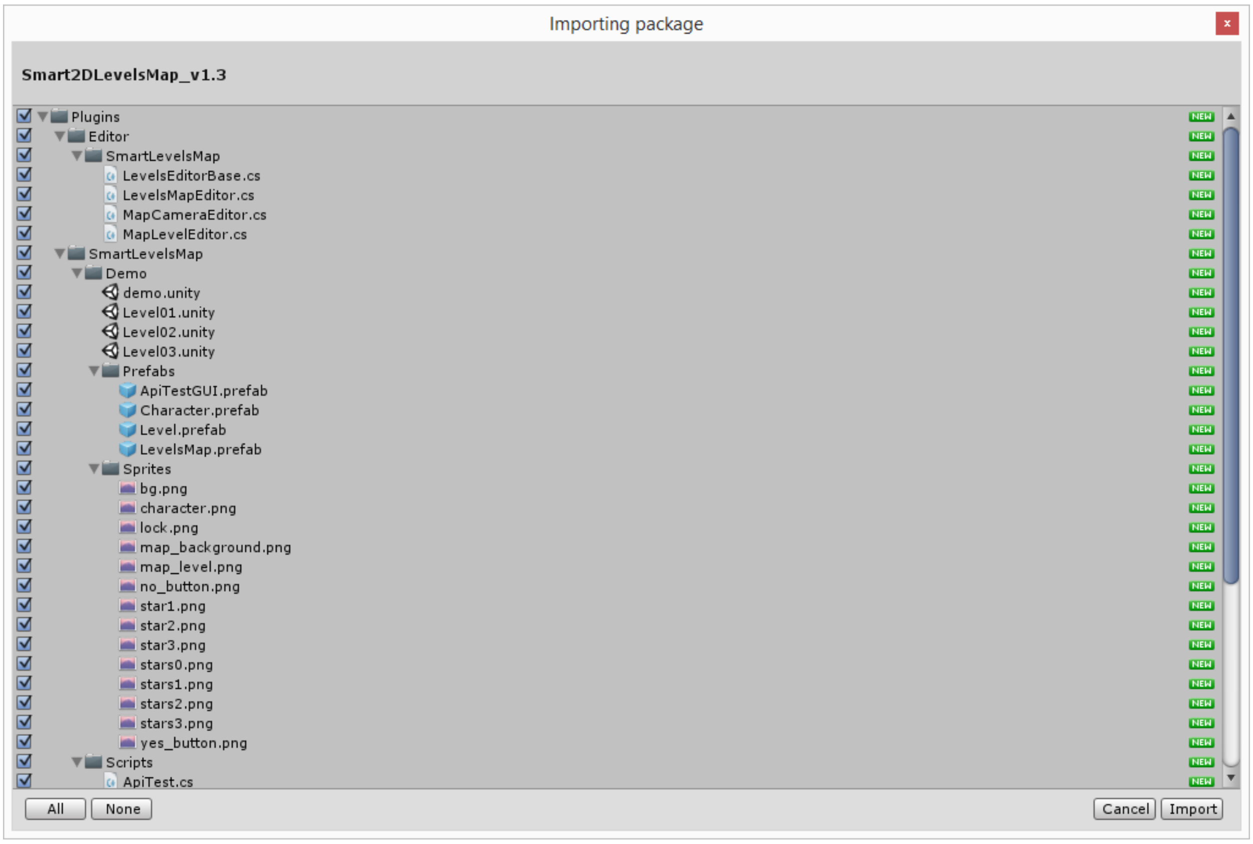
Smart 2D Levels Map Documentation v1.3

1. Import and Demo.

Create 2D Unity project and import “Smart 2D Levels Map” plugin.



Importing package

Smart2DLevelsMap_v1.3

```
☑ Plugins
☑   Editor
☑     SmartLevelsMap
☑       LevelsEditorBase.cs
☑       LevelsMapEditor.cs
☑       MapCameraEditor.cs
☑       MapLevelEditor.cs
☑   SmartLevelsMap
☑     Demo
☑       demo.unity
☑       Level01.unity
☑       Level02.unity
☑       Level03.unity
☑       Prefabs
☑         ApiTestGUI.prefab
☑         Character.prefab
☑         Level.prefab
☑         LevelsMap.prefab
☑       Sprites
☑         bg.png
☑         character.png
☑         lock.png
☑         map_background.png
☑         map_level.png
☑         no_button.png
☑         star1.png
☑         star2.png
☑         star3.png
☑         stars0.png
☑         stars1.png
☑         stars2.png
☑         stars3.png
☑         yes_button.png
☑     Scripts
☑       ApiTest.cs
```

Open "demo" scene from "Assets/Plugins/SmartLevelsMap/Demo" directory, run scene and investigate how it works.

2. Tutorial.

You can find video tutorial here: http://youtu.be/OJV731mNqnE

3. Levels map component.

“LevelsMap” contains two states:

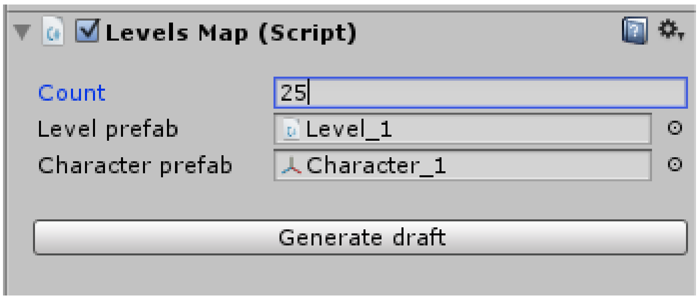
3.1. “Generate draft” state.

This state is accessible when you just add “LevelsMap” component to game object.

It has the following parameters:

- Count: Amount of levels which component will generate.
- Level prefab: prefab of level with concrete structure (you can get it from “Demo” folder).
- Character prefab: prefab of character which will walk on map.

With “Generate draft” button click, plugin will generate all level’s structure in the scene and “LevelsMap” component will switch to “Levels map settings” state.



☑ Levels Map (Script)

Count 25

Level prefab Level_1

Character prefab Character_1

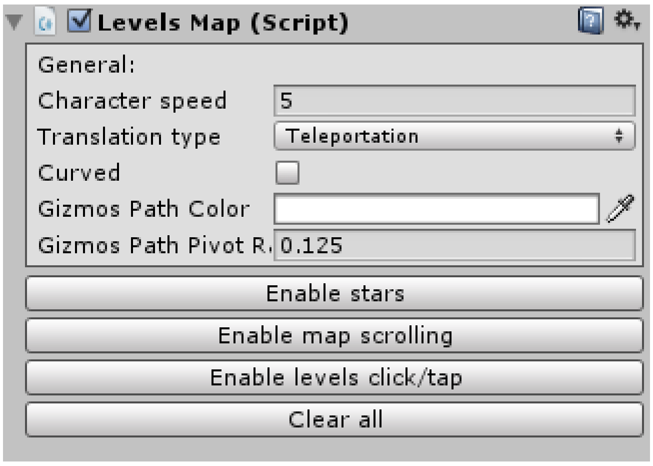
3.2. “Levels map settings” state.

This state is accessible when the component has generated level’s structure in the scene.

It has the following parameters:

- Character speed: walking on map character speed when “Translation type” parameter has value “Walk”.
- Translation type: how character achieve the selected level. Can get one of two possible values:
  a. Teleportation: character moves immediately to the selected level.
  b. Walk: moves by path to selected level with speed from “Character speed” parameter.
- Curved: make the path smooth or linear.
- Gizmos path color: color of path which is visible in “Scene” window. Required for path tuning in edit mode.
- Gizmos path pivot range: circle range, which is visible in “Scene” window. Required for path tuning in edit mode.

“Clear all” button delete all “Levels Map” structure, and switch component into “Generate draft” state.



☑ Levels Map (Script)

General:

Character speed: 5

Translation type: Teleportation

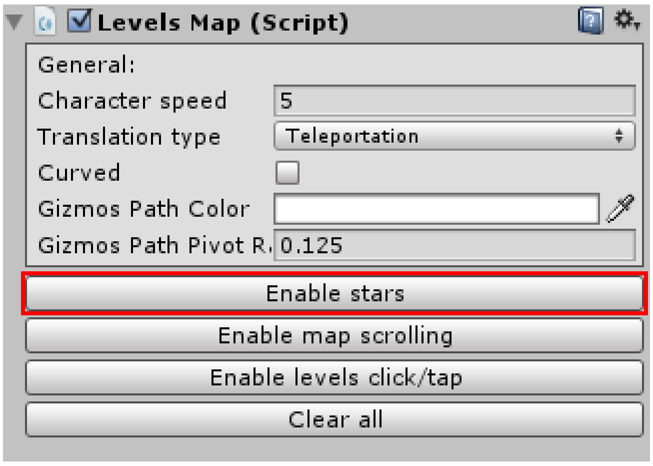
Curved: □

Gizmos Path Color:

Gizmos Path Pivot R: 0.125

4. Stars customization.

Plugin contains the possibility to enable and disable stars.



General:

Character speed 5

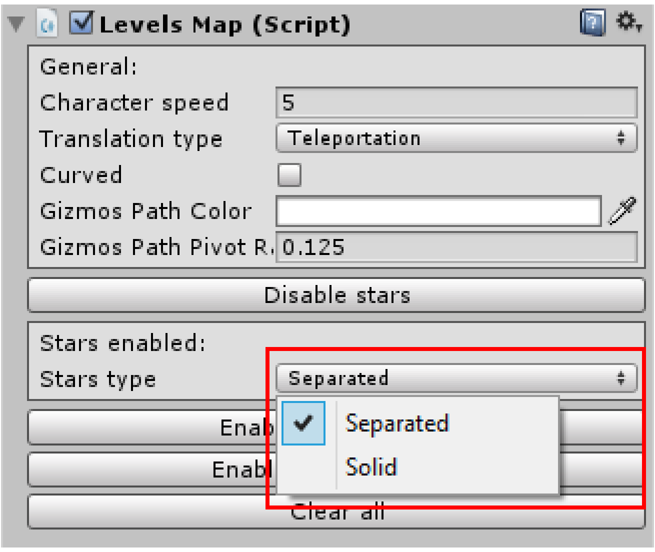
Translation type Teleportation

Curved ☐

Gizmos Path Color

Gizmos Path Pivot R 0.125

When stars are enabled, you can select from two star types: “Separated” and “Solid”:



General:

Character speed 5

Translation type Teleportation

Curved ☐

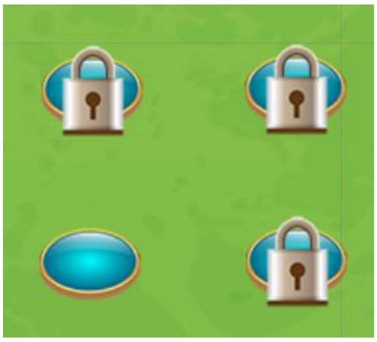
Gizmos Path Color

Gizmos Path Pivot R 0.125

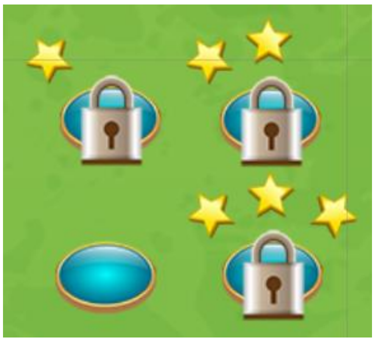
Stars enabled:

Stars type Separated

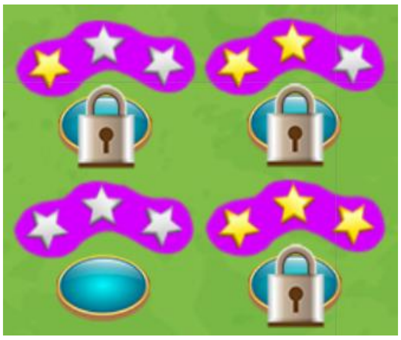
Check following images to understand star types:



Disable



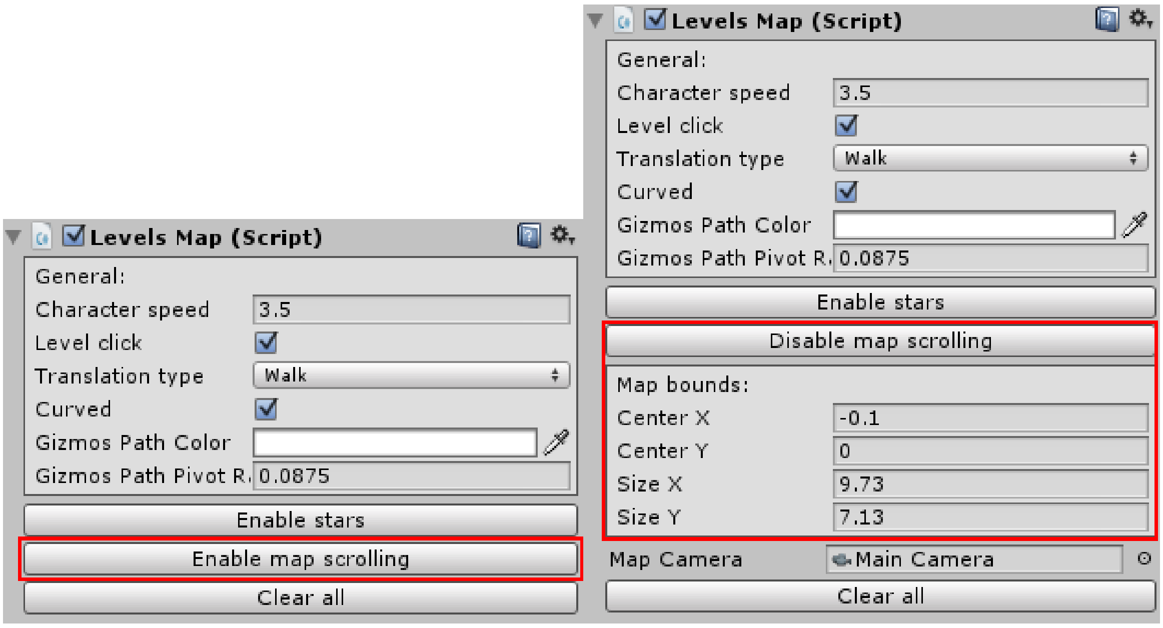
Separated stars



Solid stars

5. Map scrolling.

If your map does not fit the camera (big map), you can enable the map scrolling feature. This feature will open map bounds settings.



☑ Levels Map (Script)

General:

Character speed 3.5

Level click ☑

Translation type Walk

Curved ☑

Gizmos Path Color

Gizmos Path Pivot R. 0.0875

☑ Levels Map (Script)

General:

Character speed 3.5

Level click ☑

Translation type Walk

Curved ☑

Gizmos Path Color

Gizmos Path Pivot R. 0.0875

Map bounds:

Center X -0.1

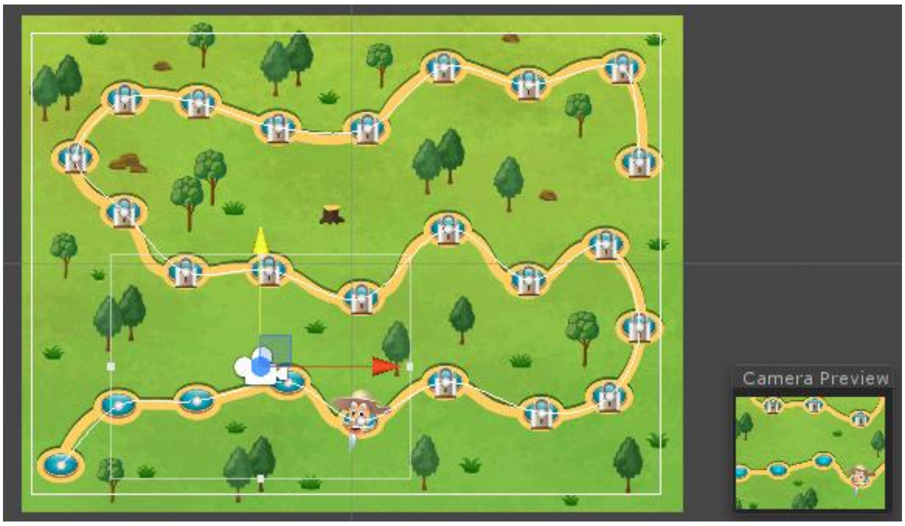
Center Y 0

Size X 9.73

Size Y 7.13

Map Camera Main Camera

(Settings example)



(Gizmos bounds example)

The Plugin supports desktop and web mouse camera drag, and mobile devices touch camera drag.

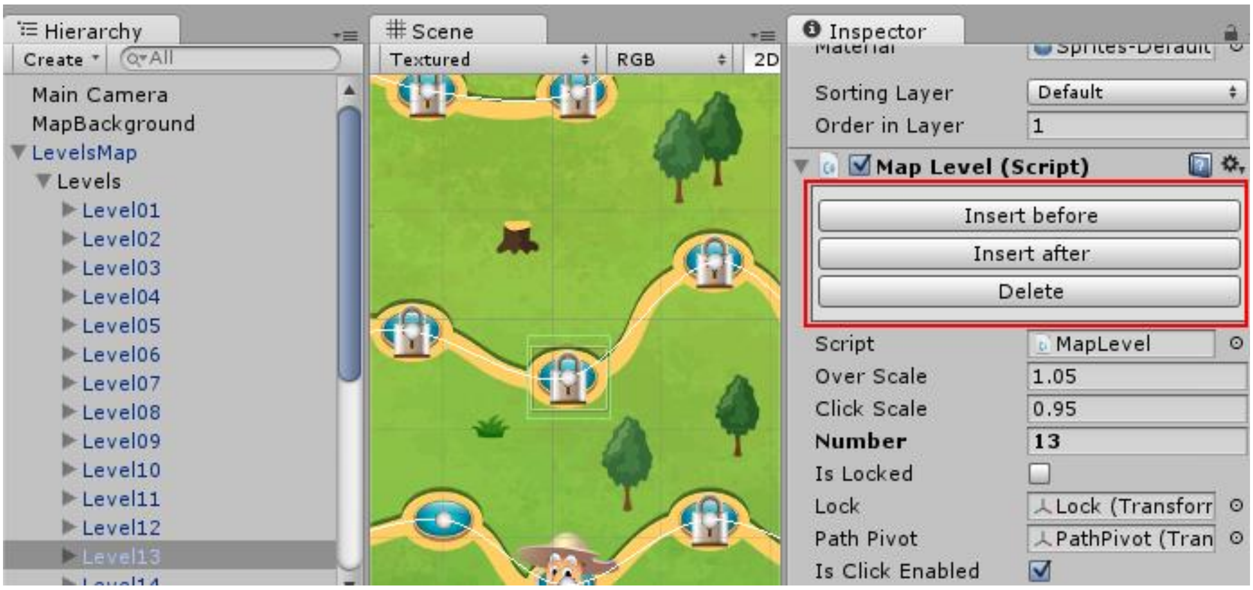
6. Insert and delete levels on the map.

If you select any level on scene view or on hierarchy view, you will get following options:

- “Insert before” button insert new level before selected level.
- “Insert after” button insert new level after selected level.
- “Delete” button deletes selected level.

After any insertion or deletion “Number” fields will be updated for all remained levels.

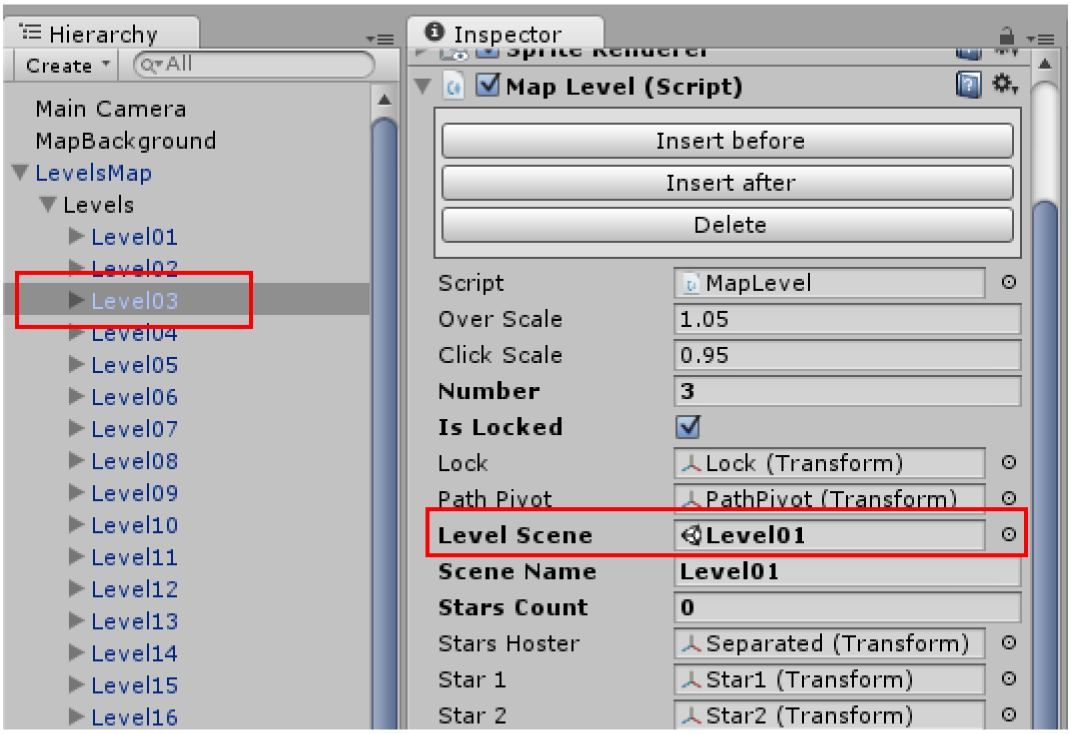
Warning: Do not delete levels from hierarchy by “Del” button.



Material: Sprites-Default
Sorting Layer: Default
Order in Layer: 1
Script: MapLevel
Over Scale: 1.05
Click Scale: 0.95
Number: 13
Is Locked: □
Lock: Lock (Transform)
Path Pivot: PathPivot (Tran
Is Click Enabled: ☑

7. Scene assignment to MapLevel

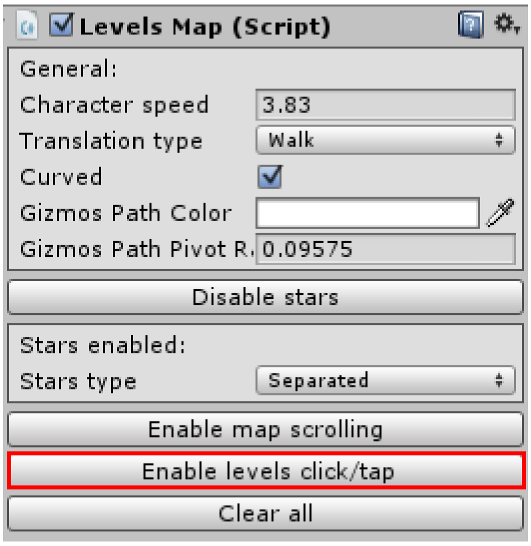
You can select any level from Hierarchy and drag and drop scene to “LevelScene” field. When a character reach level on level map, if this level contains assigned scene - this scene will open automatically.



Script	MapLevel
Over Scale	1.05
Click Scale	0.95
Number	**3**
Is Locked	☑
Lock	Lock (Transform)
Path Pivot	PathPivot (Transform)
Level Scene	**Level01**
Scene Name	**Level01**
Stars Count	**0**
Stars Hoster	Separated (Transform)
Star 1	Star1 (Transform)
Star 2	Star2 (Transform)

8. Level click/tap behavior.

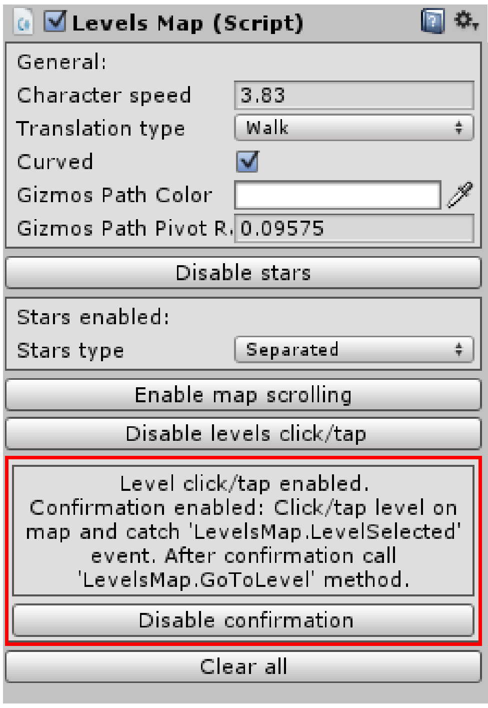
If you want to enable character movement by level click on the map, you can enable this using “Enable levels click/tap” button.



Character speed: 3.83
Translation type: Walk
Curved: ☑
Gizmos Path Color:
Gizmos Path Pivot R: 0.09575
Stars type: Separated

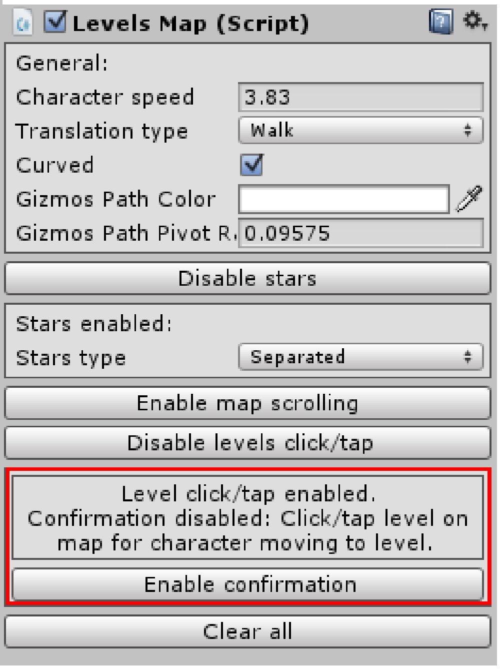
This feature contains two behaviors:

- **Confirmation disabled.**
  When you click on level, character will go to level immediately.
- **Confirmation enabled.**
  This behavior is required when you want to show some information about level before loading this level. When you click on level, character will not go to this level, just event LevelsMap.SelectedLevel will rise. You can catch this event and show any level information dialog with confirmation button (“ok”, “go” and others). By this button click you must use LevelsMap.GoToLevel to start character walking.



Character speed: 3.83
Translation type: Walk
Curved: ☑
Gizmos Path Color:
Gizmos Path Pivot R: 0.09575
Stars type: Separated

Level click/tap enabled.
Confirmation enabled: Click/tap level on map and catch 'LevelsMap.LevelSelected' event. After confirmation call 'LevelsMap.GoToLevel' method.



Character speed: 3.83
Translation type: Walk
Curved: ☑
Gizmos Path Color:
Gizmos Path Pivot R: 0.09575
Stars type: Separated

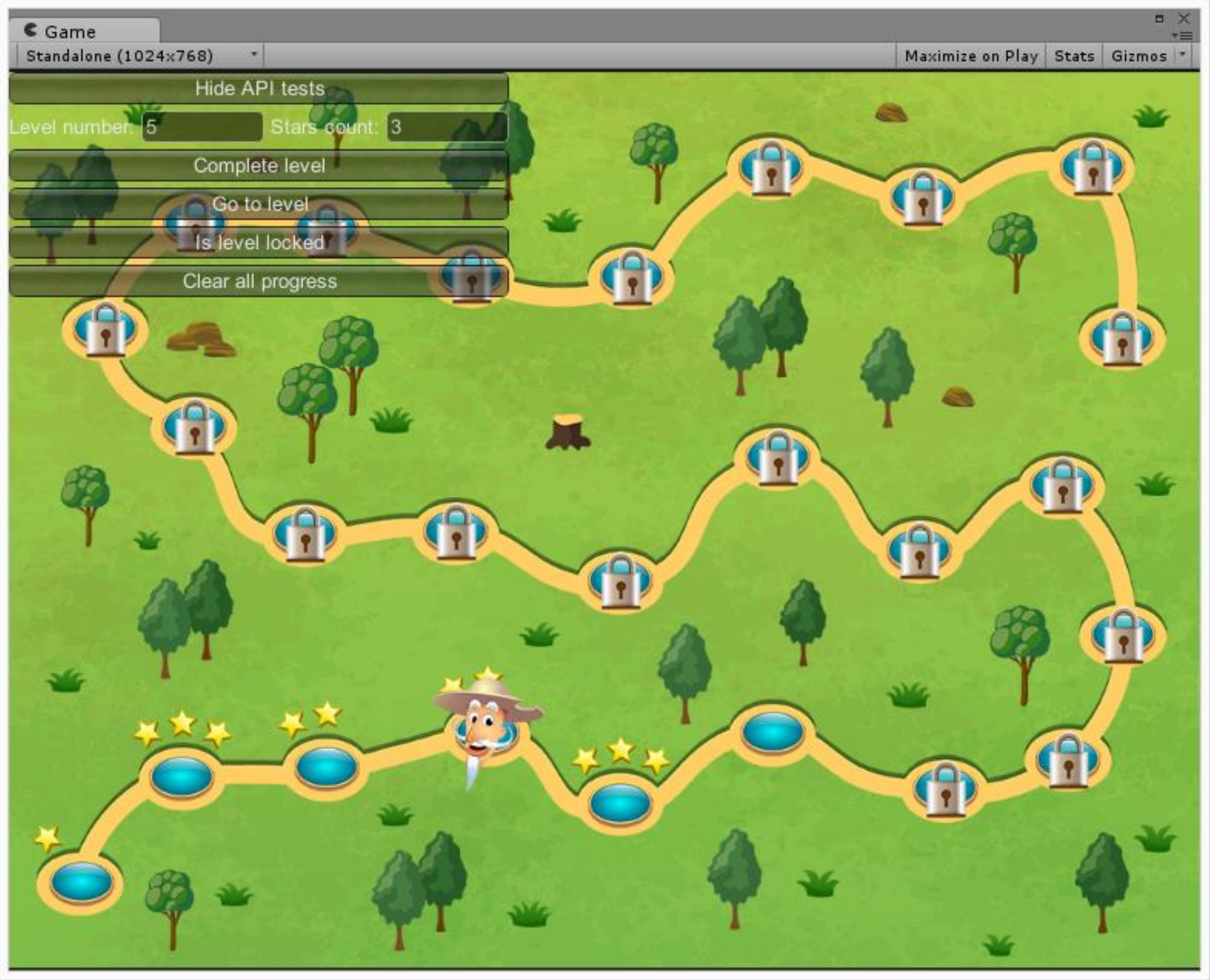
Level click/tap enabled.
Confirmation disabled: Click/tap level on map for character moving to level.

9. API description.

LevelsMap class contains following static methods:

a. LevelsMap.CompleteLevel(int number, intstarsCount) - mark level with “number” as completed with “starsCount” stars when stars feature is enabled.
b. LevelsMap.CompleteLevel(int number) - mark level with “number” as completed when stars feature is disabled.
c. LevelsMap.GoToLevel(int number) - move character to level “number”, using selected translation type from “LevelsMap” component setting.
d. boolisLocked = LevelsMap.IsLevelLocked(int number) - get information, whether level “number” is locked or not.
e. LevelsMap.ClearAllProgress() -help method which clear all levels progress. Set all levels as not completed.

You can add “ApiTest” script to any game object on scene for testing how current levels map is working. This script shows unity GUI as on below screenshot:



Level number: 5
Stars count: 3

LevelsMapclass contains following event:

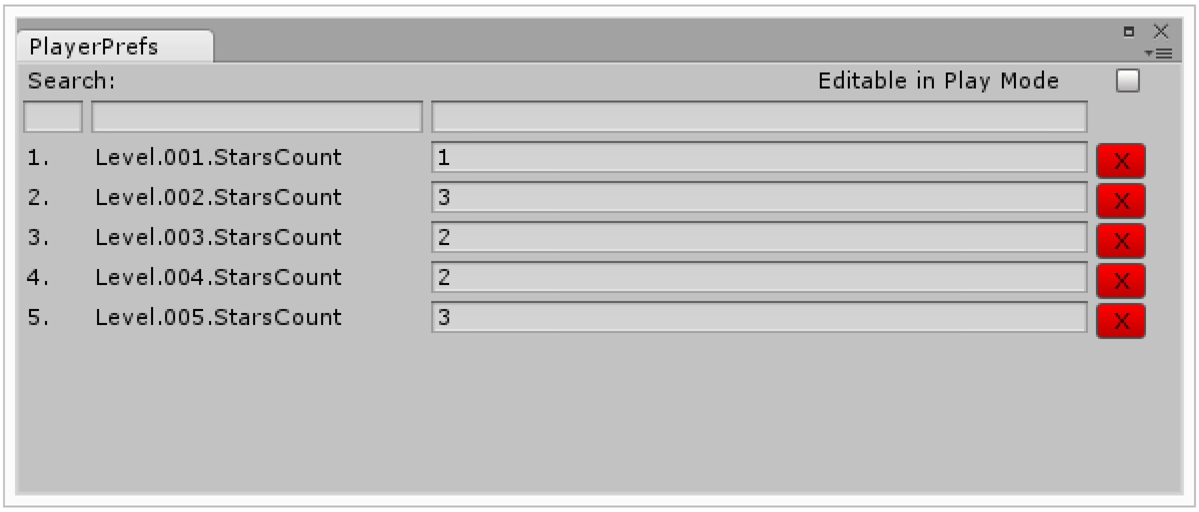
- LevelSelectedevent – rise when level is selected by click/tap on map.
- LevelReachedevent - rise when character achieves selected level.

Check following scenario for example:

```
publicvoidOnEnable()
{
LevelsMap.LevelSelected += OnLevelSelected;
LevelsMap.LevelReached += OnLevelReached;
}

publicvoidOnDisable()
{
LevelsMap.LevelSelected -= OnLevelSelected;
LevelsMap.LevelReached -= OnLevelReached;
}

private void OnLevelReached(object sender, LevelReachedEventArgse)
{
Application.LoadLevel(e.Number);
}

privatevoidOnLevelSelected(object sender, LevelReachedEventArgs e)
{
//Show level information window
}
```

10. Saving progress.

Plugin save levels progress in “PlayerPrefs” in following format:



1.	Level.001.StarsCount	1	X
2.	Level.002.StarsCount	3	X
3.	Level.003.StarsCount	2	X
4.	Level.004.StarsCount	2	X
5.	Level.005.StarsCount	3	X

If you want your own saving logic, you can implement IMapProgressManager interface and use LevelsMap.OverrideMapProgressManager(IMapProgressManager)method.

ApiTest script contains example.

You must call “OverrideMapProgressManager” method in “Awake” as plugin load state in “Start” method, and at this time it should know which mechanism to use.

11. Support.

For any questions, write to me: nubick@gmail.com