

INTRODUCTION TO GAME MAKER: ADDING OBJECTS

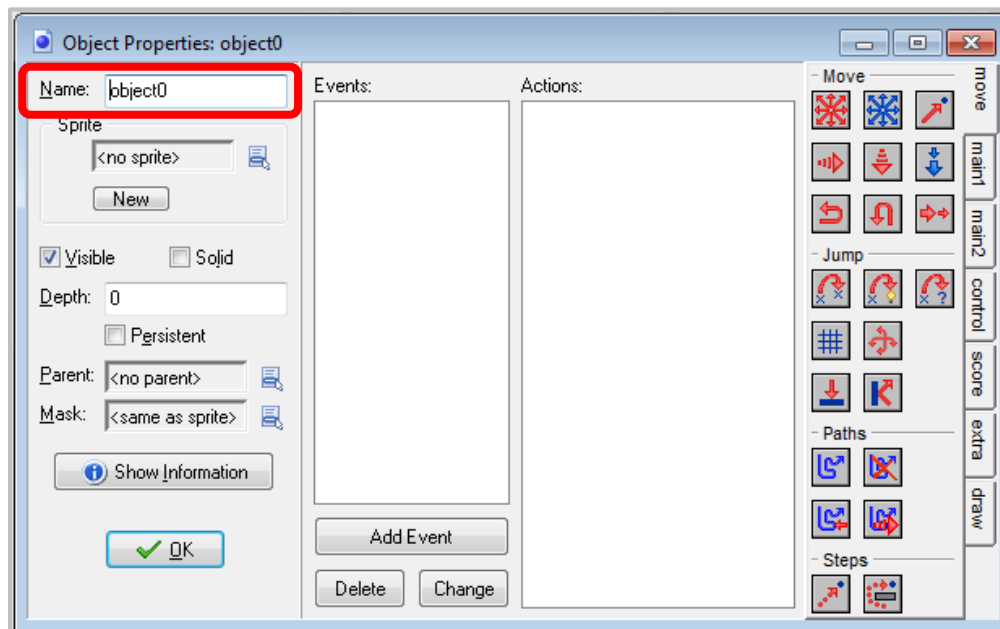
Objects are what make up the different parts of a game, such as the player, the enemy, the score, etc. Objects can also control the game through the use of things like **Events** and **Actions** that you can add to them.

CREATING OBJECTS

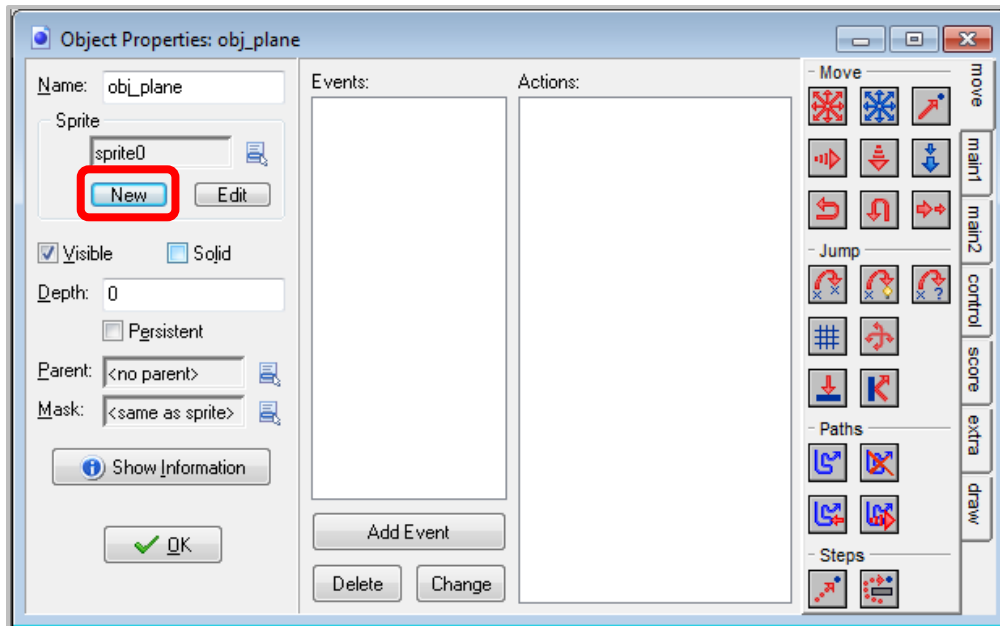
1. To create an Object, click the **Create an Object** icon. Alternatively, you can use the keyboard shortcut **SHIFT + CTRL + O**, or select **Resources > Create Object** from the menu bar.



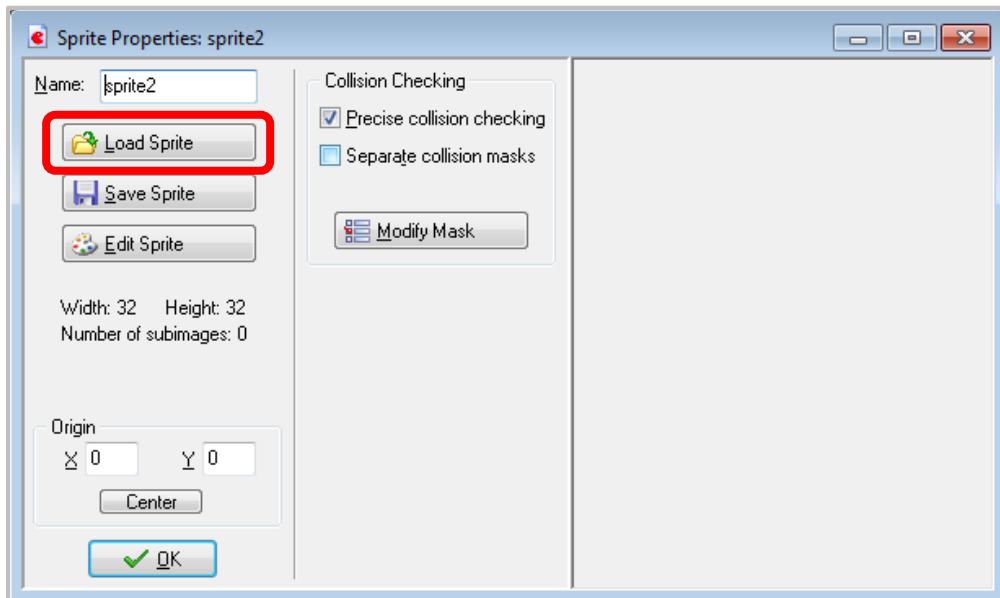
2. When the Object Properties window appears, in the **Name** field type a name for your object (e.g. obj_plane).



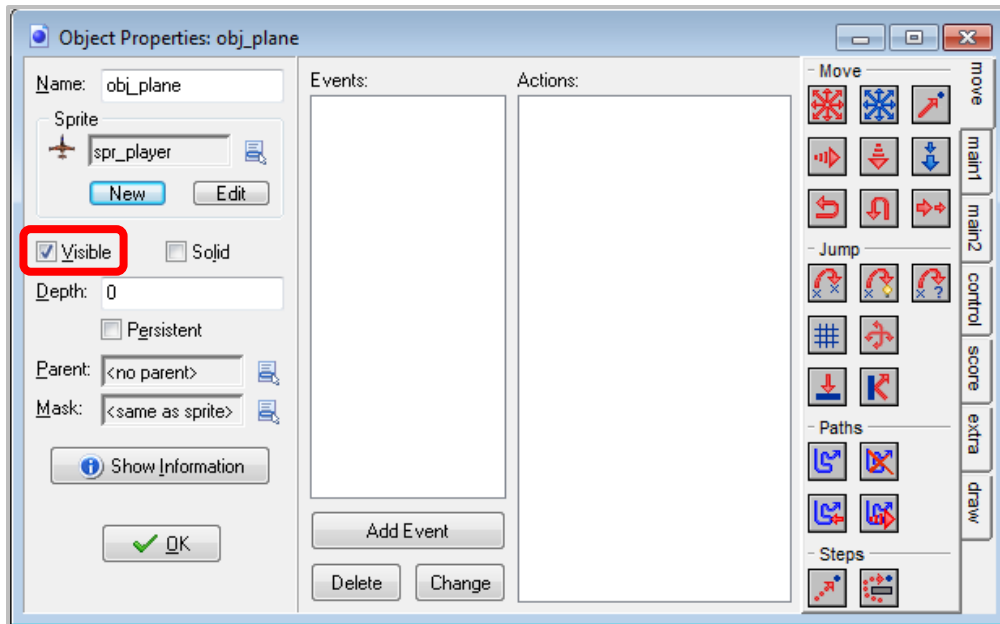
3. Now assign a sprite to the object by clicking the **New** button from the Sprite section.



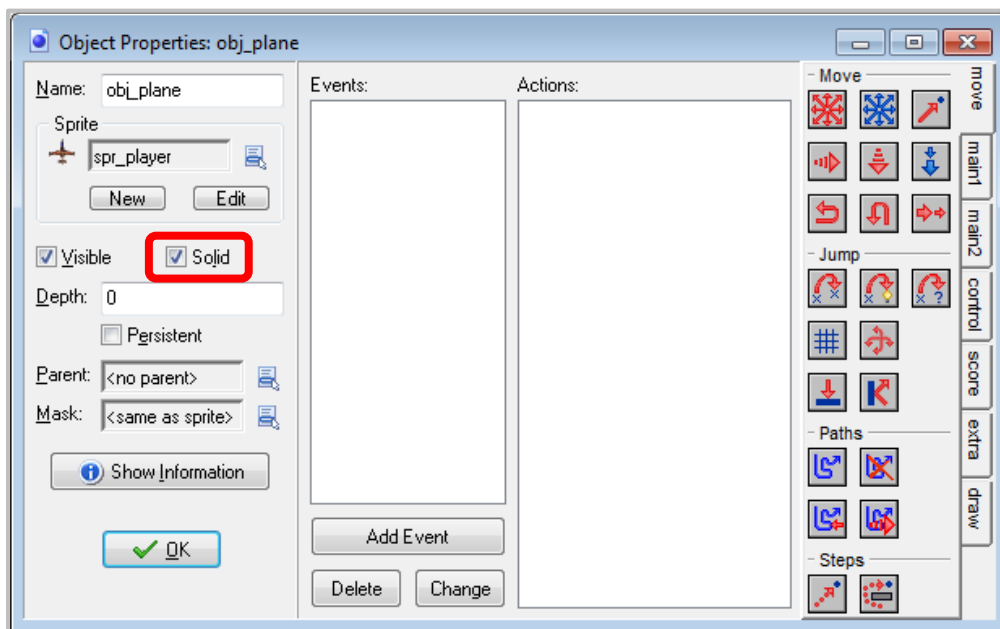
4. Load a sprite by clicking the **Load Sprite** button and navigating to an image file you want to use as your sprite. Once you have selected your sprite, make sure you name the sprite using the three-letter prefix **spr**. For this example, I will name my sprite **spr_player**.



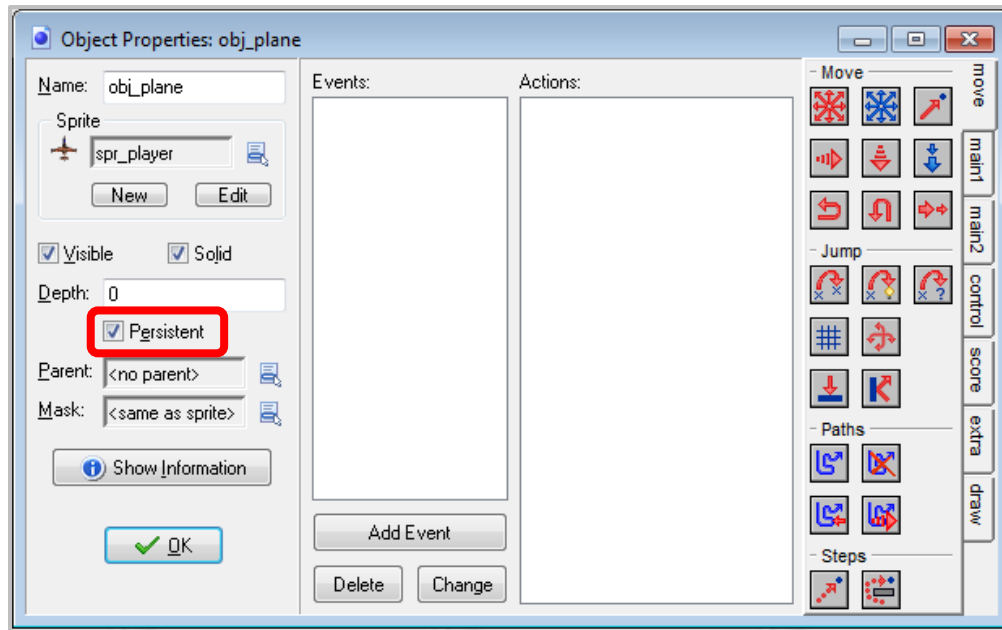
5. Make sure the the **Visible** check box is selected. This will ensure that the object is visible in the game.



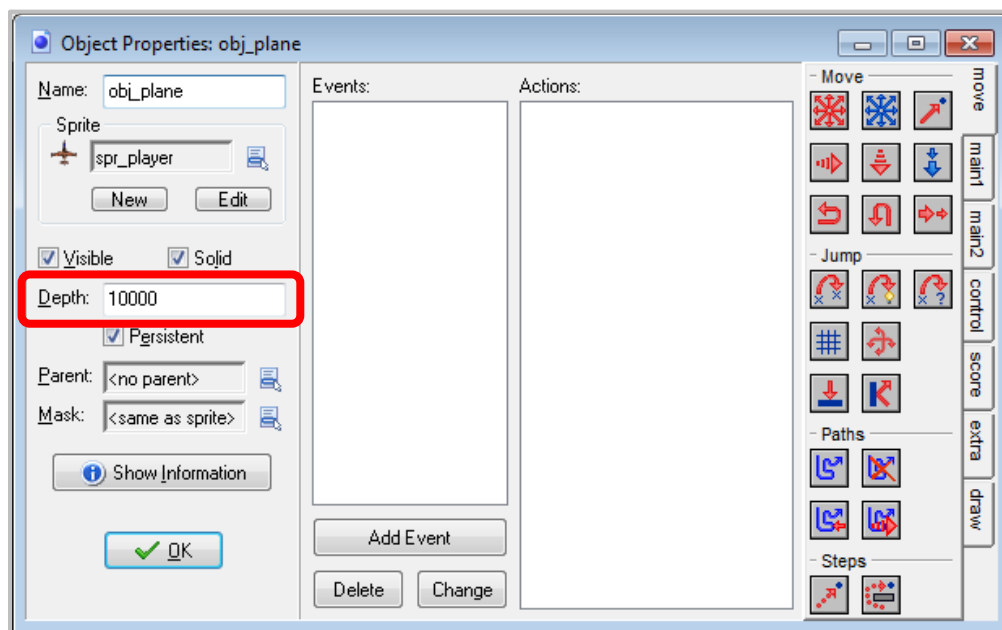
6. Select the **Solid** check box so that GameMaker knows this is an object that can collide with other objects. By keeping the Solid check box unchecked, objects will be able to go through it (which, for this example, we do not want happening).



7. Select the **Persistent** check box so that the object carries over from one room to another. In other words, by making it persistent the object is not destroyed even if the player leaves one room and enters another. The only way to destroy a persistent object is to do so through Events and Actions (which we will look at later on in this unit).



8. In the **Depth** field, enter a numerical value (e.g. 10000) to determine which layer of the room you want the object to reside at. The Depth field enables you to place objects over other objects.



9. Click the **OK** button once you have completed all the above steps.

PLACING OBJECTS IN THE GAME ROOM

A **Room** in GameMaker is where you place all the different parts of your game. After you finish creating your resources – i.e. sounds, sprites, and objects – you're ready to place instances of your objects in the room. But first you have to create a room.

1. To create a new Room, click the **Create a Room** icon. Alternatively, you can use the keyboard shortcut **SHIFT + CTRL + R**, or select **Resources > Create Room** from the menu bar.



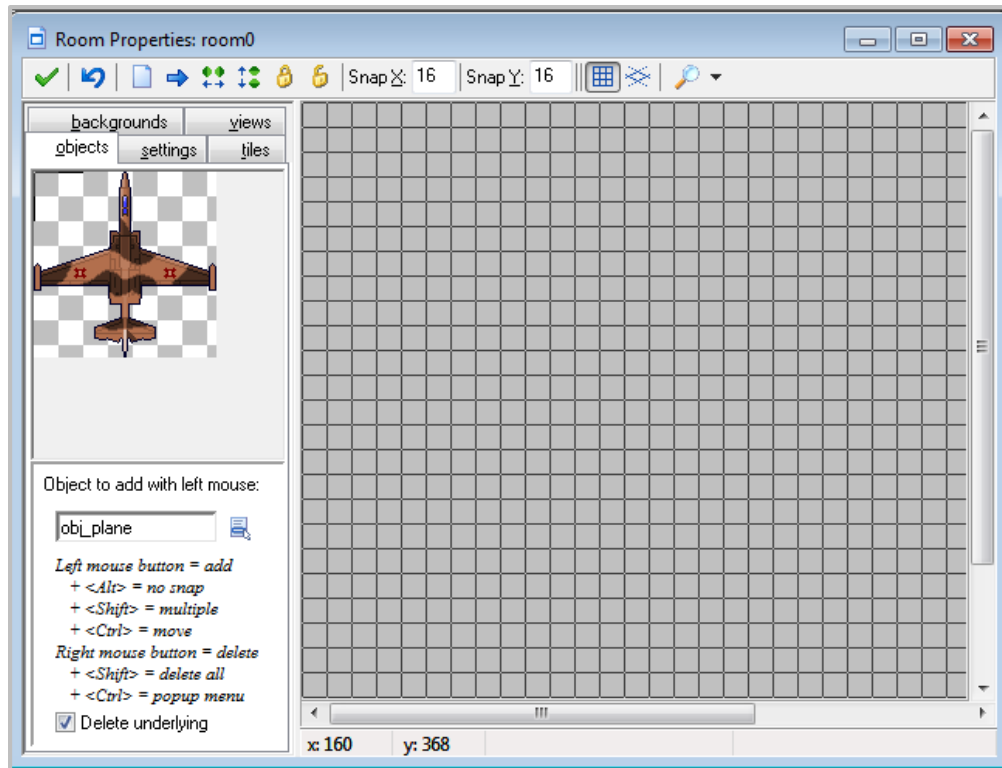
2. The **Room Properties** window has several tabs of features including:

Backgrounds: Here, you can set the background color, or choose a background image that you can tile to fill the room.

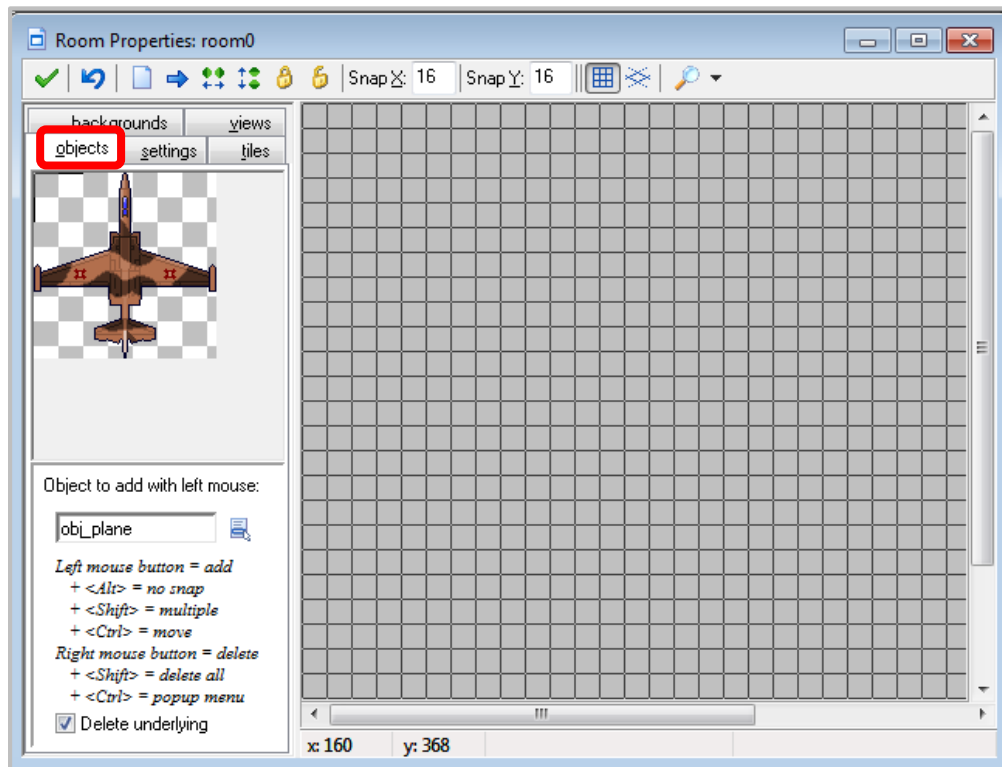
Objects: Here, you can select objects in order to place instances of those objects in the room.

Settings: Here, you can name the room, set the size of the room, and set the speed of the room. The default speed is 30 steps, which means there are 30 steps per second. Knowing the speed of the room is useful when it comes to setting alarms and other things we will look at later.

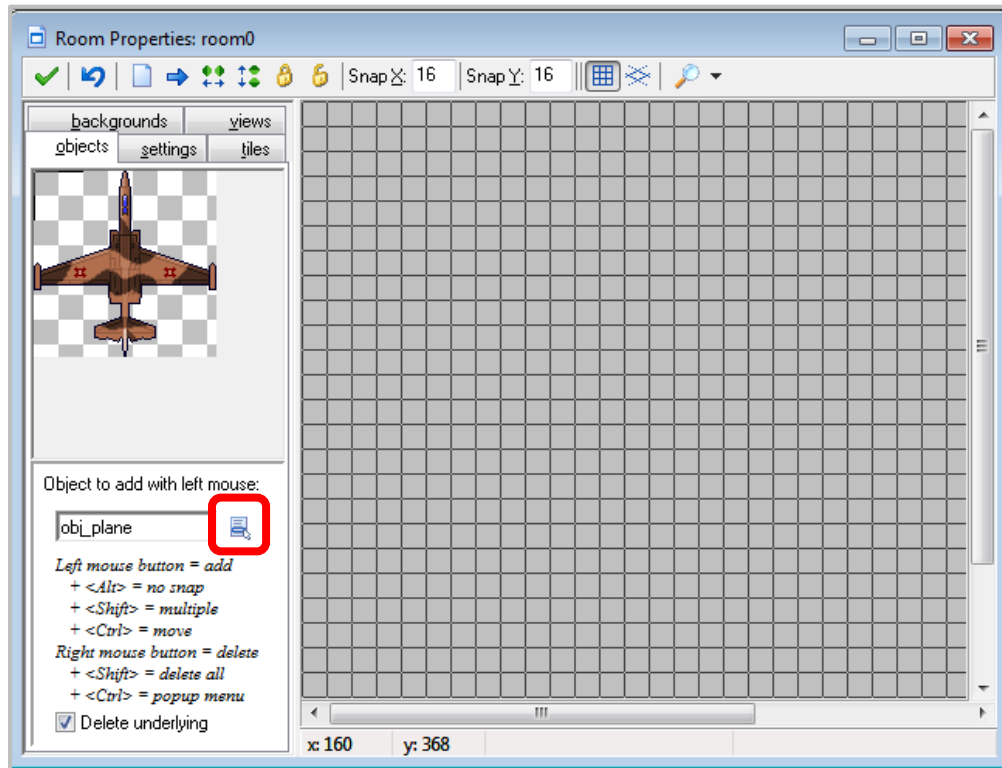
Tiles: Here, you can select and manually place different images to fill the background. This is different from the Backgrounds tab in that the Backgrounds tab can automatically fill the room for you, while the Tiles tab is manual.



3. Click the **Objects** tab.

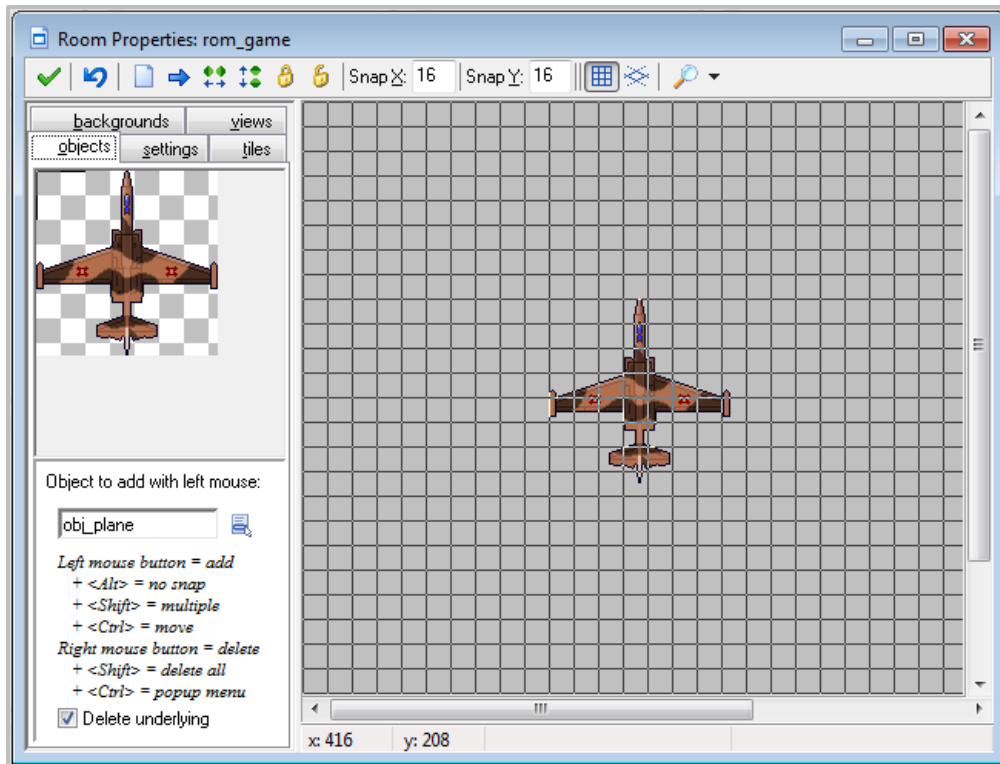


4. Click the drop-down icon to select the object you want to place an instance of in the room. The name of the object appears in the field, and you see that object's assigned Sprite in the top corner of the window.

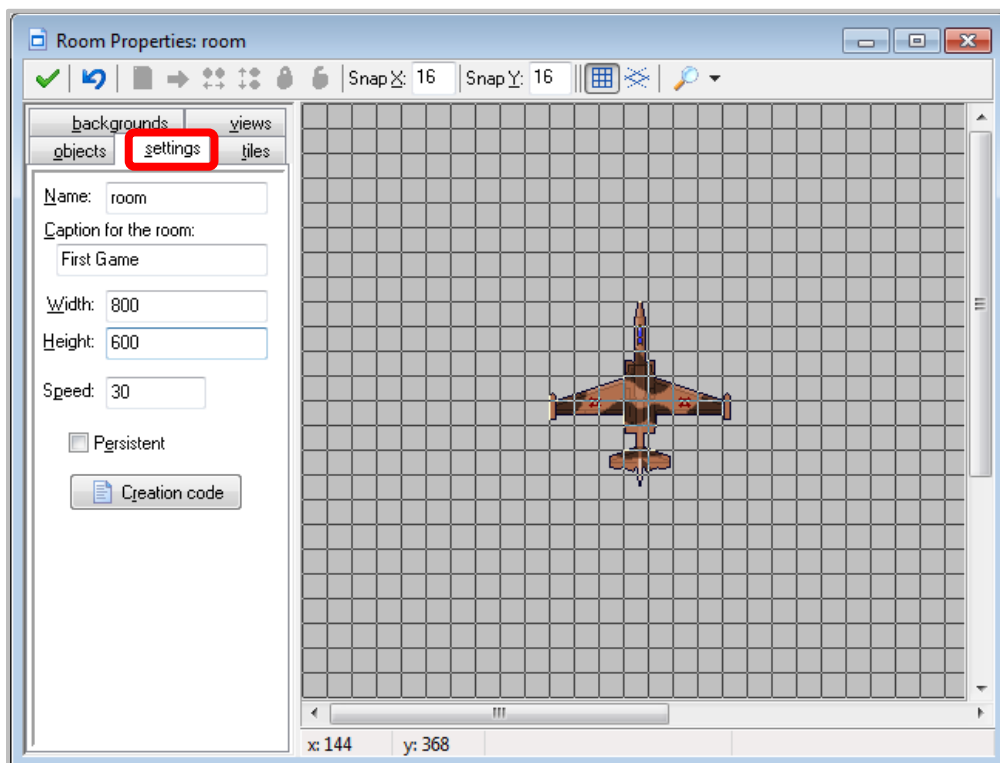


5. Left-click in the room where you want to place an instance of the object. The sprite for the object appears where you click. If you're placing an object without an assigned sprite, you see a little blue circle with a question mark in it.

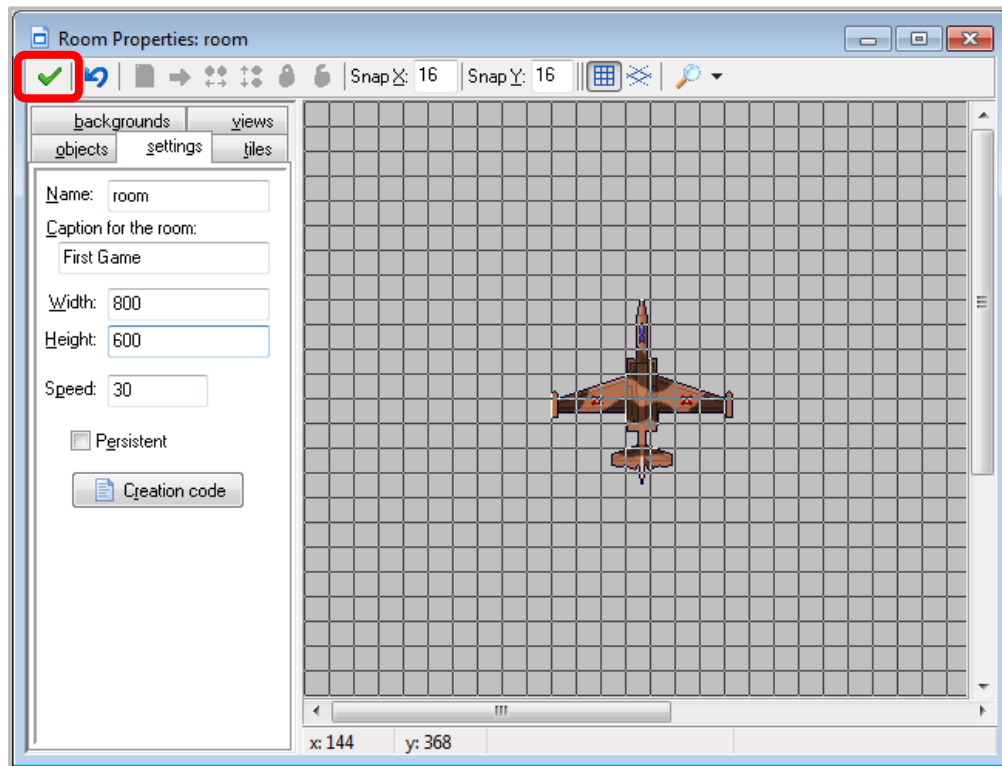
To remove an instance of the object from the room, simply click the right mouse button.



6. Now select the **Settings** tab, and set the name of the room (call it room), set the caption for the room to "First Game" (this will appear in the title bar of the window when the game runs), and set the width and height of the room to 800 x 600.



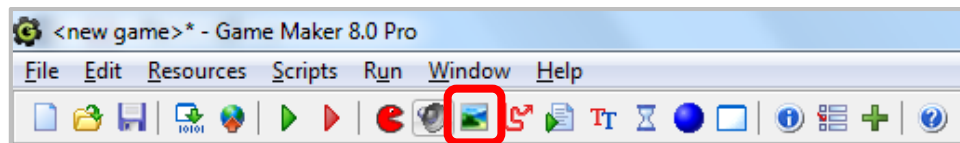
7. Save and close the window by selecting the green check mark icon at the top-left corner.



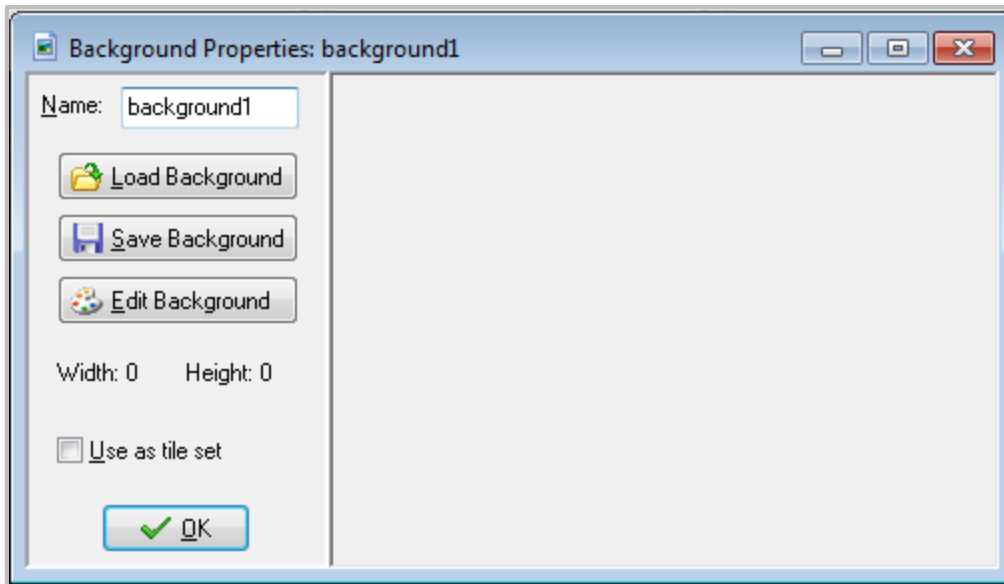
CREATING A BACKGROUND

Now let's create a background for our game.

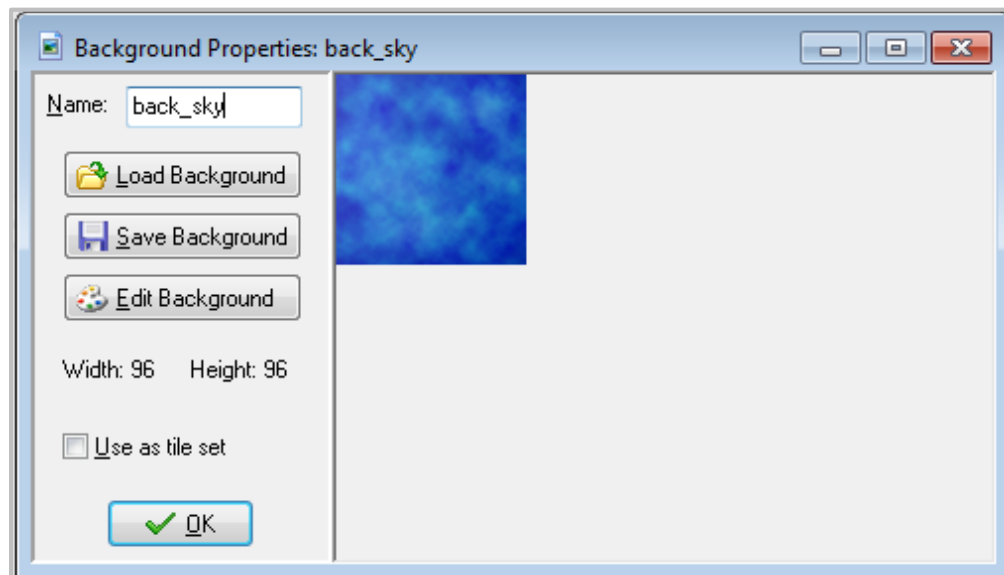
1. To create a Background, click the **Create a Background** icon. Alternatively, you can use the keyboard shortcut **SHIFT + CTRL + B**, or select **Resources > Create Background** from the menu bar.



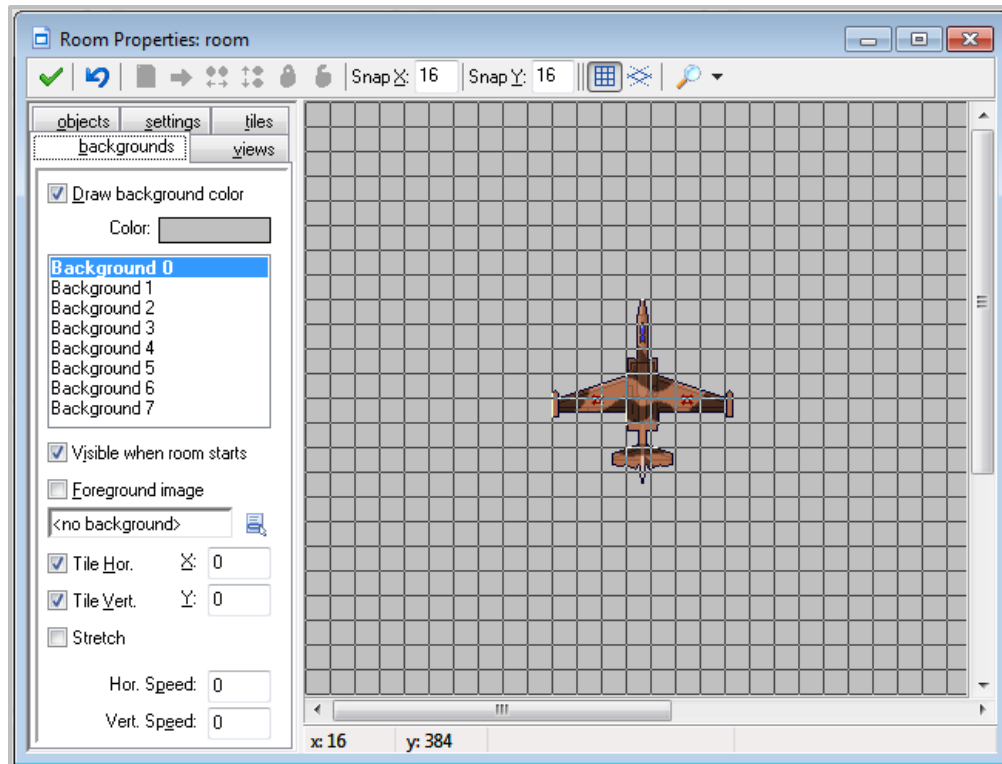
2. Click the **Load Background** button and select an image file you want to use as your background. For this example, I will be using an image file called **sky.png** which you can find on the shared directory.



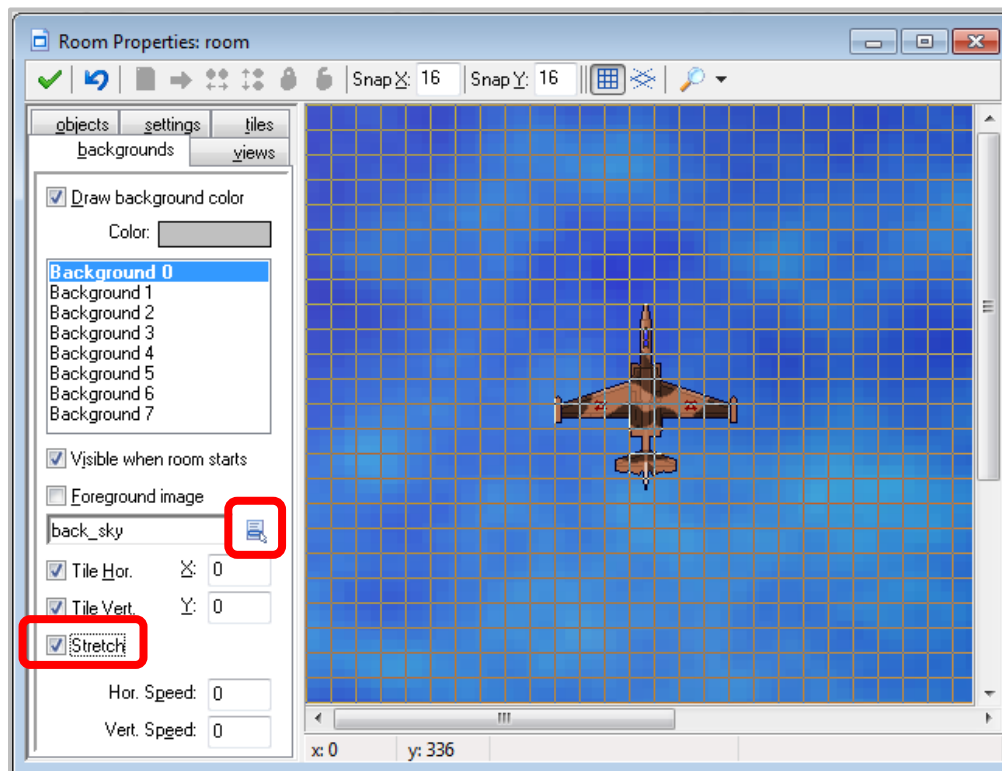
3. Once you have selected the image file, name the background starting with the four-letter prefix **back**. I will call my background **back_sky**. Click **OK** when you're done.



4. Now go back to your room and click the **Background** tab.



5. Click the drop-down menu to select the background you created and select the **Stretch** check box. Click **OK** once you're done.



6. Now let's run our program by clicking on the **Run the Game** icon.



In the next few lessons, we will learn to create events for the objects we create.