### GENERAL ENGINE DESCRIPTION

**GAMEENGINE (Class)** 

TILE (Class)

MAP (Class)

HERO (Class)

**ENEMY (Class)** 

Constructor

**ENEMY ARRAY (Class)** 

CONSUMABLE (Class)

Constructor

**CONSUMABLE ARRAY (Class)** 

CONSUMABLE\_INVENTORY (Class)

OBJECT (Class)

Constructor

OBJECT\_ARRAY (Class)

OBJECT\_INVENTORY (Class)

LAYOUT (Class)

SCREEN TEXT (Class)

**MAIN GAME CLASS** 

BASIC SET-UP

## **GENERAL ENGINE DESCRIPTION**

This engine is based on LIBGDX. Any game you'll develop with this engine, must be libgdx compatible.

**GAMEENGINE** (Class)

The Engine class is the main class from the engine (not the main class from the game itself). The Engine class is a wrapper for other classes and algo have their own methods. On the Engine class you can find all the constants and setup configuration of the game itself (size of the map, the map layout, lists of the enemies, objects, consumables, sprite loaders, etc...).

GameEngine is a class that must be instanced from the main game class.

TILE (Class)

The Tile class define each tile. (the state and the associated image)

MAP (Class)

The Map class defines the layout of the game, is composed by N\*M static matrix of tiles (from Tile class). The map is pseudo-randomly generated with a user parametrization via GameEngine constants.

HERO (Class)

The Hero class defines the player character.

**ENEMY (Class)** 

The Enemy class defines each enemy on the actual game (not all possible enemies, but only the instances active on the game, all enemy profiles are defined on the Engine class).

Constructor

Enemy(String name,int baseagility,int basestrength, int baseresist, int basehp, int x,int y,String file)

**ENEMY\_ARRAY** (Class)

All active enemies on the game are grouped into an arrayList of enemies.

CONSUMABLE (Class)

The Enemy class defines each consumable item on the actual game (not all possible consumables, but only the instances active on the game, all consumable profiles are defined on the Engine class).

Constructor

Consumable(String name, int agility, int hp,int force, int resist,int x,int y,String file)

## CONSUMABLE\_ARRAY (Class)

All active consumables on the game are grouped into an arrayList of consumables.

CONSUMABLE\_INVENTORY (Class)

ArrayList of consumables available on the player inventory.

**OBJECT** (Class)

The Object class defines each object item on the actual game (not all possible objects, but only the instances active on the game, all object profiles are defined on the Engine class).

#### Constructor

Object(String name, String position, int baseattack, int basedefense, int basedurability, int x, int y, String file)

OBJECT\_ARRAY (Class)

All active objects on the game are grouped into an arrayList of objects.

OBJECT\_INVENTORY (Class)

ArrayList of objects available on the player inventory.

LAYOUT (Class)

Layout class have the background images to create game layout.

SCREEN\_TEXT (Class)

Using this class, you can create / show info text screens.

## MAIN GAME CLASS

In order to use the engine, you must create a game class with a main loop. You must instance and initialize the GameEngine there.

# **BASIC SET-UP**

This a basic overview of the configuration:

- 1.Configure GameEngine:
  - 1.1.Define constants. (like number of tiles, fps, ...)
  - 1.2.Define enemy / consumables / object templates.
  - 1.3. Create empty arrays. (enemy / consumables / object)
  - 1.4.Create player instance.
  - 1.5. Create a map instance.
- 2.Create game main class:
  - 2.1.Initialize GameEngine.
  - 2.2.Get instances of all engine elements that you will need.
  - 2.3. Use the engine API to call available methods.

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