - username

password - password

Module com.example.project

Package com.example.project.models.gameScreens

MainMenuModel

java.lang.Object
 com.example.project.models.gameScreens.GameScreenModel
 com.example.project.models.gameScreens.MainMenuModel

```
public class MainMenuModel  
extends GameScreenModel
```

main menu model class

Field Summary

Fields inherited from class com.example.project.models.gameScreens.GameScreenModel

logger, sceneManager, session

Constructor Summary

Constructors

Constructor

Description

MainMenuModel(Session session, SceneManager sceneManager)

constructor.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

onLogoutClicked()

switches to the login screen

void

onStartClicked()

switches to the level screen

Methods inherited from class com.example.project.models.gameScreens.GameScreenModel

getSceneManager, getSession

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Details

MainMenuModel

```
public MainMenuModel(Session session,  
                      SceneManager sceneManager)
```

constructor.

Parameters:

session - session to use for the game.

sceneManager - scenes.

Method Details

onStartClicked

```
public void onStartClicked()
```

switches to the level screen

onLogoutClicked

```
public void onLogoutClicked()
```

switches to the login screen

Module com.example.project
Package com.example.project.models.gameScreens

Class ScoreChimePlayer

java.lang.Object
com.example.project.models.gameScreens.ScoreChimePlayer

```
public class ScoreChimePlayer  
extends Object
```

plays a note from the F major scale ascending in pitch each time for a nice score combo sound.

Constructor Summary

Constructors

Constructor

Description

`ScoreChimePlayer()`

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

void

`playNextNote()`

plays the note then increments the int index.

void

`reset()`

resets back to 0.

Methods inherited from class java.lang.Object

`clone()`, `equals()`, `finalize()`, `getClass()`, `hashCode()`, `notify()`, `notifyAll()`, `toString()`, `wait()`, `wait()`, `wait()`

Constructor Details

ScoreChimePlayer

```
public ScoreChimePlayer()
```

Method Details

reset

```
public void reset()
```

resets back to 0.

playNextNote

```
public void playNextNote()
```

```
plays the note then increments the int index.
```

Copyright © 2025. All rights reserved.

Module com.example.project

Package com.example.project.controllers.gameScreens

Class DailyRewardController

```
java.lang.Object
  com.example.project.controllers.gameScreens.GameScreenController
    com.example.project.controllers.gameScreens.DailyRewardController
```

```
public class DailyRewardController
extends GameScreenController
```

Controller for the daily reward popup screen.

Nested Class Summary

Nested classes/interfaces inherited from class com.example.project.controllers.gameScreens.GameScreenController

```
GameScreenController.SidebarLoaded
```

Field Summary

Fields inherited from class com.example.project.controllers.gameScreens.GameScreenController

```
logger
```

Constructor Summary

Constructors

Constructor

Description

```
DailyRewardController()
```

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

```
void
```

```
onSceneChangedToThis()
```

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

```
void
```

```
setup(Session session, SceneManager sceneManager)
```

Initialises the daily reward view by resetting the reward label.

Methods inherited from class com.example.project.controllers.gameScreens.GameScreenController

```
loadSidebar
```

Methods inherited from class java.lang.Object

```
clone(), equals(), finalize(), getClass(), hashCode(), notify(), notifyAll(), toString(), wait(), wait(), wait()
```

Constructor Details

DailyRewardController

```
public DailyRewardController()
```

Method Details

setup

```
public void setup(Session session,  
                  SceneManager sceneManager)
```

Initialises the daily reward view by resetting the reward label.

Specified by:

[setup](#) in class [GameScreenController](#)

Parameters:

session - session.

sceneManager - scene manager.

onSceneChangedToThis

```
public void onSceneChangedToThis()
```

Description copied from class: [GameScreenController](#)

Called when the game scene is changed to one of the GameScenes Login, Level, Shop etc.

Specified by:

[onSceneChangedToThis](#) in class [GameScreenController](#)

Module com.example.project

Package com.example.project.models.gameScreens

Class ShopModel

java.lang.Object ↗
 com.example.project.models.gameScreens.GameScreenModel
 com.example.project.models.gameScreens.ShopModel

public class **ShopModel**
extends [GameScreenModel](#)

Shop Model.

Field Summary

Fields

Modifier and Type

Field

Description

protected final int
numberOfShopItems

Fields inherited from class com.example.project.models.gameScreens.GameScreenModel

logger, sceneManager, session

Constructor Summary

Constructors

Modifier

Constructor

Description

ShopModel(Session session, SceneManager sceneManager)

Constructor

protected

ShopModel(Session session, SceneManager sceneManager, Logger logger)

Constructor for tests.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

`javafx.beans.property.ListProperty<UpgradeTileModel>`

getCurrentShopItemsProperty()

Current items in the shop row that you can buy.

void

onNextLevelPressed()

exists shop and increments level requirement for the next level.

void

regenerateShopItems()

create new shop items.

void

tryPurchase(UpgradeTileModel tileClickedOn)

This should attempt to purchase an upgrade tile from the shop.

Methods inherited from class com.example.project.models.gameScreens.GameScreenModel

getSceneManager, getSession

Methods inherited from class java.lang.Object

clone², equals², finalize², getClass², hashCode², notify², notifyAll², toString², wait², wait², wait²

Field Details

numberOfShopItems

protected final int numberOfShopItems

See Also:

Constant Field Values

Constructor Details

ShopModel

```
protected ShopModel(Session session,  
                    SceneManager sceneManager,  
                    Logger logger)
```

Constructor for tests.

Parameters:

session - session.

logger - logger to use.

ShopModel

```
public ShopModel(Session session,  
                 SceneManager sceneManager)
```

Constructor

Parameters:

session - game session.

sceneManager - scenes.

Method Details

getCurrentShopItemsProperty

```
public javafx.beans.property.ListProperty<UpgradeTileModel> getCurrentShopItemsProperty()
```

Current items in the shop row that you can buy.

Returns:

shop items.

regenerateShopItems

```
public void regenerateShopItems()
```

create new shop items.

tryPurchase

```
public void tryPurchase(UpgradeTileModel tileClickedOn)
```

This should attempt to purchase an upgrade tile from the shop. Verifies the player has sufficient funds, deducts the cost, removes the item from the shop, and logs the transaction.

Parameters:

tileClickedOn - the upgrade tile the player is trying to purchase

Throws:

`IllegalArgumentException` - if tileClickedOn is empty (null)

See Also:

[for adding to player's collection](#)

onNextLevelPressed

```
public void onNextLevelPressed()
```

exists shop and increments level requirement for the next level.

Uses of Class

com.example.project.models.gameScreens.DailyRewardModel

No usage of com.example.project.models.gameScreens.DailyRewardModel

Copyright © 2025. All rights reserved.

Uses of Enum Class

com.example.project.models.gameScreens.DailyRewardType

Packages that use DailyRewardType

Package

Description

com.example.project.models.gameScreens

Uses of DailyRewardType in com.example.project.models.gameScreens

Methods in com.example.project.models.gameScreens that return DailyRewardType

Modifier and Type

Method

Description

DailyRewardType

DailyRewardModel.rollReward()

Randomly selects a daily reward.

static DailyRewardType

DailyRewardType.valueOf(String[?] name)

Returns the enum constant of this class with the specified name.

static DailyRewardType[]

DailyRewardType.values()

Returns an array containing the constants of this enum class, in the order they are declared.

Methods in com.example.project.models.gameScreens with parameters of type DailyRewardType

Modifier and Type

Method

Description

void

DailyRewardModel.applyReward(DailyRewardType reward)

Applies the effect of the given reward to the session and marks it as claimed.

Uses of Class com.example.project.models.gameScreens.GameScreenModel

Packages that use GameScreenModel

Package

Description

com.example.project.models.gameScreens

Uses of GameScreenModel in com.example.project.models.gameScreens

Subclasses of GameScreenModel in com.example.project.models.gameScreens

Modifier and Type

Class

Description

class

DailyRewardModel

Model for handling daily reward logic and state.

class

LevelModel

Represents the level model.

class

LoginModel

Login model class.

class

MainMenuModel

main menu model class

class

ShopModel

Shop Model.

Uses of Class com.example.project.models.gameScreens.LevelModel

Packages that use LevelModel

Package

Description

com.example.project.controllers.gameScreens

com.example.project.controllers.gameScreens.animations

com.example.project.models.tiles

Uses of LevelModel in com.example.project.controllers.gameScreens

Methods in com.example.project.controllers.gameScreens with parameters of type LevelModel

Modifier and Type

Method

Description

void

`SidebarController.setupProperties(LevelModel levelModel)`

Setup sync able properties.

Constructors in com.example.project.controllers.gameScreens with parameters of type LevelModel

Modifier

Constructor

Description

protected

`LevelController(LevelModel model)`

Uses of LevelModel in com.example.project.controllers.gameScreens.animations

Constructors in com.example.project.controllers.gameScreens.animations with parameters of type LevelModel

Modifier

Constructor

Description

`LevelScoreSequence(List<LetterTileController> wordTileControllers, LevelModel levelModel, javafx.scene.control.Label comboCountLabel, javafx.scene.control.Label multiplierLabel)`

Constructor.

Uses of LevelModel in com.example.project.models.tiles

Methods in com.example.project.models.tiles with parameters of type LevelModel

Modifier and Type

Method

Description

```
static void
UpgradeEffects.braceletEffect(LevelModel levelModel)
Add +1 to score multiplier for every consecutive letter alphabetical order.

static void
UpgradeEffects.buttonEffect(LevelModel levelModel)
adds 5 to the word score for every x in the tile rack.

static void
UpgradeEffects.coinEffect(LevelModel levelModel)
20% Chance the total word score is doubled

static void
UpgradeEffects.diceEffect(LevelModel levelModel)
Value is doubled for a random letter in the played word

static void
UpgradeEffects.glassesEffect(LevelModel levelModel)
Adds +2 to the score multiplier for every identical pair of letters next to each other

static void
UpgradeEffects.mirrorEffect(LevelModel levelModel)
If played word is a palindrome, doubles word score.

void
UpgradeTileModel.runUpgradeEffect(LevelModel model)
gets the effect for this tile.
```

Method parameters in com.example.project.models.tiles with type arguments of type LevelModel

Modifier and Type

Method

Description

UpgradeTileModel.UpgradeBuilder

UpgradeTileModel.UpgradeBuilder.upgradeEffect(Consumer<LevelModel> upgradeEffect)

upgrade effect builder

Uses of Class com.example.project.models.gameScreens.LoginModel

No usage of com.example.project.models.gameScreens.LoginModel

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.models.gameScreens.MainMenuModel

No usage of com.example.project.models.gameScreens.MainMenuModel

Copyright © 2025. All rights reserved.

Uses of Class com.example.project.models.gameScreens.ScoreChimePlayer

Packages that use ScoreChimePlayer

Package

Description

com.example.project.models.gameScreens

Uses of ScoreChimePlayer in com.example.project.models.gameScreens

Methods in com.example.project.models.gameScreens that return ScoreChimePlayer

Modifier and Type

Method

Description

ScoreChimePlayer

LevelModel.getTileScoreSoundPlayer()

Gets the tile score sound effect player.

Uses of Class com.example.project.models.gameScreens.ShopModel

Packages that use ShopModel

Package

Description

com.example.project.controllers.gameScreens

Uses of ShopModel in com.example.project.controllers.gameScreens

Constructors in com.example.project.controllers.gameScreens with parameters of type ShopModel

Modifier

Constructor

Description

protected

`ShopController(ShopModel model, UpgradeTileGroup players, UpgradeTileGroup shopItems, Logger logger)`

protected constructor for unit testing with mock model injection.

Package com.example.project.models.gameScreens

package com.example.project.models.gameScreens

Related Packages

Package

Description

[com.example.project.models](#)

[com.example.project.models.popups](#)

[com.example.project.models.tileGroups](#)

[com.example.project.models.tiles](#)

All Classes and Interfaces

Classes

Enum Classes

Class

Description

DailyRewardModel

Model for handling daily reward logic and state.

DailyRewardType

Enum representing the possible daily reward outcomes.

GameScreenModel

Game Screen Model.

LevelModel

Represents the level model.

LoginModel

Login model class.

MainMenuModel

main menu model class

ScoreChimePlayer

plays a note from the F major scale ascending in pitch each time for a nice score combo sound.

ShopModel

Shop Model.

Module com.example.project

Package com.example.project.controllers.gameScreens

Record Class GameScreenController.SidebarLoaded

java.lang.Object[✉]
 java.lang.Record[✉]
 com.example.project.controllers.gameScreens.GameScreenController.SidebarLoaded

Enclosing class:

GameScreenController

```
protected static record GameScreenController.SidebarLoaded(javafx.scene.Parent node,  
SidebarController controller)  
extends Record✉
```

Constructor Summary

Constructors

Modifier

Constructor

Description

protected

SidebarLoaded(javafx.scene.Parent node, SidebarController controller)

Creates an instance of a SidebarLoaded record class.

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

SidebarController

controller()

Returns the value of the controller record component.

final boolean

equals(Object[✉] o)

Indicates whether some other object is "equal to" this one.

final int

hashCode()

Returns a hash code value for this object.

javafx.scene.Parent

node()

Returns the value of the node record component.

final String[✉]

toString()

Returns a string representation of this record class.

Methods inherited from class java.lang.Object[✉]

clone[✉], finalize[✉], getClass[✉], hashCode[✉], notify[✉], notifyAll[✉], wait[✉], wait[✉], wait[✉]

Constructor Details

SidebarLoaded

```
protected SidebarLoaded(javafx.scene.Parent node,  
                      SidebarController controller)
```

Creates an instance of a SidebarLoaded record class.

Parameters:

node - the value for the node record component

controller - the value for the controller record component

Method Details

toString

```
public final String toString()
```

Returns a string representation of this record class. The representation contains the name of the class, followed by the name and value of each of the record components.

Specified by:

[toString](#) in class [Record](#)

Returns:

a string representation of this object

hashCode

```
public final int hashCode()
```

Returns a hash code value for this object. The value is derived from the hash code of each of the record components.

Specified by:

[hashCode](#) in class [Record](#)

Returns:

a hash code value for this object

equals

```
public final boolean equals(Object o)
```

Indicates whether some other object is "equal to" this one. The objects are equal if the other object is of the same class and if all the record components are equal. All components in this record class are compared with [Objects::equals\(Object, Object\)](#).

Specified by:

[equals](#) in class [Record](#)

Parameters:

o - the object with which to compare

Returns:

true if this object is the same as the o argument; false otherwise.

node

```
public javafx.scene.Parent node()
```

Returns the value of the node record component.

Returns:

the value of the node record component

controller

```
public SidebarController controller()
```

Returns the value of the controller record component.

Returns:

the value of the controller record component

Hierarchy For Package com.example.project.models.gameScreens

Package Hierarchies:

[All Packages](#)

Class Hierarchy

- [java.lang.Object](#)
 - [com.example.project.models.gameScreens.GameScreenModel](#)
 - [com.example.project.models.gameScreens.DailyRewardModel](#)
 - [com.example.project.models.gameScreens.LevelModel](#)
 - [com.example.project.models.gameScreens.LoginModel](#)
 - [com.example.project.models.gameScreens.MainMenuModel](#)
 - [com.example.project.models.gameScreens.ShopModel](#)
 - [com.example.project.models.gameScreens.ScoreChimePlayer](#)

Enum Class Hierarchy

- [java.lang.Object](#)
 - [java.lang.Enum](#)<E> (implements [java.lang.Comparable](#)<T>, [java.lang.constant.Constable](#), [java.io.Serializable](#))
 - [com.example.project.models.gameScreens.DailyRewardType](#)

Copyright © 2025. All rights reserved.

Uses of Package com.example.project.models.gameScreens

Packages that use com.example.project.models.gameScreens

Package	Description
com.example.project.controllers.gameScreens	

com.example.project.controllers.gameScreens.animations
--

com.example.project.models.gameScreens
--

com.example.project.models.tiles

Classes in com.example.project.models.gameScreens used by com.example.project.controllers.gameScreens

Class	Description
LevelModel	Represents the level model.
ShopModel	Shop Model.

Classes in com.example.project.models.gameScreens used by com.example.project.controllers.gameScreens.animation

Class	Description
LevelModel	Represents the level model.

Classes in com.example.project.models.gameScreens used by com.example.project.models.gameScreens

Class	Description
DailyRewardType	Enum representing the possible daily reward outcomes.
GameScreenModel	Game Screen Model.
ScoreChimePlayer	plays a note from the F major scale ascending in pitch each time for a nice score combo sound.

Classes in com.example.project.models.gameScreens used by com.example.project.models.tiles

Class	Description
LevelModel	Represents the level model.

Module com.example.project

Package com.example.project.models

package com.example.project.models

Related Packages

Package

Description

[com.example.project](#)

[com.example.project.models.gameScreens](#)

[com.example.project.models.popups](#)

[com.example.project.models.tileGroups](#)

[com.example.project.models.tiles](#)

[com.example.project.controllers](#)

[com.example.project.services](#)

Classes

Class

Description

User

Represents a user in the application that can log in.

Hierarchy For Package com.example.project.models

Package Hierarchies:

All Packages

Class Hierarchy

- [java.lang.Object](#) ↗
 - [com.example.project.models.User](#)

Copyright © 2025. All rights reserved.

Uses of Package com.example.project.models

Packages that use com.example.project.models

Package

Description

com.example.project.services

com.example.project.services.sqlite.dAOs

Classes in com.example.project.models used by com.example.project.services

Class

Description

User

Represents a user in the application that can log in.

Classes in com.example.project.models used by com.example.project.services.sqlite.dAOs

Class

Description

User

Represents a user in the application that can log in.

Module com.example.project
Package com.example.project.models.popups

Class DefinitionPopup

java.lang.Object ↗
 com.example.project.models.popups.PopupModel
 com.example.project.models.popups.DefinitionPopup

```
public class DefinitionPopup  
extends PopupModel
```

Represents Definition window called when a word is played

Property Summary

Properties

Type

Property

Description

javafx.beans.property.ReadOnlyStringProperty

definition

javafx.beans.property.ReadOnlyStringProperty

word

Field Summary

Fields inherited from class com.example.project.models.popups.PopupModel

paperSoundPlayer, reversePaperSoundPlayer

Constructor Summary

Constructors

Constructor

Description

DefinitionPopup()

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type

Method

Description

javafx.beans.property.ReadOnlyStringProperty

definitionProperty()

String ↗

getFXMLPath()

gets FXML path

```
javafx.beans.property.ReadOnlyBooleanProperty
```

```
getIsDefinitionActive()
```

```
void
```

```
setIsDefinitionActive(boolean newState)
```

```
toggle isDefinitionActive
```

```
void
```

```
setPopup(String currentWord)
```

```
javafx.beans.property.ReadOnlyStringProperty
```

```
wordProperty()
```

Methods inherited from class com.example.project.models.popups.PopupModel

```
getPaperSoundPlayer, getReversePaperSoundPlayer
```

Methods inherited from class java.lang.Object

```
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait
```

Property Details

definition

```
public javafx.beans.property.ReadOnlyStringProperty definitionProperty
```

See Also:

```
definitionProperty()
```

word

```
public javafx.beans.property.ReadOnlyStringProperty wordProperty
```

See Also:

```
wordProperty()
```

Constructor Details

DefinitionPopup

```
public DefinitionPopup()
```

Method Details

definitionProperty

```
public javafx.beans.property.ReadOnlyStringProperty definitionProperty()
```

Returns:

```
returns property of definition
```

wordProperty

```
public javafx.beans.property.ReadOnlyStringProperty wordProperty()
```

Returns:

returns property of word

getIsDefinitionActive

```
public javafx.beans.property.ReadOnlyBooleanProperty getIsDefinitionActive()
```

Returns:

returns boolean

setIsDefinitionActive

```
public void setIsDefinitionActive(boolean newState)
```

toggle isDefinitionActive

Parameters:

newState - current state of definition window

setPopup

```
public void setPopup(String2 currentWord)
```

Parameters:

currentWord - Word, when OnPlayButton is passed

getFXMLPath

```
public String2 getFXMLPath()
```

Description copied from class: [PopupModel](#)

gets FXML path

Specified by:

[getFXMLPath](#) in class [PopupModel](#)

Returns:

string path

Module com.example.project

Package com.example.project.models.popups

Class PopupModel

java.lang.Object[✉]
com.example.project.models.popups.PopupModel

Direct Known Subclasses:

DefinitionPopup

```
public abstract class PopupModel  
extends Object✉
```

Parent class for popup windows

Field Summary

Fields

Modifier and Type

Field

Description

```
protected final GameSoundPlayer
```

paperSoundPlayer

```
protected final GameSoundPlayer
```

reversePaperSoundPlayer

Constructor Summary

Constructors

Constructor

Description

PopupModel()

Method Summary

All Methods

Instance Methods

Abstract Methods

Concrete Methods

Modifier and Type

Method

Description

```
abstract String✉
```

getFXMLPath()

gets FXML path

GameSoundPlayer

getPaperSoundPlayer()

gets paper sound player

GameSoundPlayer

getReversePaperSoundPlayer()

gets reversed paper sound player

Methods inherited from class java.lang.Object

clone[✉], equals[✉], finalize[✉], getClass[✉], hashCode[✉], notify[✉], notifyAll[✉], toString[✉], wait[✉], wait[✉], wait[✉]

Field Details

paperSoundPlayer

protected final GameSoundPlayer paperSoundPlayer

reversePaperSoundPlayer

protected final GameSoundPlayer reversePaperSoundPlayer

Constructor Details

PopupModel

public PopupModel()

Method Details

getFXMLPath

public abstract String[✉] getFXMLPath()

gets FXML path

Returns:

string path

getPaperSoundPlayer

public GameSoundPlayer getPaperSoundPlayer()

gets paper sound player

Returns:

sound player

getReversePaperSoundPlayer

public GameSoundPlayer getReversePaperSoundPlayer()

gets reversed paper sound player

Returns:

sound player

Uses of Class com.example.project.models.popups.DefinitionPopup

Packages that use DefinitionPopup

Package

Description

com.example.project.controllers.popupControllers

Uses of DefinitionPopup in com.example.project.controllers.popupControllers

Methods in com.example.project.controllers.popupControllers that return DefinitionPopup

Modifier and Type

Method

Description

DefinitionPopup

DefinitionController.getModel()

Methods in com.example.project.controllers.popupControllers with parameters of type DefinitionPopup

Modifier and Type

Method

Description

void

DefinitionController.initialize(DefinitionPopup model)

Uses of Class com.example.project.models.popups.PopupModel

Packages that use PopupModel

Package

Description

com.example.project.controllers.popupControllers

com.example.project.models.popups

com.example.project.services

Uses of PopupModel in com.example.project.controllers.popupControllers

Classes in com.example.project.controllers.popupControllers with type parameters of type PopupModel

Modifier and Type

Class

Description

class

PopupController<P extends PopupModel>

Parent class for PopupControllers

Fields in com.example.project.controllers.popupControllers declared as PopupModel

Modifier and Type

Field

Description

protected P

PopupController.model

Uses of PopupModel in com.example.project.models.popups

Subclasses of PopupModel in com.example.project.models.popups

Modifier and Type

Class

Description

class

DefinitionPopup

Represents Definition window called when a word is played

Uses of PopupModel in com.example.project.services

Methods in com.example.project.services with type parameters of type PopupModel

Modifier and Type

Method

Description

<C extends PopupController<P>, P extends PopupModel>

C

PopupLoader.createPopupController(P popupModel)

create popup controller.

Module com.example.project

Package com.example.project.models.popups

package com.example.project.models.popups

Related Packages

Package

Description

[com.example.project.models](#)

[com.example.project.models.gameScreens](#)

[com.example.project.models.tileGroups](#)

[com.example.project.models.tiles](#)

Classes

Class

Description

[DefinitionPopup](#)

Represents Definition window called when a word is played

[PopupModel](#)

Parent class for popup windows

Copyright © 2025. All rights reserved.