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Chapter 1

Package com.retroMachines.game.Map

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1.1 Class LambdaToMap

1.1.1 Declaration

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

1.1.2 Constructor summary

```
    LambdaToMap()
```

1.1.3 Method summary

```
    getMapFromTerm(String)
```

1.1.4 Constructors

- **LambdaToMap**
 public **LambdaToMap**()

1.1.5 Methods

- **getMapFromTerm**
 public Map **getMapFromTerm**(java.lang.String lambda)

1.2 Class Map

1.2.1 Declaration

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

1.2.2 Constructor summary

Map()

1.2.3 Constructors

- Map
public Map()

Chapter 2

Package com.retroMachines.data

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AssetManager 10

2.1 Class AssetManager

2.1.1 Declaration

```
public class AssetManager
extends com.badlogic.gdx.assets.AssetManager
```

2.1.2 Field summary

```
manager
menuSkin
```

2.1.3 Constructor summary

```
AssetManager()
```

2.1.4 Method summary

```
initialize() loads all relevant objects into the cache of the game for flawless drawing
loadMap(int) Loads a map from the Storage based on it's id
queueLoading()
setMenuSkin()
update()
```

2.1.5 Fields

- public static AssetManager **manager**

- `public static com.badlogic.gdx.scenes.scene2d.ui.Skin menuSkin`

2.1.6 Constructors

- **AssetManager**
`public AssetManager()`

2.1.7 Methods

- **initialize**
`public void initialize()`
 - **Description**
loads all relevant objects into the cache of the game for flawless drawing
- **loadMap**
`public static com.badlogic.gdx.maps.tiled.TiledMap loadMap(int levelId)`
 - **Description**
Loads a map from the Storage based on it's id
 - **Parameters**
 - * `levelId` – the id of the map to load
 - **Returns** – the map loaded as a TiledMap
- **queueLoading**
`public static void queueLoading()`
- **setMenuSkin**
`public static void setMenuSkin()`
- **update**
`public synchronized boolean update()`

2.1.8 Members inherited from class AssetManager

`com.badlogic.gdx.assets.AssetManager`

- `public synchronized void clear()`
- `public synchronized boolean containsAsset(java.lang.Object arg0)`
- `public synchronized void dispose()`
- `public void finishLoading()`
- `public synchronized Object get(AssetDescriptor arg0)`
- `public synchronized Object get(java.lang.String arg0)`
- `public synchronized Object get(java.lang.String arg0, java.lang.Class arg1)`
- `public synchronized Array getAll(java.lang.Class arg0, com.badlogic.gdx.utils.Array arg1)`
- `public synchronized String getAssetFileName(java.lang.Object arg0)`
- `public synchronized Array getAssetNames()`
- `public synchronized Class getAssetType(java.lang.String arg0)`
- `public synchronized Array getDependencies(java.lang.String arg0)`
- `public synchronized String getDiagnostics()`
- `public synchronized int getLoadedAssets()`

- public AssetLoader getLoader(java.lang.Class arg0)
- public AssetLoader getLoader(java.lang.Class arg0, java.lang.String arg1)
- public Logger getLogger()
- public synchronized float getProgress()
- public synchronized int getQueuedAssets()
- public synchronized int getReferenceCount(java.lang.String arg0)
- public synchronized boolean isLoaded(java.lang.String arg0)
- public synchronized boolean isLoaded(java.lang.String arg0, java.lang.Class arg1)
- public synchronized void load(AssetDescriptor arg0)
- public synchronized void load(java.lang.String arg0, java.lang.Class arg1)
- public synchronized void load(java.lang.String arg0, java.lang.Class arg1, AssetLoaderParameters arg2)
- public synchronized void setErrorListener(AssetErrorListener arg0)
- public synchronized void setLoader(java.lang.Class arg0, loaders.AssetLoader arg1)
- public synchronized void setLoader(java.lang.Class arg0, java.lang.String arg1, loaders.AssetLoader arg2)
- public void setLogger(com.badlogic.gdx.utils.Logger arg0)
- public synchronized void setReferenceCount(java.lang.String arg0, int arg1)
- public synchronized void unload(java.lang.String arg0)
- public synchronized boolean update()
- public boolean update(int arg0)

Chapter 3

Package com.retroMachines.game

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3.1 Class Controller

3.1.1 Declaration

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

3.1.2 Constructor summary

```
Controller()
```

3.1.3 Constructors

- Controller
 public Controller()

Chapter 4

Package com.retroMachines.data.models

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4.1 Class Profile

4.1.1 Declaration

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

4.1.2 Constructor summary

Profile(String, int, Setting, Statistic) constructor for a new profile

4.1.3 Method summary

```
getProfileId()
getProfileName()
getSetting()
setProfileId(int)
setProfileName(String)
setSetting(Setting)
```

4.1.4 Constructors

- **Profile**

```
public Profile(java.lang.String name, int profileId, Setting setting,  
Statistic statistic)
```

- **Description**

- constructor for a new profile

- **Parameters**

- * **name** – Name of the profile
 - * **profileId** – Id of the profile
 - * **setting** – settings of the profile
 - * **statistic** – statistics of the profile

4.1.5 Methods

- **getProfileId**

```
public int getProfileId()
```

- **Returns** – the Id of the profile

- **getProfileName**

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

- **Returns** – the name of the profile

- **getSetting**

```
public Setting getSetting()
```

- **Returns** – the setting

- **setProfileId**

```
public void setProfileId(int profileId)
```

- **Parameters**

- * **profileId** – new Id of the profile

- **setProfileName**

```
public void setProfileName(java.lang.String profileName)
```

- **Parameters**

- * **profileName** – new name of the profile

- **setSetting**

```
public void setSetting(Setting setting)
```

- **Parameters**

- * **setting** – the setting to set

4.2 Class Setting

4.2.1 Declaration

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

4.2.2 Constructor summary

Setting(boolean, boolean, float)

4.2.3 Method summary

```
getVolume()
isLeftControl()
isSoundOnOff()
setLeftControl(boolean)
setSoundOnOff(boolean)
setVolume(float)
```

4.2.4 Constructors

- **Setting**
`public Setting(boolean leftControl, boolean soundOnOff, float volume)`

4.2.5 Methods

- **getVolume**
`public float getVolume()`
 - **Returns** – the volume
- **isLeftControl**
`public boolean isLeftControl()`
 - **Returns** – the leftControl
- **isSoundOnOff**
`public boolean isSoundOnOff()`
 - **Returns** – the soundOnOff
- **setLeftControl**
`public void setLeftControl(boolean leftControl)`
 - **Parameters**
 - * `leftControl` – the leftControl to set
- **setSoundOnOff**
`public void setSoundOnOff(boolean soundOnOff)`

- **Parameters**

- * `soundOnOff` – the `soundOnOff` to set

- **setVolume**

- `public void setVolume(float volume)`

- **Parameters**

- * `volume` – the volume to set

4.3 Class Statistic

4.3.1 Declaration

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

4.3.2 Constructor summary

Statistic(int, int, int) creates a new instance of `Statistic` and assigns all the variables to the instance

4.3.3 Method summary

```
getLevelsComplete()
getPlaytime()
getStepCounter()
setLevelsComplete(int)
setPlaytime(int)
setStepCounter(int)
```

4.3.4 Constructors

- **Statistic**

- `public Statistic(int playtime, int levelsComplete, int stepCounter)`

- **Description**

- creates a new instance of `Statistic` and assigns all the variables to the instance

- **Parameters**

- * `playtime` –
 - * `levelsComplete` –
 - * `stepCounter` –

4.3.5 Methods

- **getLevelsComplete**

- `public int getLevelsComplete()`

- **getPlaytime**
public int getPlaytime()
- **getStepCounter**
public int getStepCounter()
- **setLevelsComplete**
public void setLevelsComplete(int levelsComplete)
- **setPlaytime**
public void setPlaytime(int playtime)
- **setStepCounter**
public void setStepCounter(int stepCounter)

Chapter 5

Package com.retroMachines.ui.screens

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5.1 Class AbstractScreen

Abstrakte Screen Klasse auf die alle Anzeigen des Spiels handhabt.

5.1.1 Declaration

```
public abstract class AbstractScreen
extends java.lang.Object
implements com.badlogic.gdx.Screen
```

5.1.2 All known subclasses

EvaluationScreen (in [7.1](#), page [24](#)), GameScreen (in [7.2](#), page [25](#)), ProfileMenuScreen (in [8.10](#), page [33](#)), AboutMenuScreen (in [8.1](#), page [28](#)), CreateFirstProfileMenuScreen (in [8.3](#), page [29](#)), SettingsMenuScreen (in [8.12](#), page [34](#)), CreateProfileMenuScreen (in [8.4](#), page [29](#)), ProfileManagementMenuScreen (in [8.9](#), page [33](#)), AchievementsMenuScreen (in [8.2](#), page [28](#)), LoadMenuScreen (in [8.6](#), page [31](#)), LevelMenuScreen (in [8.5](#), page [30](#)), MenuScreen (in [8.8](#), page [32](#)), MainMenuScreen (in [8.7](#), page [31](#)), StageMenuScreen (in [8.13](#), page [35](#)), ProfileSettingsMenuScreen (in [8.11](#), page [34](#))

5.1.3 Constructor summary

AbstractScreen(RetroMachines)

5.1.4 Method summary

`dispose()`
`hide()`
`pause()`
`render(float)` Renders the Stage to the Screen.
`resize(int, int)`
`resume()`
`show()`

5.1.5 Constructors

- **AbstractScreen**
`public AbstractScreen(com.retroMachines.RetroMachines game)`

5.1.6 Methods

- **dispose**
`void dispose()`
- **hide**
`void hide()`
- **pause**
`void pause()`
- **render**
`public void render(float delta)`
 - **Description**
Renders the Stage to the Screen.
- **resize**
`void resize(int arg0, int arg1)`
- **resume**
`void resume()`
- **show**
`void show()`

5.2 Class AndroidCamera

5.2.1 Declaration

```
public class AndroidCamera
extends com.badlogic.gdx.graphics.OrthographicCamera
```

5.2.2 Constructor summary

`AndroidCamera(int, int)`

5.2.3 Constructors

- `AndroidCamera`
`public AndroidCamera(int width, int height)`

5.2.4 Members inherited from class `OrthographicCamera`

```
com.badlogic.gdx.graphics.OrthographicCamera
• public void rotate(float arg0)
• public void setToOrtho(boolean arg0)
• public void setToOrtho(boolean arg0, float arg1, float arg2)
• public void translate(float arg0, float arg1)
• public void translate(com.badlogic.gdx.math.Vector2 arg0)
• public void update()
• public void update(boolean arg0)
• public zoom
```

5.2.5 Members inherited from class `Camera`

```
com.badlogic.gdx.graphics.Camera
• public final combined
• public final direction
• public far
• public final frustum
• public Ray getPickRay(float arg0, float arg1)
• public Ray getPickRay(float arg0, float arg1, float arg2, float arg3, float
  arg4, float arg5)
• public final invProjectionView
• public void lookAt(float arg0, float arg1, float arg2)
• public void lookAt(com.badlogic.gdx.math.Vector3 arg0)
• public near
• public void normalizeUp()
• public final position
• public Vector3 project(com.badlogic.gdx.math.Vector3 arg0)
• public Vector3 project(com.badlogic.gdx.math.Vector3 arg0, float arg1, float
  arg2, float arg3, float arg4)
• public final projection
• public void rotate(float arg0, float arg1, float arg2, float arg3)
• public void rotate(com.badlogic.gdx.math.Matrix4 arg0)
• public void rotate(com.badlogic.gdx.math.Quaternion arg0)
• public void rotate(com.badlogic.gdx.math.Vector3 arg0, float arg1)
• public void rotateAround(com.badlogic.gdx.math.Vector3 arg0,
  com.badlogic.gdx.math.Vector3 arg1, float arg2)
• public void transform(com.badlogic.gdx.math.Matrix4 arg0)
• public void translate(float arg0, float arg1, float arg2)
• public void translate(com.badlogic.gdx.math.Vector3 arg0)
• public Vector3 unproject(com.badlogic.gdx.math.Vector3 arg0)
• public Vector3 unproject(com.badlogic.gdx.math.Vector3 arg0, float arg1, float
  arg2, float arg3, float arg4)
• public final up
• public abstract void update()
• public abstract void update(boolean arg0)
• public final view
• public viewportHeight
• public viewportWidth
```

Chapter 6

Package com.retroMachines

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6.1 Class RetroMachines

6.1.1 Declaration

```
public class RetroMachines
extends com.badlogic.gdx.Game
```

6.1.2 Field summary

```
HEIGHT
WIDTH
```

6.1.3 Constructor summary

```
RetroMachines()
```

6.1.4 Method summary

```
create()
getProfileController()
getSettingController()
```

6.1.5 Fields

- public static final int **WIDTH**
- public static final int **HEIGHT**

6.1.6 Constructors

- **RetroMachines**
public RetroMachines()

6.1.7 Methods

- **create**
public void create()
- **getProfileController**
public game.controllers.ProfileController getProfileController()
- **getSettingController**
public game.controllers.SettingController getSettingController()

6.1.8 Members inherited from class Game

com.badlogic.gdx.Game

- public void **dispose()**
- public Screen **getScreen()**
- public void **pause()**
- public void **render()**
- public void **resize(int arg0, int arg1)**
- public void **resume()**
- public void **setScreen(Screen arg0)**

Chapter 7

Package com.retroMachines.ui.screens.game

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7.1 Class EvaluationScreen

7.1.1 Declaration

```
public class EvaluationScreen
extends com.retroMachines.ui.screens.AbstractScreen (in 5.1, page 19)
```

7.1.2 Constructor summary

```
    EvaluationScreen(RetroMachines, GameController)
```

7.1.3 Constructors

- EvaluationScreen

```
    public EvaluationScreen(com.retroMachines.RetroMachines game,
                            com.retroMachines.game.controllers.GameController gameController)
```

7.1.4 Members inherited from class AbstractScreen

```
com.retroMachines.ui.screens.AbstractScreen (in 5.1, page 19)
```

- public void dispose()
- public void hide()
- public void pause()
- public void render(float delta)

- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

7.2 Class `GameScreen`

7.2.1 Declaration

`public class GameScreen`
`extends com.retroMachines.ui.screens.AbstractScreen` (in [5.1](#), page [19](#))

7.2.2 Constructor summary

`GameScreen(RetroMachines, GameController)`

7.2.3 Method summary

`dispose()`
`render(float)`
`setMap(TiledMap)`

7.2.4 Constructors

- **GameScreen**
`public GameScreen(com.retroMachines.RetroMachines game,`
`com.retroMachines.game.controllers.GameController gameController)`

7.2.5 Methods

- **dispose**
`void dispose()`
- **render**
`public void render(float delta)`
 - Description copied from `com.retroMachines.ui.screens.AbstractScreen` (in [5.1](#), page [19](#))
Renders the Stage to the Screen.
- **setMap**
`public void setMap(com.badlogic.gdx.maps.tiled.TiledMap map)`

7.2.6 Members inherited from class `AbstractScreen`

`com.retroMachines.ui.screens.AbstractScreen` (in [5.1](#), page [19](#))

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`

- `public void resume()`
- `public void show()`

Chapter 8

Package com.retroMachines.ui.screens.menus

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abstrakte MenuScreen klasse die die grundstzliche Struktur eines Mens widerspiegelt.	
ProfileManagementMenuScreen	33
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8.1 Class AboutMenuScreen

8.1.1 Declaration

public class AboutMenuScreen

extends com.retroMachines.ui.screens.AbstractScreen (in [5.1](#), page [19](#))

8.1.2 Constructor summary

AboutMenuScreen(RetroMachines)

8.1.3 Method summary

show()

8.1.4 Constructors

- AboutMenuScreen

public AboutMenuScreen(com.retroMachines.RetroMachines game)

8.1.5 Methods

- show

void show()

8.1.6 Members inherited from class AbstractScreen

com.retroMachines.ui.screens.AbstractScreen (in [5.1](#), page [19](#))

- public void dispose()
- public void hide()
- public void pause()
- public void render(float delta)
- public void resize(int width, int height)
- public void resume()
- public void show()

8.2 Class AchievementsMenuScreen

8.2.1 Declaration

public class AchievementsMenuScreen

extends com.retroMachines.ui.screens.menus.MenuScreen (in [8.8](#), page [32](#))

8.2.2 Constructor summary

AchievementsMenuScreen(RetroMachines)

8.2.3 Constructors

- **AchievementsMenuScreen**
`public AchievementsMenuScreen(com.retroMachines.RetroMachines game)`

8.2.4 Members inherited from class AbstractScreen

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.3 Class CreateFirstProfileMenuScreen

8.3.1 Declaration

`public class CreateFirstProfileMenuScreen`
`extends com.retroMachines.ui.screens.menus.MenuScreen` (in 8.8, page 32)

8.3.2 Constructor summary

`CreateFirstProfileMenuScreen(RetroMachines)`

8.3.3 Constructors

- **CreateFirstProfileMenuScreen**
`public CreateFirstProfileMenuScreen(com.retroMachines.RetroMachines game)`

8.3.4 Members inherited from class AbstractScreen

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.4 Class CreateProfileMenuScreen

8.4.1 Declaration

`public class CreateProfileMenuScreen`
`extends com.retroMachines.ui.screens.menus.MenuScreen` (in 8.8, page 32)

8.4.2 Constructor summary

CreateProfileMenuScreen(RetroMachines)

8.4.3 Constructors

- **CreateProfileMenuScreen**

`public CreateProfileMenuScreen(com.retroMachines.RetroMachines game)`

8.4.4 Members inherited from class AbstractScreen

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.5 Class LevelMenuScreen

8.5.1 Declaration

`public class LevelMenuScreen`

extends `com.retroMachines.ui.screens.menus.MenuScreen` (in 8.8, page 32)

8.5.2 Constructor summary

LevelMenuScreen(RetroMachines)

8.5.3 Constructors

- **LevelMenuScreen**

`public LevelMenuScreen(com.retroMachines.RetroMachines game)`

8.5.4 Members inherited from class AbstractScreen

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.6 Class `LoadMenuScreen`

8.6.1 Declaration

```
public class LoadMenuScreen
extends com.retroMachines.ui.screens.AbstractScreen (in 5.1, page 19)
```

8.6.2 Constructor summary

```
LoadMenuScreen(RetroMachines)
```

8.6.3 Method summary

```
show()
```

8.6.4 Constructors

- **LoadMenuScreen**
`public LoadMenuScreen(com.retroMachines.RetroMachines game)`

8.6.5 Methods

- **show**
`void show()`

8.6.6 Members inherited from class `AbstractScreen`

```
com.retroMachines.ui.screens.AbstractScreen (in 5.1, page 19)
```

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.7 Class `MainMenuScreen`

8.7.1 Declaration

```
public class MainMenuScreen
extends com.retroMachines.ui.screens.menus.MenuScreen (in 8.8, page 32)
```

8.7.2 Constructor summary

```
MainMenuScreen(RetroMachines)
```

8.7.3 Method summary

```
show()
```

8.7.4 Constructors

- **MainMenuScreen**
`public MainMenuScreen(com.retroMachines.RetroMachines game)`

8.7.5 Methods

- **show**
`void show()`

8.7.6 Members inherited from class `AbstractScreen`

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.8 Class `MenuScreen`

abstrakte `MenuScreen` klasse die die grundstzliche Struktur eines Mens widerspiegelt.

8.8.1 Declaration

`public abstract class MenuScreen`
extends `com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

8.8.2 All known subclasses

`ProfileMenuScreen` (in 8.10, page 33), `CreateFirstProfileMenuScreen` (in 8.3, page 29), `SettingsMenuScreen` (in 8.12, page 34), `CreateProfileMenuScreen` (in 8.4, page 29), `ProfileManagementMenuScreen` (in 8.9, page 33), `AchievementsMenuScreen` (in 8.2, page 28), `LevelMenuScreen` (in 8.5, page 30), `MainMenuScreen` (in 8.7, page 31), `StageMenuScreen` (in 8.13, page 35), `ProfileSettingsMenuScreen` (in 8.11, page 34)

8.8.3 Constructor summary

`MenuScreen(RetroMachines)`

8.8.4 Constructors

- **MenuScreen**
`public MenuScreen(com.retroMachines.RetroMachines game)`

8.8.5 Members inherited from class `AbstractScreen`

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.9 Class `ProfileManagementMenuScreen`

8.9.1 Declaration

`public class ProfileManagementMenuScreen`

`extends com.retroMachines.ui.screens.menus.MenuScreen` (in 8.8, page 32)

8.9.2 Constructor summary

`ProfileManagementMenuScreen(RetroMachines)`

8.9.3 Constructors

- `ProfileManagementMenuScreen`
`public ProfileManagementMenuScreen(com.retroMachines.RetroMachines game)`

8.9.4 Members inherited from class `AbstractScreen`

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.10 Class `ProfileMenuScreen`

8.10.1 Declaration

`public class ProfileMenuScreen`

`extends com.retroMachines.ui.screens.menus.MenuScreen` (in 8.8, page 32)

8.10.2 Constructor summary

`ProfileMenuScreen(RetroMachines)`

8.10.3 Constructors

- **ProfileMenuScreen**

`public ProfileMenuScreen(com.retroMachines.RetroMachines game)`

8.10.4 Members inherited from class AbstractScreen

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.11 Class ProfileSettingsMenuScreen

8.11.1 Declaration

`public class ProfileSettingsMenuScreen`

`extends com.retroMachines.ui.screens.menus.MenuScreen` (in 8.8, page 32)

8.11.2 Constructor summary

`ProfileSettingsMenuScreen(RetroMachines)`

8.11.3 Constructors

- **ProfileSettingsMenuScreen**

`public ProfileSettingsMenuScreen(com.retroMachines.RetroMachines game)`

8.11.4 Members inherited from class AbstractScreen

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.12 Class SettingsMenuScreen

8.12.1 Declaration

`public class SettingsMenuScreen`

`extends com.retroMachines.ui.screens.menus.MenuScreen` (in 8.8, page 32)

8.12.2 Constructor summary

`SettingsMenuScreen(RetroMachines)`

8.12.3 Constructors

- `SettingsMenuScreen`

`public SettingsMenuScreen(com.retroMachines.RetroMachines game)`

8.12.4 Members inherited from class `AbstractScreen`

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

8.13 Class `StageMenuScreen`

8.13.1 Declaration

`public class StageMenuScreen`

`extends com.retroMachines.ui.screens.menus.MenuScreen` (in 8.8, page 32)

8.13.2 Constructor summary

`StageMenuScreen(RetroMachines)`

8.13.3 Constructors

- `StageMenuScreen`

`public StageMenuScreen(com.retroMachines.RetroMachines game)`

8.13.4 Members inherited from class `AbstractScreen`

`com.retroMachines.ui.screens.AbstractScreen` (in 5.1, page 19)

- `public void dispose()`
- `public void hide()`
- `public void pause()`
- `public void render(float delta)`
- `public void resize(int width, int height)`
- `public void resume()`
- `public void show()`

Chapter 9

Package com.retroMachines.lambda

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9.1 Class Abstraction

9.1.1 Declaration

```
public class Abstraction
extends com.retroMachines.lambda.Vertex (in 9.5, page 39)
```

9.1.2 Constructor summary

```
    Abstraction(Tree, Variable)
```

9.1.3 Method summary

```
    toString()
```

9.1.4 Constructors

- **Abstraction**
 public Abstraction(Tree tree, Variable var)

9.1.5 Methods

- **toString**
public java.lang.String toString()

9.1.6 Members inherited from class Vertex

com.retroMachines.lambda.Vertex (in 9.5, page 39)

- public boolean setEdge(Vertex v)
- public abstract String toString()

9.2 Class Application

9.2.1 Declaration

public class Application
extends com.retroMachines.lambda.Vertex (in 9.5, page 39)

9.2.2 Constructor summary

Application(Tree, Tree)

9.2.3 Method summary

toString()

9.2.4 Constructors

- **Application**
public Application(Tree t1, Tree t2)

9.2.5 Methods

- **toString**
public java.lang.String toString()

9.2.6 Members inherited from class Vertex

com.retroMachines.lambda.Vertex (in 9.5, page 39)

- public boolean setEdge(Vertex v)
- public abstract String toString()

9.3 Class Tree

9.3.1 Declaration

public class Tree
extends java.lang.Object

9.3.2 Constructor summary

Tree(String) creates Tree representation of given lambda-term in string representation

Tree(Vertex)

9.3.3 Method summary

alphaConversion(Variable) fulfills alphConversion on given variable.

betaReduction() fulfills one step of beta-reduction

toString()

9.3.4 Constructors

- **Tree**
 public **Tree**(java.lang.String term)
 - **Description**
 creates Tree representation of given lambda-term in string representation
 - **Parameters**
 * term – string representation of labmda-term
- **Tree**
 public **Tree**(Vertex start)

9.3.5 Methods

- **alphaConversion**
 public Variable **alphaConversion**(Variable var)
 - **Description**
 fulfills alphConversion on given variable. Creates new unique variable and replaces every appearance of var in lambda-term where needed. New Variable will be returned
 - **Parameters**
 * var – variable to change
 - **Returns** – new created variable
- **betaReduction**
 public boolean **betaReduction**()
 - **Description**
 fulfills one step of beta-reduction
 - **Returns** – true if this tree has changed, false otherwise
- **toString**
 public java.lang.String **toString**()

9.4 Class Variable

9.4.1 Declaration

```
public class Variable  
extends com.retroMachines.lambda.Vertex (in 9.5, page 39)
```

9.4.2 Constructor summary

```
Variable(char)
```

9.4.3 Method summary

```
getId()  
toString()
```

9.4.4 Constructors

- **Variable**
public Variable(char id)

9.4.5 Methods

- **getId**
public int getId()
- **toString**
public java.lang.String toString()

9.4.6 Members inherited from class Vertex

```
com.retroMachines.lambda.Vertex (in 9.5, page 39)  
• public boolean setEdge(Vertex v)  
• public abstract String toString()
```

9.5 Class Vertex

9.5.1 Declaration

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

9.5.2 All known subclasses

Application (in 9.2, page 37), Abstraction (in 9.1, page 36), Variable (in 9.4, page 39)

9.5.3 Constructor summary

```
Vertex()
```

9.5.4 Method summary

`setEdge(Vertex)`
`toString()`

9.5.5 Constructors

- **Vertex**
`public Vertex()`

9.5.6 Methods

- **setEdge**
`public boolean setEdge(Vertex v)`
- **toString**
`public java.lang.String toString()`

Chapter 10

Package com.retroMachines.lambda.test

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Classes	
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Term1	42
Es soll der gegebene Ausdruck mittels der Lambda-Datenstruktur repräsentiert werden.	
Term2	43

10.1 Class AbstractTerm

10.1.1 Declaration

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

10.1.2 All known subclasses

Term2 (in [10.4](#), page [43](#)), Term1 (in [10.3](#), page [42](#))

10.1.3 Constructor summary

```
AbstractTerm()
```

10.1.4 Method summary

```
toString()
```

10.1.5 Constructors

- **AbstractTerm**
`public AbstractTerm()`

10.1.6 Methods

- **toString**
`public java.lang.String toString()`

10.2 Class Main

10.2.1 Declaration

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

10.2.2 Constructor summary

```
Main()
```

10.2.3 Method summary

```
main(String[])
```

10.2.4 Constructors

- **Main**
`public Main()`

10.2.5 Methods

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

10.3 Class Term1

Es soll der gegebene Ausdruck mittels der Lambda-Datenstruktur repräsentiert werden. Hier geschieht das von Hand, soll aber später von einem Parser übernommen werden.

10.3.1 Declaration

```
public class Term1
extends com.retroMachines.lambda.test.AbstractTerm (in 10.1, page 41)
```

10.3.2 Constructor summary

```
Term1()
```

10.3.3 Constructors

- **Term1**
public Term1()

10.3.4 Members inherited from class AbstractTerm

com.retroMachines.lambda.test.AbstractTerm (in 10.1, page 41)

- public String toString()

10.4 Class Term2

10.4.1 Declaration

public class Term2

extends com.retroMachines.lambda.test.AbstractTerm (in 10.1, page 41)

10.4.2 Constructor summary

Term2()

10.4.3 Constructors

- **Term2**
public Term2()

10.4.4 Members inherited from class AbstractTerm

com.retroMachines.lambda.test.AbstractTerm (in 10.1, page 41)

- public String toString()

Chapter 11

Package com.retroMachines.util

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Constants	44

11.1 Class Constants

11.1.1 Declaration

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

11.1.2 Constructor summary

```
    Constants()
```

11.1.3 Constructors

- **Constants**
 public Constants()

Chapter 12

Package com.retroMachines.game.controllers

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GameController This class represents the controller for the actual game.	
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12.1 Class GameController

GameController This class represents the controller for the actual game. It sets up levels and also disposes them afterwards. It saves progress to the persistent storage.

12.1.1 Declaration

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

12.1.2 Constructor summary

GameController(RetroMachines)

12.1.3 Method summary

```
getRetroMan()  
jumpRetroMan()  
levelFinished() this method will be called
```

startLevel(int) sets initializes a given level and fires it up

12.1.4 Constructors

- **GameController**
`public GameController(com.retroMachines.RetroMachines game)`

12.1.5 Methods

- **getRetroMan**
`public com.retroMachines.game.gameelements.RetroMan getRetroMan()`
- **jumpRetroMan**
`public void jumpRetroMan()`
- **levelFinished**
`public void levelFinished()`
 - **Description**
this method will be called
- **startLevel**
`public void startLevel(int levelId)`
 - **Description**
sets initializes a given level and fires it up
 - **Parameters**
 - * `levelId` – the level to be started

12.2 Class ProfileController

12.2.1 Declaration

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

12.2.2 Field summary

MAX_PROFILE_NUMBER the amount of profiles allowed in the game

12.2.3 Constructor summary

ProfileController(RetroMachines) creates a new instance of the profile controller

12.2.4 Method summary

changeActiveProfile(String) changes to the current profile to another profile
deleteCurrentProfile() removes the currently active profile
getProfile()
getProfileName() Get the name of the currently active user
isValidUsername(String) checks if a given username is valid, meaning it is not occupied by another profile already

12.2.5 Fields

- **public static final int MAX_PROFILE_NUMBER**
 - the amount of profiles allowed in the game

12.2.6 Constructors

- **ProfileController**
public ProfileController(com.retroMachines.RetroMachines game)
 - **Description**
creates a new instance of the profile controller
 - **Parameters**
 - * **game** – the game for calls towards the game

12.2.7 Methods

- **changeActiveProfile**
public void changeActiveProfile(java.lang.String profileName)
 - **Description**
changes to the current profile to another profile
 - **Parameters**
 - * **profileName** – the name of the profile
- **deleteCurrentProfile**
public void deleteCurrentProfile()
 - **Description**
removes the currently active profile
- **getProfile**
public com.retroMachines.data.models.Profile getProfile()
 - **Returns** – the profile
- **getProfileName**
public java.lang.String getProfileName()

- **Description**
Get the name of the currently active user
- **Returns** – The name of the currently active user; Empty String if no user is active.
- **isValidUsername**
`public boolean isValidUsername(java.lang.String username)`
 - **Description**
checks if a given username is valid, meaning it is not occupied by another profile already

12.3 Class SettingController

12.3.1 Declaration

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

12.3.2 Constructor summary

```
SettingController(RetroMachines)
```

12.3.3 Constructors

- **SettingController**
`public SettingController(com.retroMachines.RetroMachines game)`

12.4 Class StatisticController

12.4.1 Declaration

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

12.4.2 Constructor summary

```
StatisticController()
```

12.4.3 Constructors

- **StatisticController**
`public StatisticController()`

Chapter 13

Package com.retroMachines.game.gameelements

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13.1 Class GameElement

13.1.1 Declaration

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

13.1.2 All known subclasses

MachineElement (in [13.3](#), page [51](#)), MetalElement (in [13.4](#), page [51](#)), LightElement (in [13.2](#), page [50](#))

13.1.3 Constructor summary

```
GameElement()
```

13.1.4 Method summary

`render(float)`

13.1.5 Constructors

- **GameElement**
`public GameElement()`

13.1.6 Methods

- **render**
`public abstract void render(float deltaTime)`

13.2 Class **LightElement**

13.2.1 Declaration

`public class LightElement`
`extends com.retroMachines.game.gameelements.GameElement` (in [13.1](#), page [49](#))

13.2.2 Constructor summary

`LightElement()`

13.2.3 Method summary

`render(float)`

13.2.4 Constructors

- **LightElement**
`public LightElement()`

13.2.5 Methods

- **render**
`public abstract void render(float deltaTime)`

13.2.6 Members inherited from class **GameElement**

`com.retroMachines.game.gameelements.GameElement` (in [13.1](#), page [49](#))

- `public abstract void render(float deltaTime)`

13.3 Class MachineElement

13.3.1 Declaration

`public class MachineElement`

extends `com.retroMachines.game.gameelements.GameElement` (in [13.1](#), page [49](#))

13.3.2 Constructor summary

`MachineElement()`

13.3.3 Method summary

`render(float)`

13.3.4 Constructors

- **MachineElement**
`public MachineElement()`

13.3.5 Methods

- **render**
`public abstract void render(float deltaTime)`

13.3.6 Members inherited from class GameElement

`com.retroMachines.game.gameelements.GameElement` (in [13.1](#), page [49](#))

- `public abstract void render(float deltaTime)`

13.4 Class MetalElement

13.4.1 Declaration

`public class MetalElement`

extends `com.retroMachines.game.gameelements.GameElement` (in [13.1](#), page [49](#))

13.4.2 Constructor summary

`MetalElement()`

13.4.3 Method summary

`render(float)`

13.4.4 Constructors

- **MetalElement**
`public MetalElement()`

13.4.5 Methods

- **render**
public abstract void **render**(float **deltaTime**)

13.4.6 Members inherited from class GameElement

com.retroMachines.game.gameelements.GameElement (in 13.1, page 49)

- public abstract void **render**(float **deltaTime**)

13.5 Class RetroMan

13.5.1 Declaration

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

13.5.2 Field summary

HEIGHT
WIDTH

13.5.3 Constructor summary

RetroMan()

13.5.4 Method summary

canJump()
getPos()
hasPickedUpElement()
jump()
landed() Call this method when the character is supposed to jump
pickupElement(GameElement)
render(float)

13.5.5 Fields

- public static final float **WIDTH**
- public static final float **HEIGHT**

13.5.6 Constructors

- **RetroMan**
public **RetroMan()**

13.5.7 Methods

- **canJump**
`public boolean canJump()`
- **getPos**
`public com.badlogic.gdx.math.Vector2 getPos()`
- **hasPickedUpElement**
`public boolean hasPickedUpElement()`
 - **Returns** –
- **jump**
`public void jump()`
- **landed**
`public void landed()`
 - **Description**
Call this method when the character is supposed to jump
- **pickupElement**
`public void pickupElement(GameElement element)`
 - **Parameters**
 - * `element` –
- **render**
`public com.badlogic.gdx.graphics.g2d.TextureRegion render(float deltaTime)`
 - **Parameters**
 - * `deltaTime` –