

CREATING PLATFORM OBJECTS

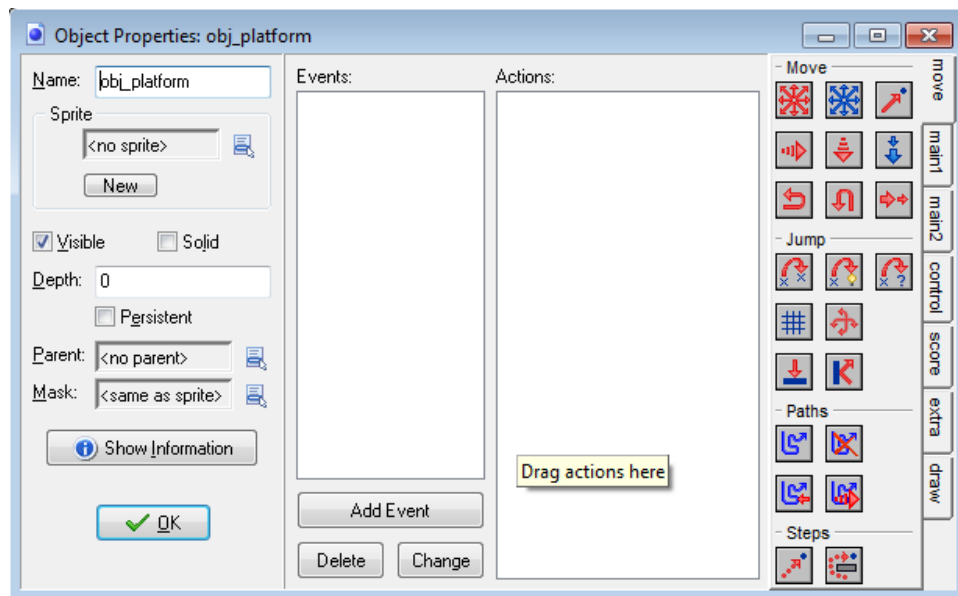
The first thing we're going to need to do for our platform game is create platform objects. Let's start by creating a platform object (called **obj_platform**). Although this object will have no events, actions or sprites, it will serve as a **parent object** for all the other platform objects that we will be using. We will get into parent objects in more detail in later lessons. For now, what you need to know about parent objects is that they allow you to group together similar kinds of objects so that they all behave in the same way.



In this example, we will only create three different platform objects (**obj_rock_begin**, **obj_rock_middle**, **obj_rock_end**). The most useful thing about making **obj_platform** the parent object of these three platforms is that we will be able to test for collisions between our character and **obj_platform** and this will automatically include collisions with **obj_rock_begin**, **obj_rock_middle**, and **obj_rock_end** as well.

CREATING THE PARENT PLATFORM OBJECT

1. Create a new Object and name the object **obj_platform**.

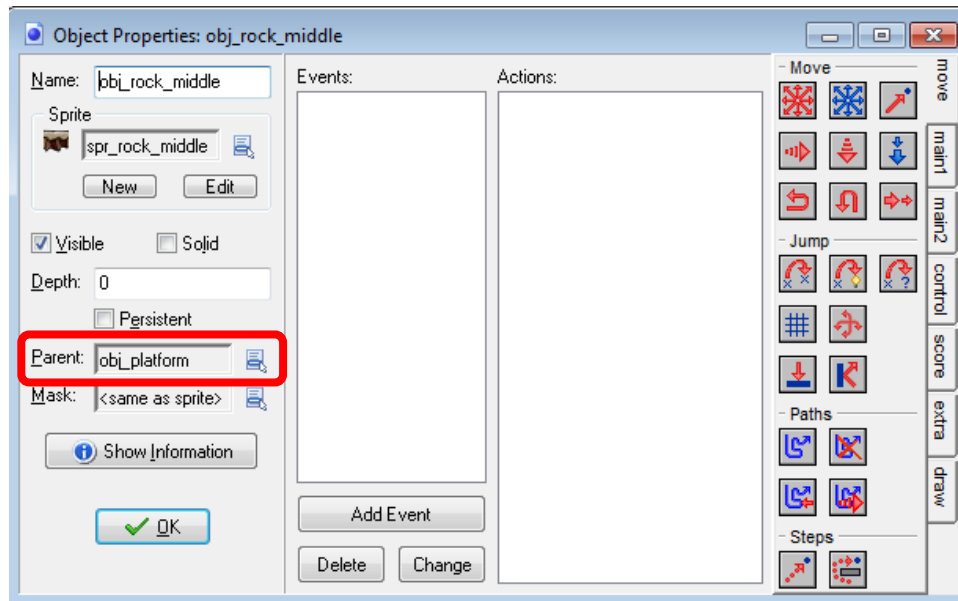


2. That's it. Just click **OK** and we're done with the parent object.

CREATING THE ROCK PLATFORM OBJECTS

1. Create a new Object, name it **obj_rock_middle**, and assign the object the sprite called **spr_rock_middle**.

2. Click on the icon at the end of the **Parent** field and select the **obj_platform** object.

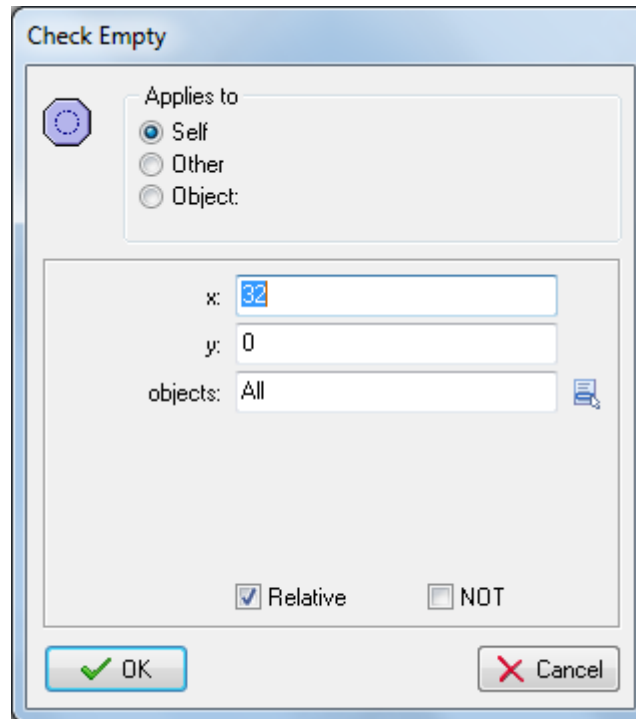


3. Click the **OK** button to close the form.
4. Repeat steps 1–3 for **obj_rock_begin** and **obj_rock_end**, using **spr_rock_begin** and **spr_rock_end** respectively.

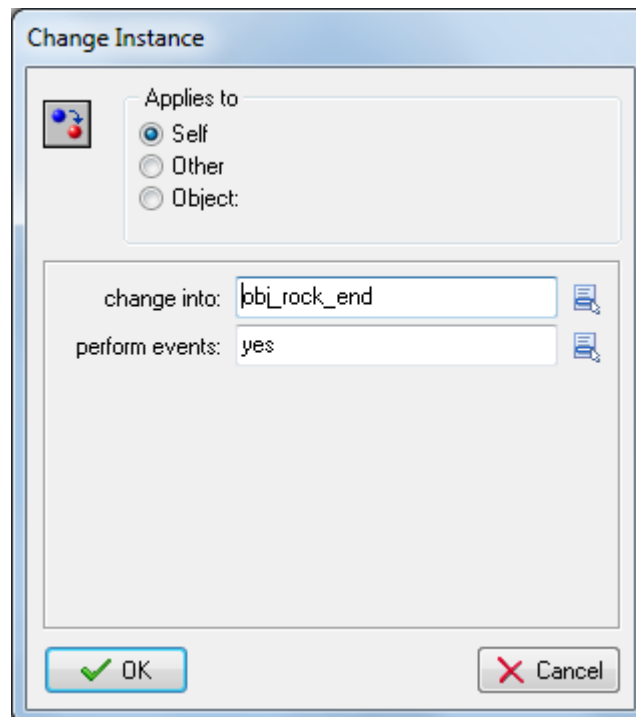
AUTOMATING THE CREATION OF PLATFORMS

Now we're going to automate the process of creating platforms by making every **obj_rock_middle** automatically create begin and end platforms on either side of it where necessary. That way, we only have to worry about placing instances of the **obj_rock_middle** object in the room editor and the object events will handle the rest for us.

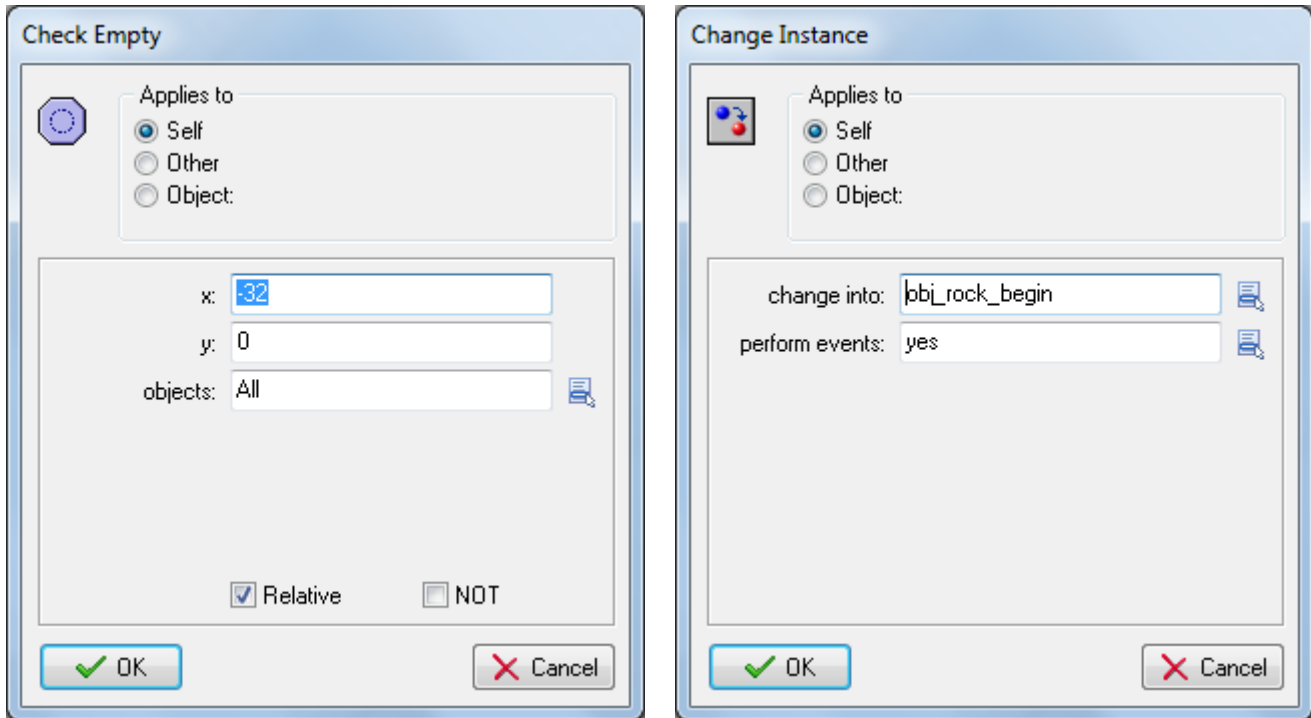
1. Reopen the Object Properties for **obj_rock_middle**.
2. Click on the **Add Event** button and select the **Create** event.
3. Add a **Check Empty** action, set **X** to **32**, leave **Y** set to **0**, set **Objects** to **All**, and make sure that the **Relative** option is checked (this checks that there wouldn't be a collision if this instance was placed 32 pixels to the right of its current position).



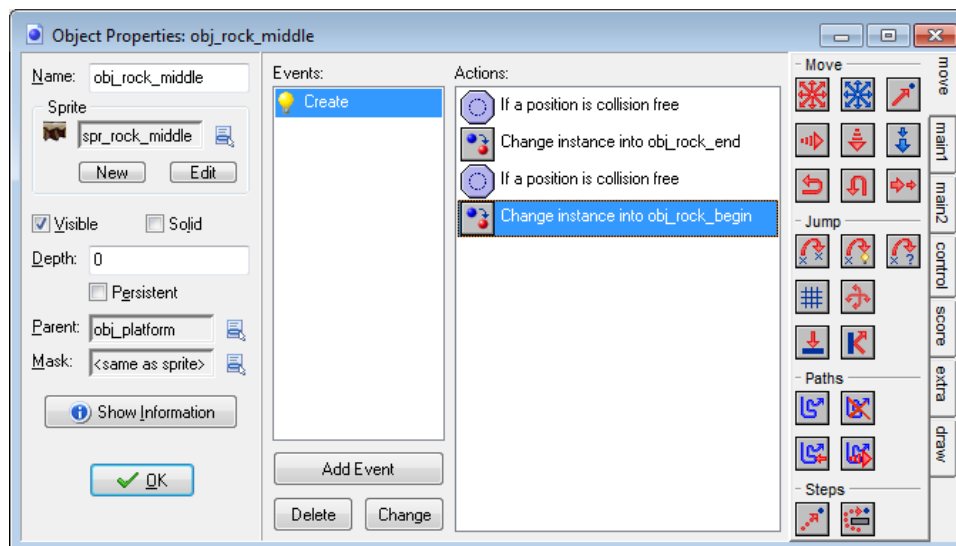
4. Add a **Change Instance** action into the actions list, click on the menu icon at the end of the **Change Into** field and select **obj_rock_end** from the list. Also, set **Perform Events** to **yes**. This will turn the middle platform section into an end platform section if the previous check was true. In other words, a rock middle will be turned into a rock end when it is at the right-most end of a length of platform.



- Repeat steps 2-4, this time checking 32 pixels to the left and creating **obj_rock_begin** (so you will need to use an X value of -32). Make sure that the left **Check Empty** is followed by the **Change Instance** for **obj_rock_begin** and the right **Check Empty** is followed by the **Change Instance** for **obj_rock_end**.



- Your list of actions for **obj_rock_middle** should now look like this.

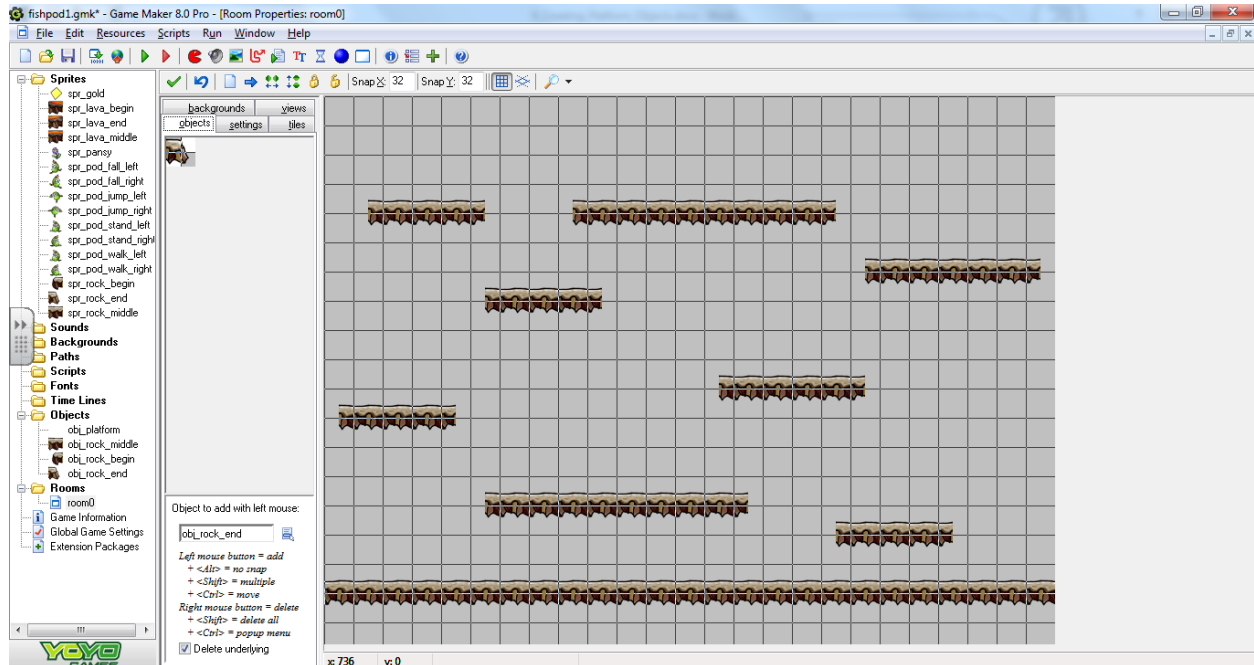


- Click the **OK** button to close the form.

CREATING OUR ROOM

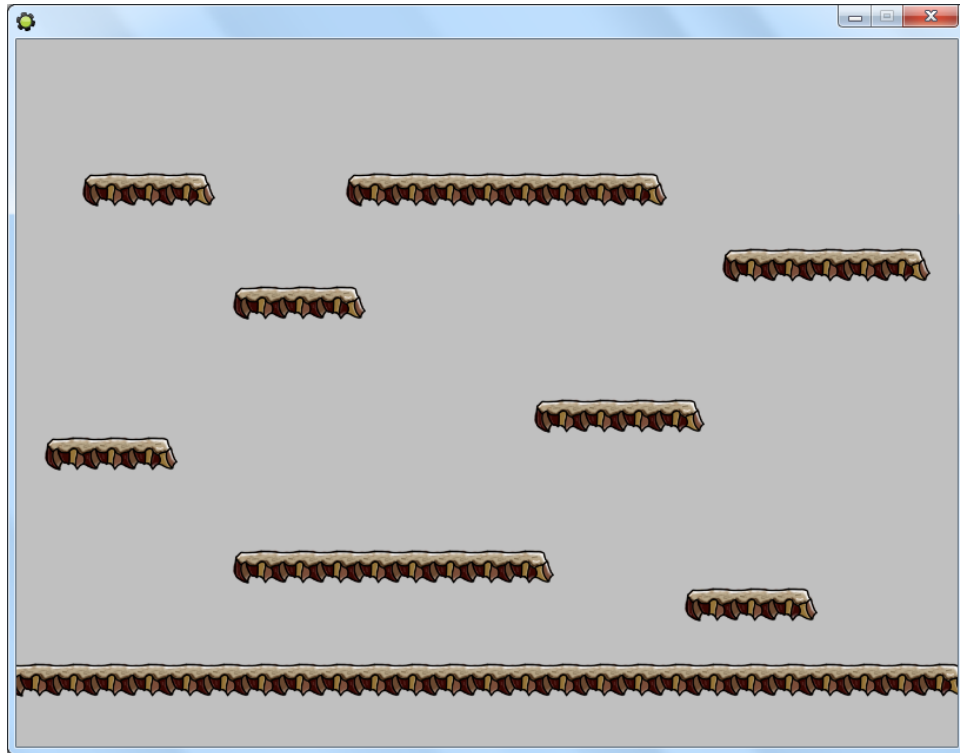
It's time to create our room by making a level and testing our automatic platforms.

1. Create a **Room** and call it **room_main**.
2. Click on the **Settings** tab and set the **width** of the room to **800** and the **height** to **600**.
3. Now set both **SnapX** and **SnapY** to 32, since this is the size of our platform sprites.
4. Switch back to the **Objects** tab, select **obj_rock_middle** and create a level similar to the one shown below by clicking the left mouse button to add instances of **obj_rock_middle** to the level.



Remember...you only need to include instances of the **obj_rock_middle** object because we have a **Create** event that will automatically create the **obj_rock_begin** and **obj_rock_end** instances where they are needed. However, you will need to put at least two platform instances next to each other in order for this to work properly.

Now when you run the game your room should appear with each platform neatly rounded off at either end.



SOURCE: Habgood, Jacob, Nielsen, Nana, Rijks, Martin and Kevin Crossley. *The Game Maker's Companion: Game Development: The Journey Continues*. New York: Apress, 2010. Print.