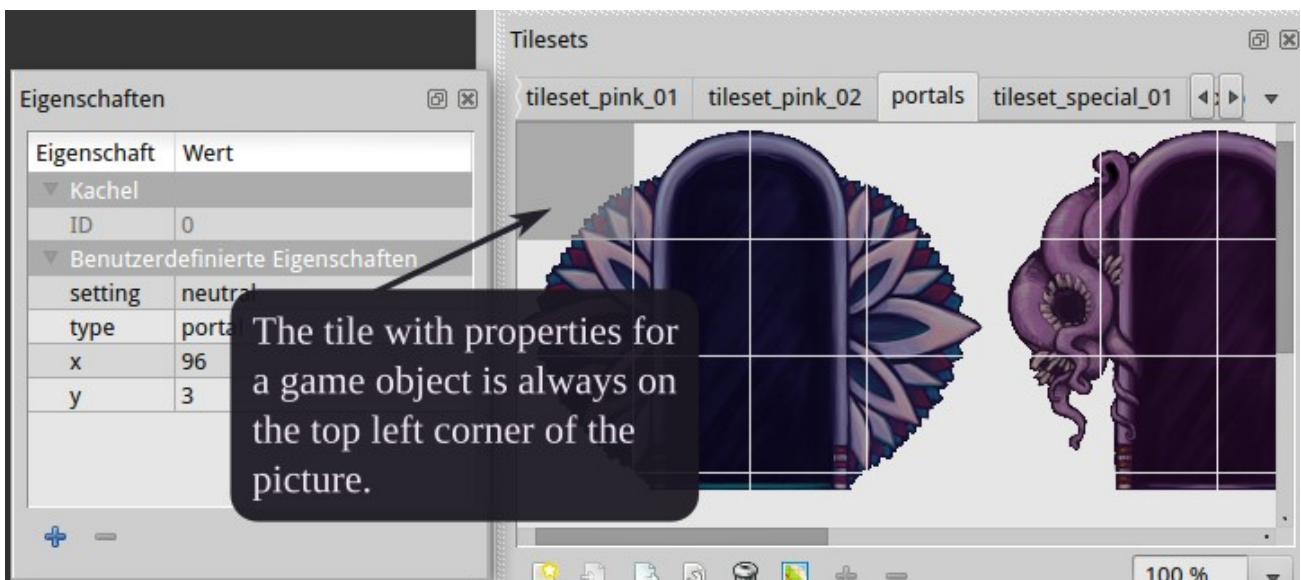

HOW TO CREATE LEVELS

To edit levels use the Tiled map editor (<http://www.mapeditor.org/>). This manual doesn't cover basic use and functions of Tiled, so it is assumed, that you are already familiar with this map editor.

START WITH THE EMPTY LEVEL

The empty level `empty_level1.tmx` can be used as a starting point. It contains already all needed sprite sheets with correct tile properties for game objects.

- (1) Foremost erase elements and resize the map.
- (2) Add decoration layers. Theoretically you can use any amount of them, but as more layers and elements you place the slower game will run. Decoration layer can be named as you like and placed on top or bottom of `walls` layer, depending where you want it to appear: behind or on top of characters.
- (3) When adding portals edit the position where player character is teleported. Position is given in tiles.



NOTES:

- ◆ Place platforms inside `walls` layer on level borders so the player can not fall out of level.
- ◆ Place tiles with which player will never collide on a decoration layer underneath the `walls` layer. This way this tiles will not be included for collision checks.
- ◆ Player can not see further than 6 tiles on given resolution 800x600 pixels. Consider this and omit placing tiles which will never be seen in game.
- ◆ Consider that a tile with properties for a game object is always on the top left corner of the picture. It is recommended to place game objects as whole picture from the sprite sheet and erase them as the whole picture to ensure that it appears correctly in game.
- ◆ Game objects are rendered on top of `walls` layer but the layer `characters` is always placed on the very top of the layer stack and is set invisible.

- ◆ Don't forget to place the players character exactly once inside a level.
- ◆ Known bug: Whole level size in pixes should be larger than 800x600 otherwise parallax layer will not be drawn

ADDITIONAL AND ADVANCED INFORMATION

MUST HAVE LAYERS

Layer named `characters` on top of level stack and set invisible that contains characters portals collectibles.

Layer named `walls` contains tiles which characters can not surpass.

PROPERTIES PLAYER

Name of the property	Value	Description
<code>type</code>	<code>player</code>	Mark the game object as player character.
<code>max_hp</code>	Number	Hitpoints.
<code>max_x_vel</code>	Number	Maximum run speed in pixels per frame.
<code>max_y_vel</code>	Number	Jump speed. How high the character can jump in pixels per frame.
<code>att_1_damage</code>	Number	Damage.
<code>att_1_stun</code>	Number	Duration of stun in frames.
<code>att_1_cooldown</code>	Number	Time till new projectiles can be spawned again.
<code>att_1_projectile_amount</code>	Number	Amount of spawned projectiles.
<code>att_1_projectile_lifetime</code>	Number	Lifetime in frames. Speed and lifetime result range of attack.
<code>att_1_spread_angle</code>	Number	Degrees between projectiles.
<code>att_1_projectile_speed</code>	Number	Speed in pixels per frame. Speed and lifetime result range of attack.
<code>att_1_pierce</code>	Number	Attack is piercing when value is set to 1.

PROPERTIES ENEMIES

Name of the property	Value	Description
<code>type</code>	<code>enemy</code>	Mark the game object as an enemy.
<code>max_hp</code>	Number	Hitpoints.
<code>max_x_vel</code>	Number	Maximum run speed in pixels per frame.
<code>max_y_vel</code>	Number	Jump speed, how high the character can

		jump in pixels per frame.
no_gravity	Number	If this is set to 1, than character is not affected by gravity.
att_1_damage	Number	Damage.
att_1_stun	Number	Duration of stun in frames.
att_1_cooldown	Number	Time till new projectiles can be spawned again.
att_1_projectile_amount	Number	Amount of projectiles.
att_1_projectile_lifetime	Number	Lifetime in frames. Speed and lifetime result range of attack.
att_1_spread_angle	Number	Degrees between projectiles.
att_1_projectile_speed	Number	Speed in pixels per frame. Speed and lifetime result range of attack.
att_1_pierce	Number	Attack is piercing when value is set to 1.
Every enemy has one attack. Only the boss needs exactly 3 attacks. So he needs analogous properties for attack 2 and 3.		
ai	Possible values:	This property determines the appearance of the enemy and his behavior and attacks.
	green_1	Enemy is patrolling the level. He switches the walk direction when colliding with a corner or a deadly tile. The enemy can at small possibility go into idle state while patrolling. When player appears in sight the enemy attacks.
	green_2	Same AI as enemy pink_2. Not moving enemy. Starts attacking when player appears in range.
	pink_1	Enemy is patrolling the level. He switches the walk direction when colliding with a corner or a deadly tile. The enemy can at small possibility go into idle state while patrolling. When player is in sight and in range the enemy attacks the player otherwise the enemy walks towards the player. Enemy can jump over projectiles from ranged attacks.
	pink_2	Same AI as enemy green_2. Not moving enemy. Starts attacking when player appears in range.

pink_3	Enemy is patrolling the level. He switches the walk direction when colliding with a corner or a deadly tile. The enemy can at small possibility go into idle state while patrolling. When player is in sight and not too near enemy attacks.
pink_boss	<p>The boss is patrolling the level. He switches the walk direction when colliding with a corner or a deadly tile. The boss can at small possibility go into idle state while patrolling. Ranged attacks are blocked. The boss has two other attacks. One for close combat and other for ranged. If player is too far but in sight, boss is walking towards the player. But if player is too near, then the boss is executing his ranged attack, so the player is safe.</p> <p>Attack 1 is the shield to block projectiles. Attack 2 close combat attack. Attack 3 ranged attack.</p>

PROPERTIES TILES

Name of the property	Value	Description
type	Possible values:	
	corner	Is needed by AI to flip the walk direction.
	deadly	Player dies instantly on collision with this tile. AI flips its walking direction on collision.
curse	Possible values:	Curses can be of different type.
	green	Spawns a projectile from random position towards the player.
	pink	Spawns an attack underneath the player.

HEAL POTION

Name of the property	Value	Description
type	heal_potion	Restores hit points.
recovery	Number	Number of hit points restored.
size	Possible values:	Determines appearance of the heal potion.

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POWER-UPS

Name of the property	Value	Description
type	skill_up	Power up modify players attack.
tag	Possible values:	
	add_projectile	Add one more projectile.
	pierce	Projectiles pierce now.

PORTALS

Name of the property	Value	Description
type	portal	Portal
x	Number	X-coordinate for teleport destination in tiles inside the level.
y	Number	Y-coordinate for teleport destination in tiles inside the level.
setting	Possible values:	Determines appearance of portal.
	neutral	
	pink	
	green	