

## Catch the Clown User Guide

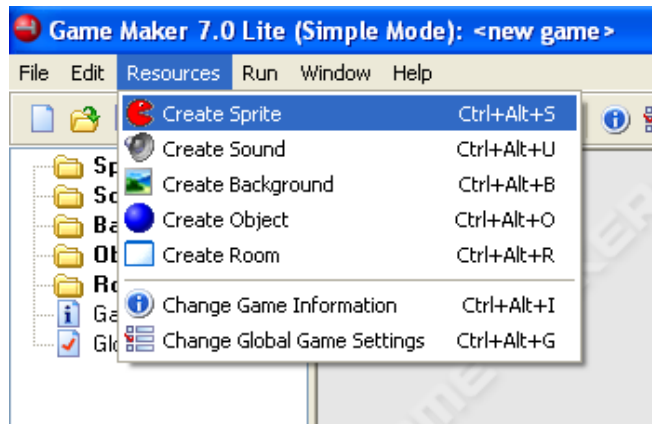
**About the Catch the Clown game:** Catch the clown is a very simple game that can be created using the Game Maker 7.0 software. It contains 2 objects, the clown and the wall. The clown object moves around a room and you need to catch the clown by clicking on it with your mouse. Each time you catch the clown you score a point and the clown speeds up and becomes harder to catch. If you can create this game you will have learned the skills needed to create even better games!!!!



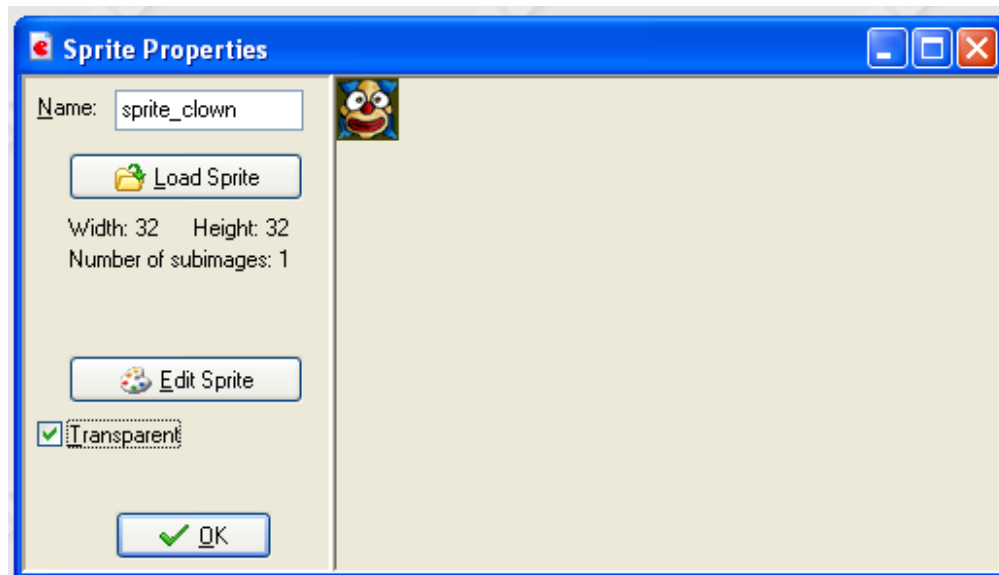
**The easiest way to follow this guide is to copy how stuff is set up in the pictures.**

Learn how to create the Catch the Clown game by following the steps below:

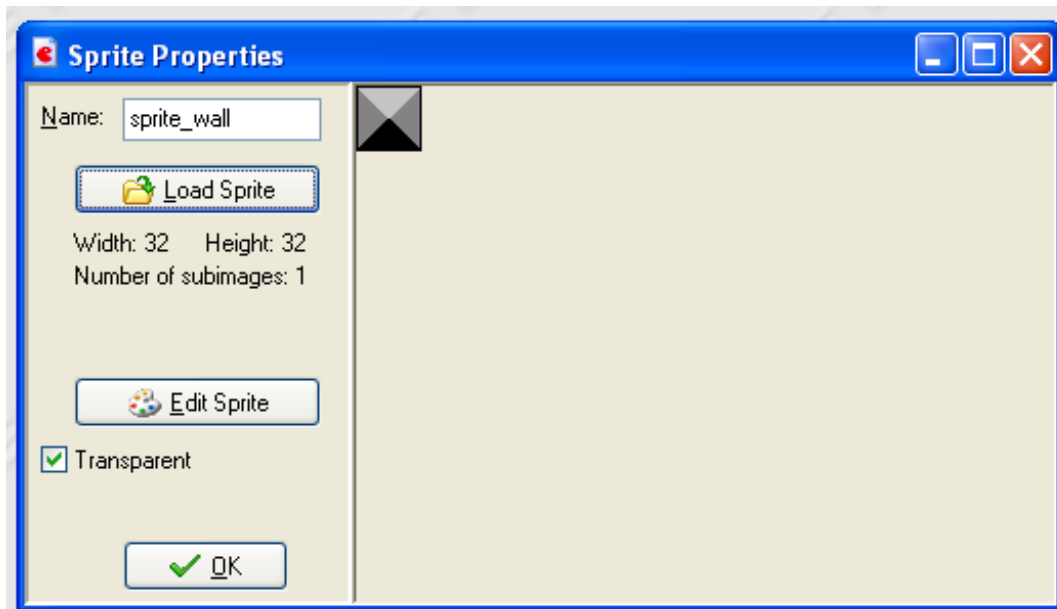
1. First we need to create the sprites for our game. On the **Resources** menu select **Create Sprite**



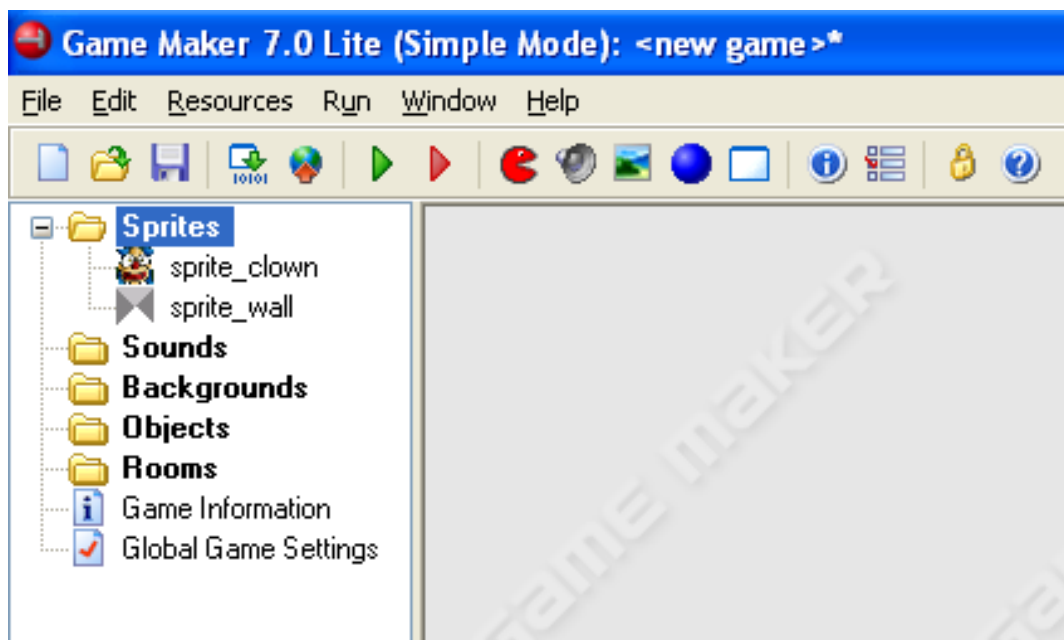
2. In Sprite Properties popup box change the **Name** field to **sprite\_clown** and press the **Load Sprite** button and browse to **S:\ICT\My Teacher\Mr Crossan\Game Maker\Catch the Clown\Resources\** and click on the **Clown.bmp** file, then click **Open** to load the sprite. The last step is to make sure you have checked the **Transparent** check box to ensure that the background of the clown sprite is see through. Click the **OK** button to close the popup window.



3. Create the wall sprite in the same way and change the **Name** field to **sprite\_clown**. You will find the image for the sprite at: **S:\ICT\My Teacher\Mr Crossan\Game Maker\Catch the Clown\Resources\wall.bmp** The popup should like below:

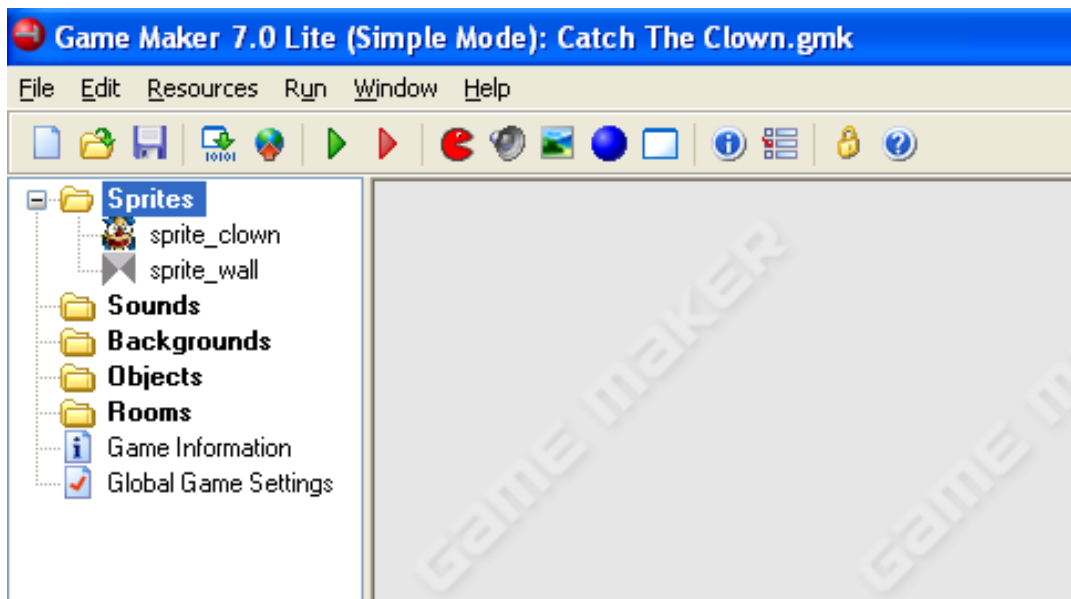


You have now created two **Resources** for your game, you can see these resources by expanding the Sprite menu on the left hand side of your screen.



You can edit the properties of any resources created for a game by clicking on it and selecting the **Edit >> Properties** menu. Let's skip this for now though, we have a game to finish!!!

4. We should now save our game. You'll see in the last picture that the game is currently called <new game>\* This means that you have not saved your game yet. Save the game to your own shared area under Year 7\Unit 3\Game Maker\CatchTheClown Look below and see how the name has changed on the blue bar at the top

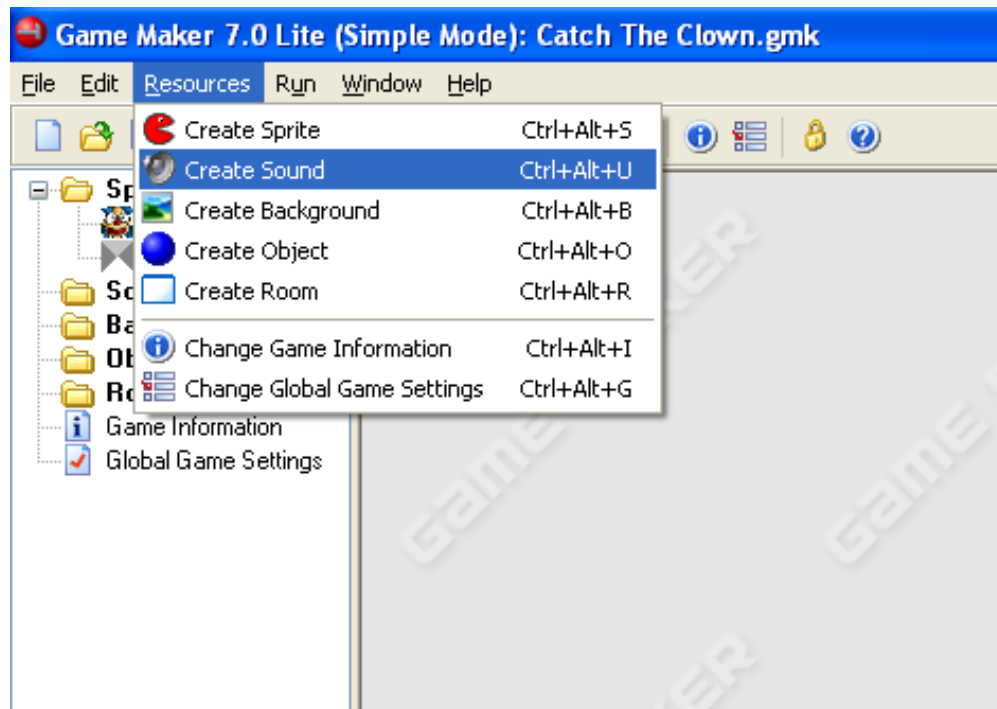


All good computer games come with sound effects. We need two sound effects for the Catch The Clown game:

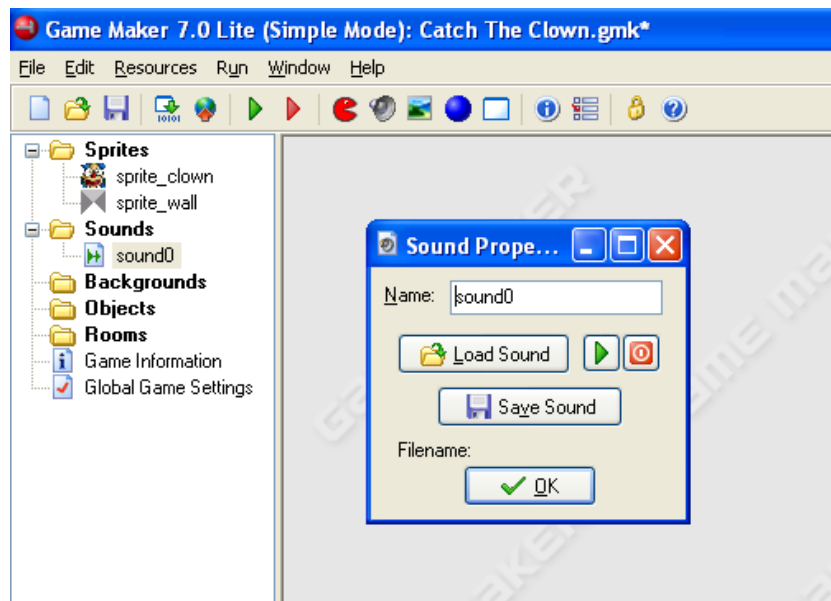
- A bounce sound for when the clown bounces of the wall
- A sound for when we catch the clown using the mouse

Let's create the bounce sound first, go to step 5 on the next page.

5. To create the sound for our game. On the **Resources** menu select **Create Sound**



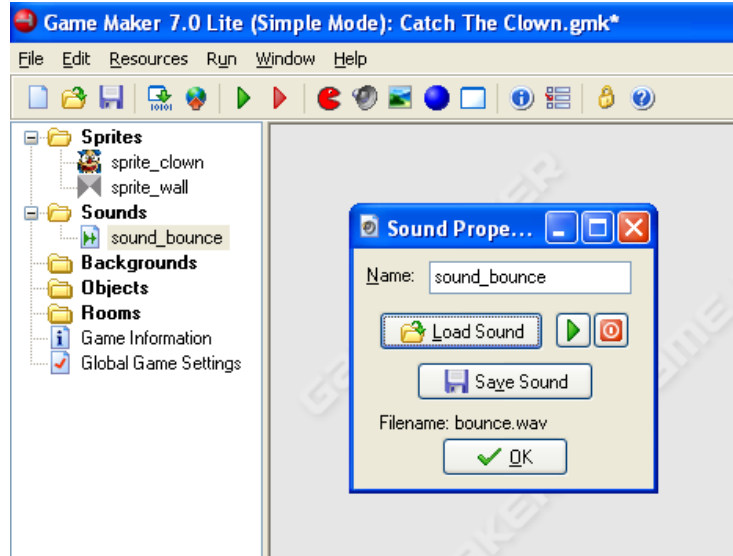
You will see the Sound Properties popup box like below:



Go to the next page to see how to load the sounds ->

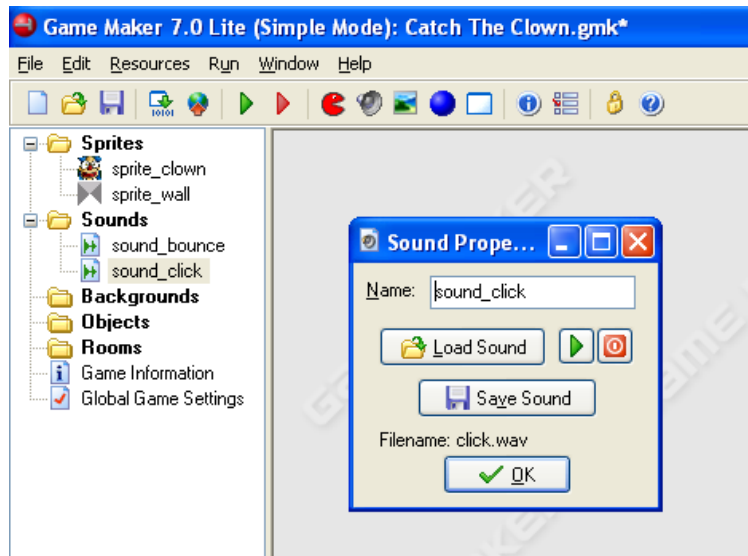
In the Sound Properties popup box change the **Name** field to **sound\_bounce** and press the **Load Sound** button and browse to **S:\ICT\My Teacher\Mr Crossan\Game Maker\Catch the**

**Clown\Resources\** and click on the **bounce.wav** file, then click **Open** to load the sound. You will know that your sound has loaded as you will now see **Filename: bounce.wav** in the popup box. You can use the little green arrow to play the sound so that you can test it.



Click the **OK** button to close the popup window.

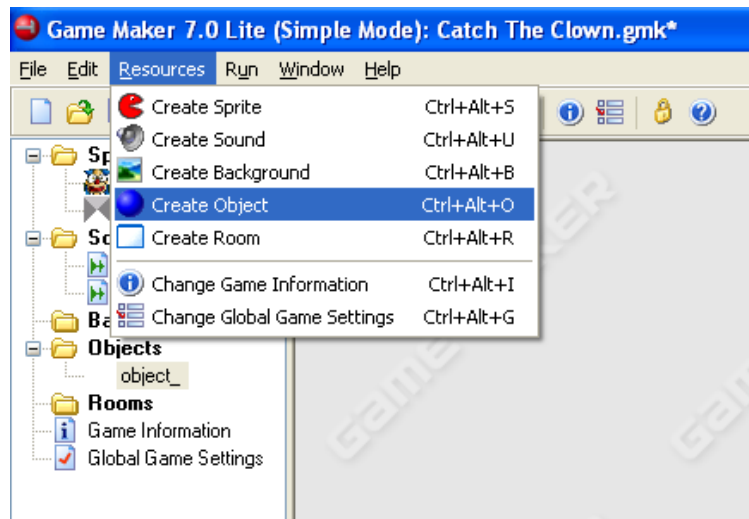
**6.** Create the click sound in the exact same way. Change the **Name** field to **sound\_click** and when you click the Load Sound button, browse to **S:\ICT\My Teacher\Mr Crossan\Game Maker\Catch the Clown\Resources\** and click on the **click.wav** file and click **Open** to load the sound file. Here's how everything should look before you press the **OK** button.



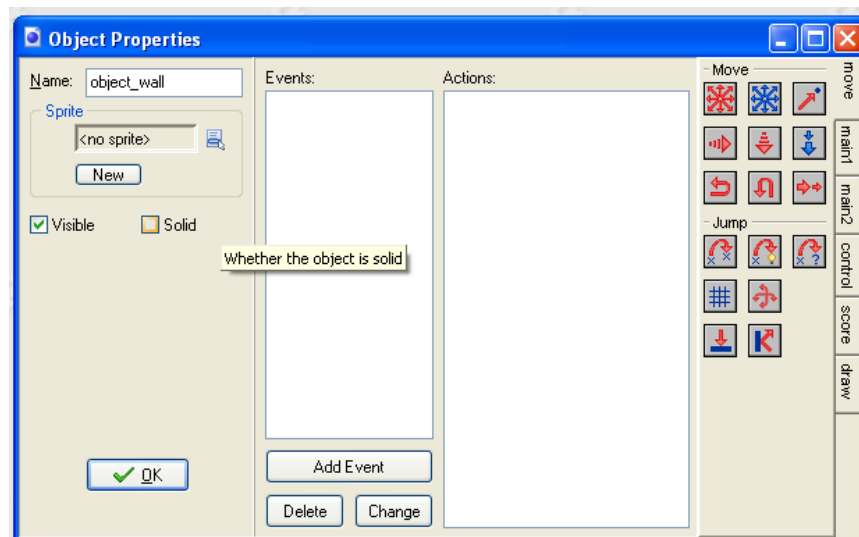
You will now see your sound resources when you expand the Sounds folder in the Resources box on the left hand side of the Game Maker User Interface.

So now we have created 4 resources for our game the next thing to do is to make them work as part of our game. To do this we need to create objects. I bet you can guess how to create an object!!!

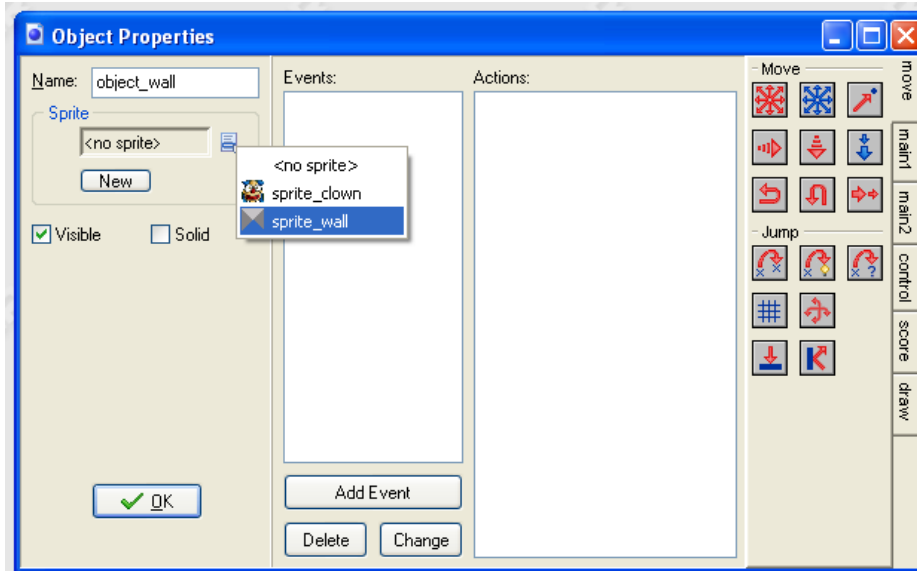
## 7. To create an object, go to the **Resources** menu select **Create Object**



When the Object Properties popup box appears change the Name field to **object\_wall**

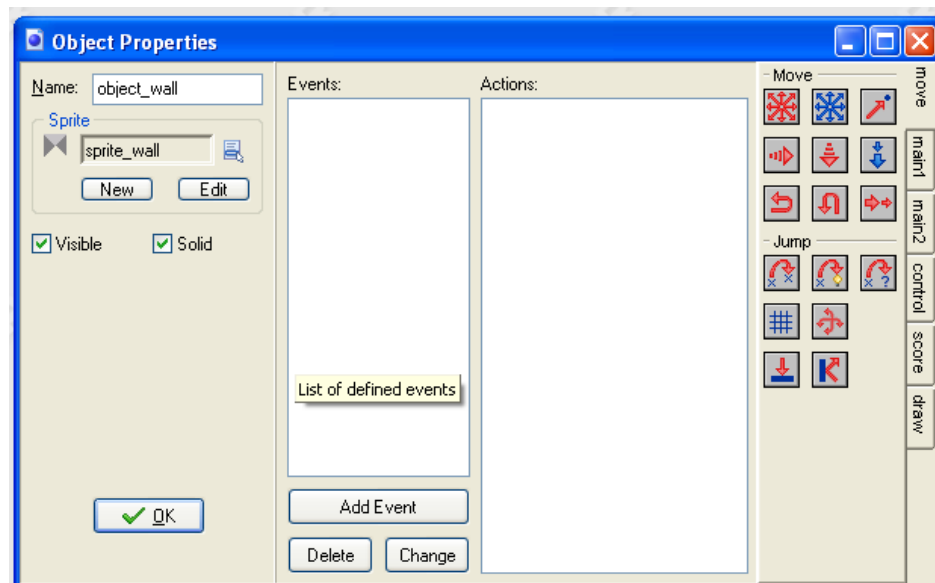


In the Sprite section click on the blue button where it says <no sprite> to select the correct sprite. Have a look below at how to do this.



When you click the blue button use the mouse to select the wall sprite that we created earlier.

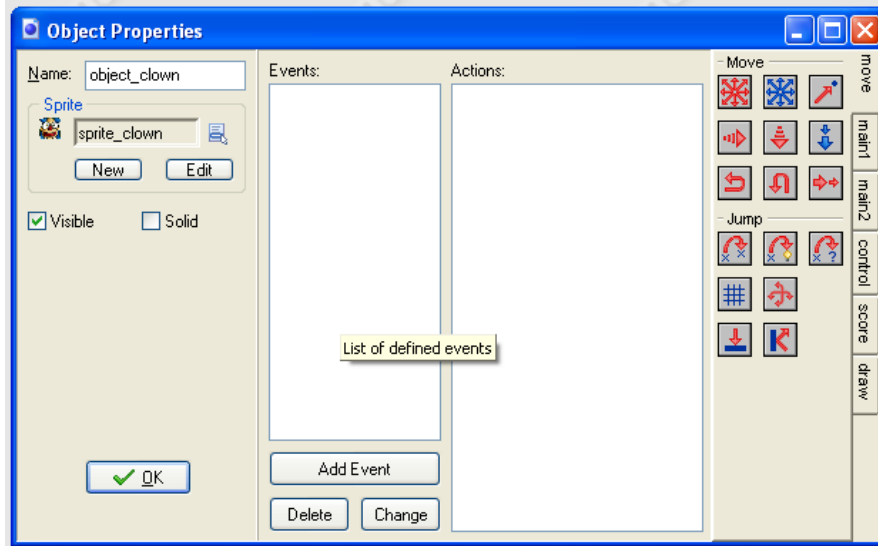
You also need to make sure both the **Visible** and **Solid** check boxes have a green check like this:



Click the **OK** button. That's our first object created.

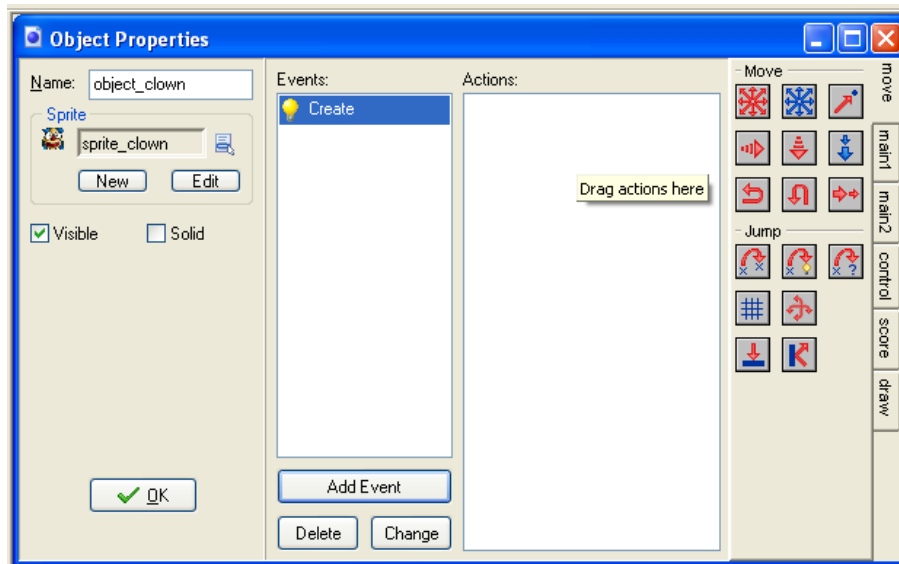
**8.** Now create the clown object in the same way. Remember change the **Name** field to **object\_clown**. Make sure that you select the clown sprite and that the **Visible** check box has a green check mark. Leave the **Solid** check box blank this time. See how it should look below.





Now we need to make our clown object do stuff in the game like move and bounce of the wall. To do this we need to add events and actions.

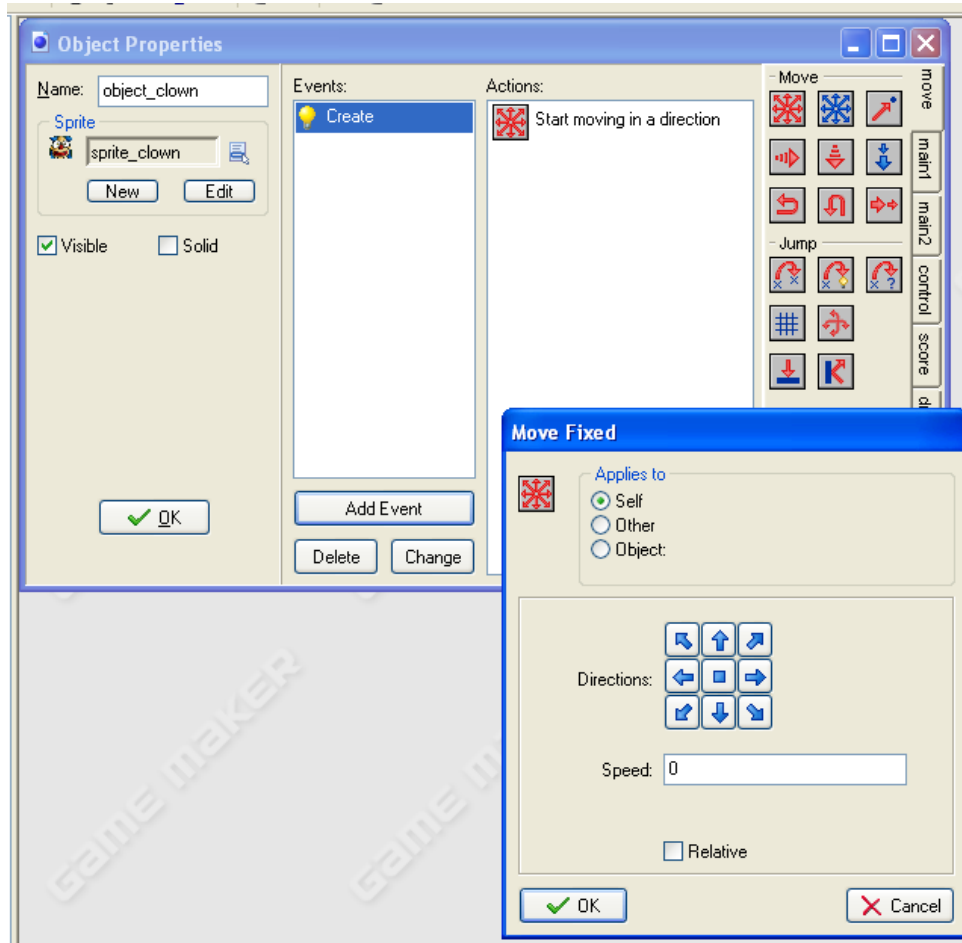
**9.** At the start of the game we need to ensure our clown object is created and that it starts to move. Click the **Add Event** button. You will see the Event Selector popup box, click the **Create** button. The Create event is automatically loaded into the **Events:** window it should be highlighted in blue and have a light bulb like below:



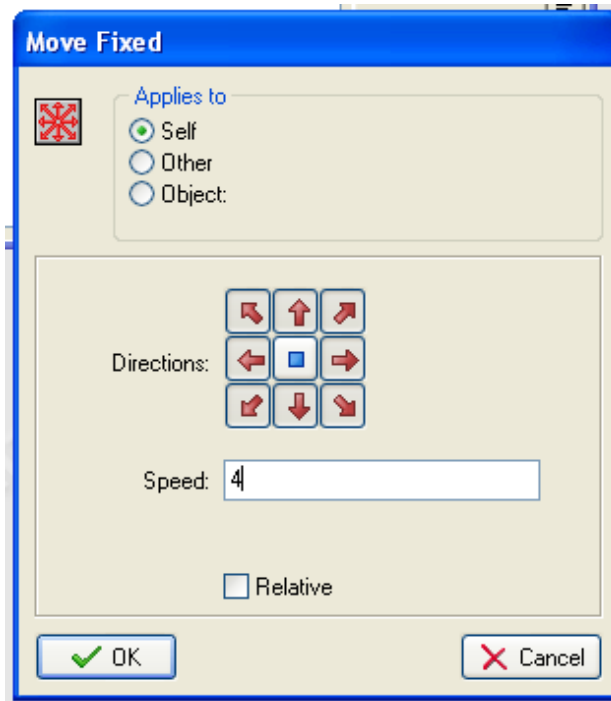
You now need to create an action for your create clown event. We need to drag the **Move Fixed** action into the **Actions:** window. The Move Fixed action can be found under the move

tab on the right hand side of the Object Properties box. It looks like this 

You will now see the Move Fixed popup box. Your window will look like this:



We need to click all the directions to make sure the clown object starts moving when it is created at the start of our Catch the Clown game. When you select all directions, direction is chosen at random. You can set the directions by clicking on the blue arrows, they will turn red when you click them. Do not click the square in the centre. Set the **Speed:** to 4. Have a look below to see how you should set everything up.

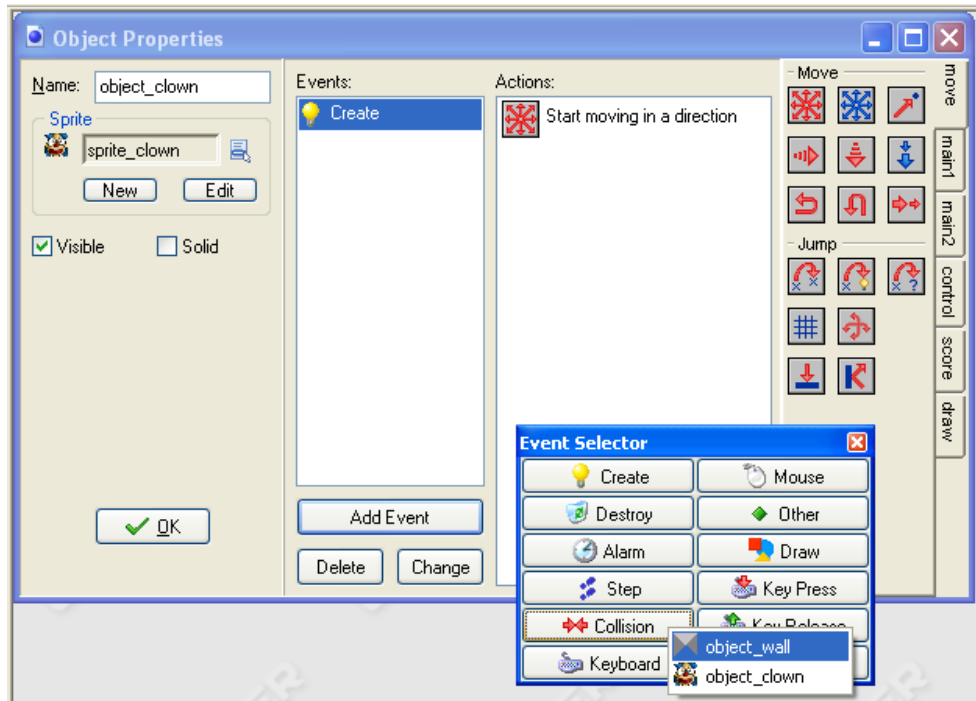


When you have set everything up like above, press the **OK** button.

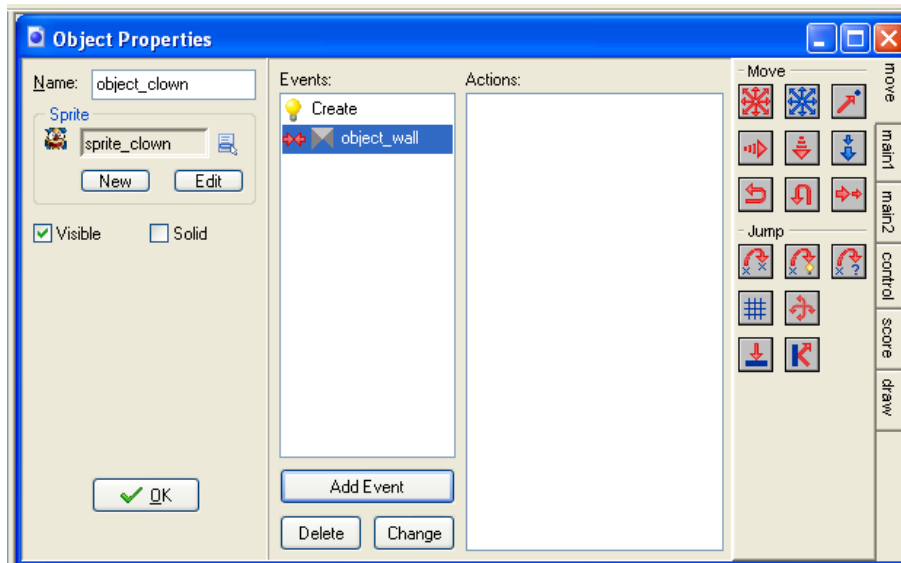
Now your clown object will move in a random direction at the start of the game.

Now remember what our finished game looks like. We have walls to and we need the clown to bounce of the wall when it collides with it. A collision is the same as a crash – when two objects hit together so we need to set up a collision event.


**10.** Click on the Add Event button, then click the Collision button in the Event Selector popup box. The collision button is the one with the two red arrows pointing together. When you press it you will get another small drop down box. Use the mouse to select the wall object as we are setting the clown up to react when it hits the wall. See below:



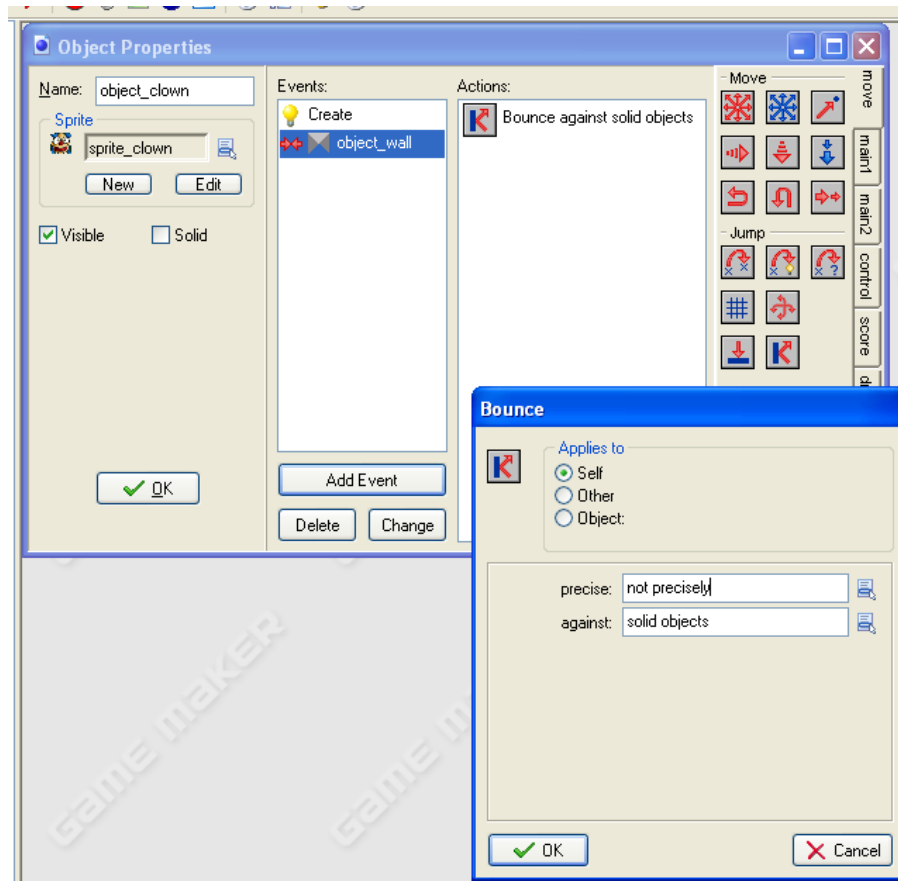
When you select the wall object your Object Properties popup should like below:



The Collision event will be highlighted in blue this time. Now we need to create some actions

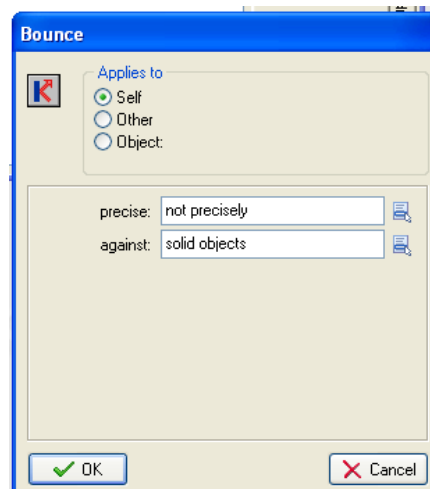
again. Drag the **bounce**  action into the Actions: window it's the one on the bottom right. You can find action by holding you mouse over them. The name will show in a small white box to tell you what action each one is.

When you drag the bounce event into the Actions: window it should look like below:



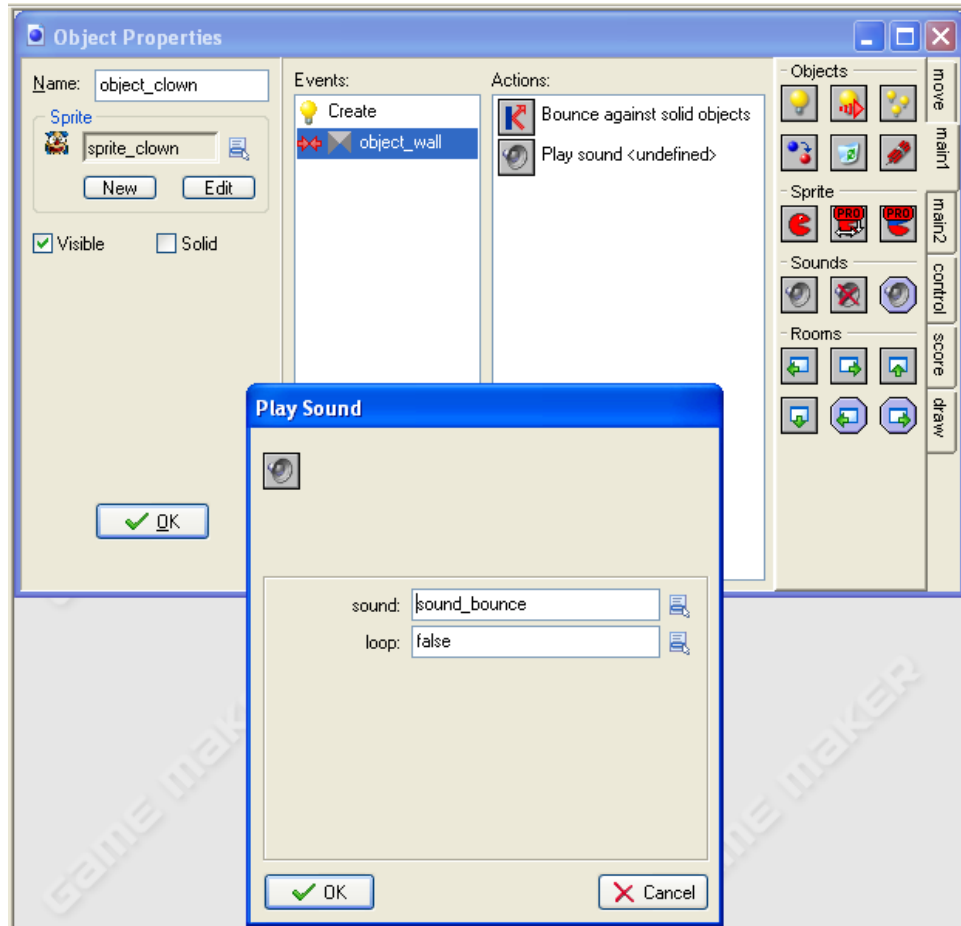
Set up the Bounce properties as follows:

- Applies to = Self
- precise: = not precisely
- against: = solid objects



Click the **OK** button and now we can add the bounce sound

Click on the **main1** tab in the actions list on the right hand side of the Object Properties window. Then drag the Play Sound action into the Actions: window. It should now look like below:

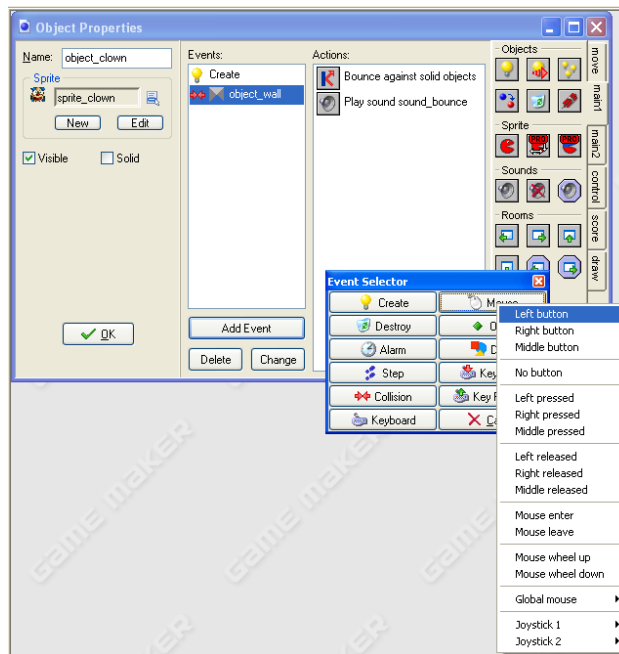


Using the small blue buttons on the Play Sound popup window select the **sound\_bounce** file and set **loop: = false**. If you've got this far this should be easy for you. Click the **OK** button when done.

That means now when our clown collides with the wall it will bounce away and a sound will be played.

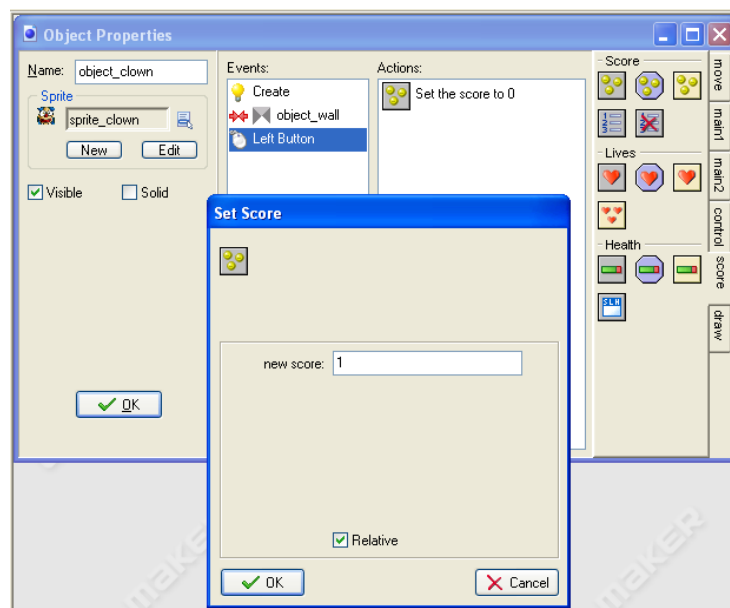
The last event we need to do is to make sure that the speed of the clown increases when you click on it with the mouse or when you 'Catch the Clown'. We also need to increase the score when you catch the clown, we'll also need a sound for this.

**11.** Create a **Mouse** event by pressing the **Add Event** button. Select **Left button** from the big drop down list.



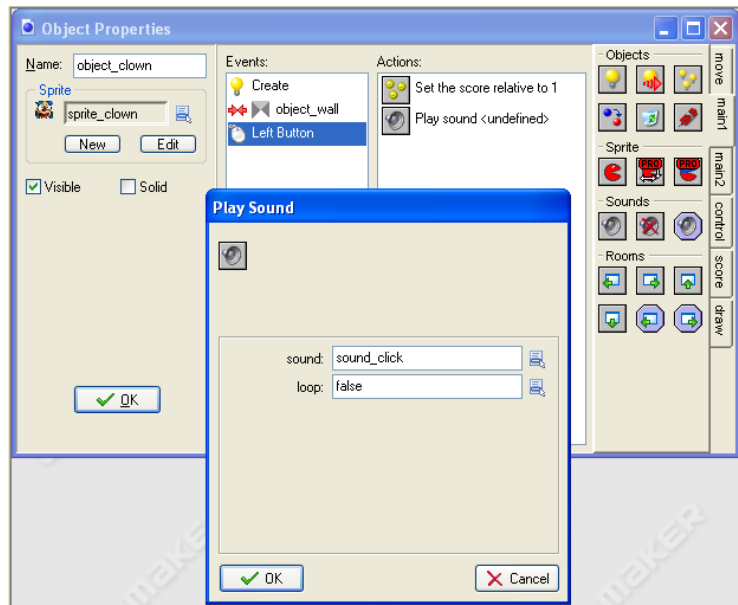
We need four actions:

Click the **Score** tab and drag the **Set Score** action into the Actions: window Set up **new score: = 1** and make sure the **Relative** check box is checked



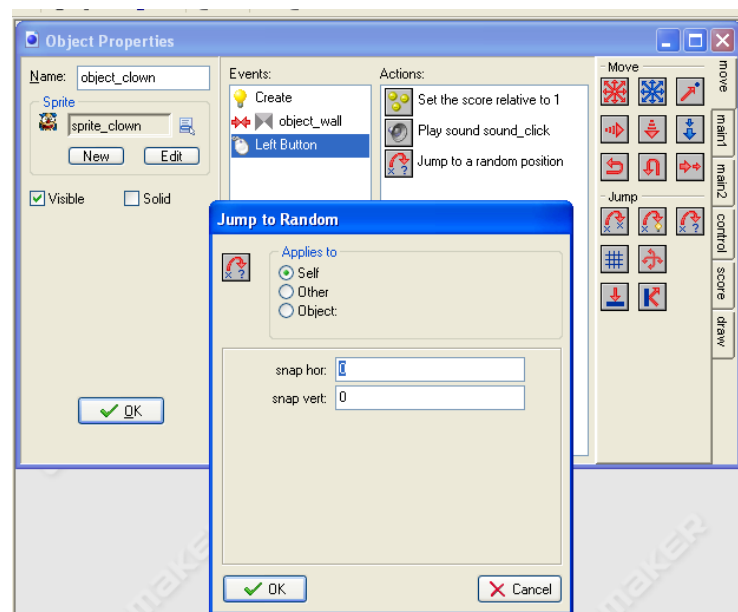
Click the **OK** button.

Click the **main1** tab and drag the **Play Sound** action into the Actions: window Set up **sound:** = **sound\_click** and **loop:** = **false**



Click the **OK** button.

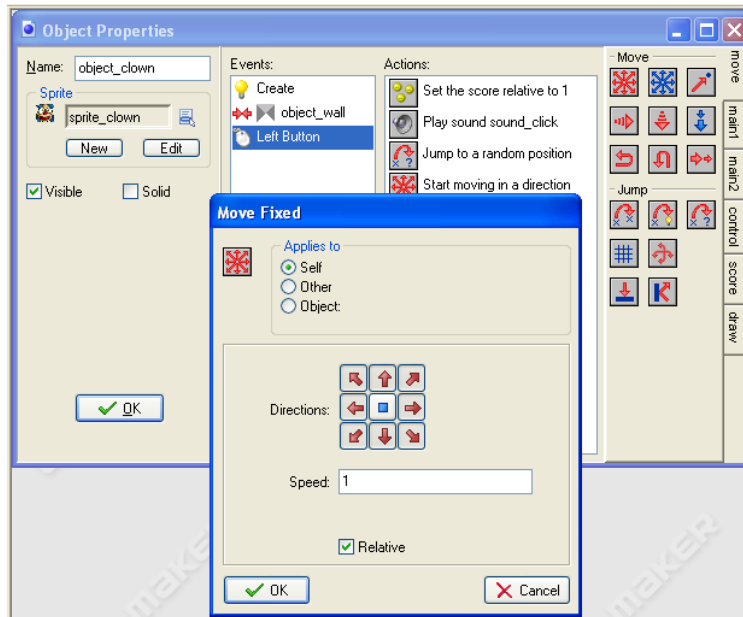
Click the **move** tab and drag the **Jump to Random** (be careful it's the one with the ? in it) action into the Actions: window Set up **Applies to** = **Self** and **snap hor:** = **0** and **snap vert:** = **0**



Click the **OK** button.



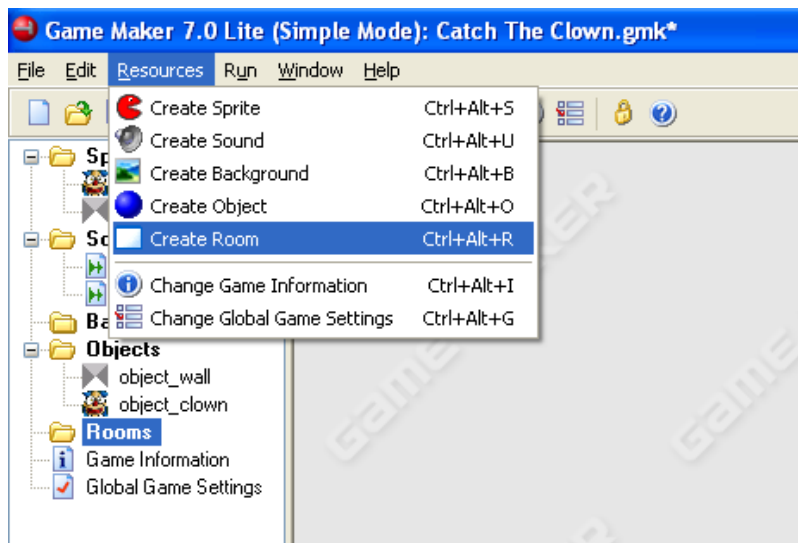
Click the **move** tab and drag the **Move Fixed** action into the Actions: window Set up **Applies to = Self** and **Speed: = 1** and make sure that the **Relative** check box is checked. This will ensure that the speed of the clown increase by 1 every time you catch it and it will move to a random position and move in random directions.



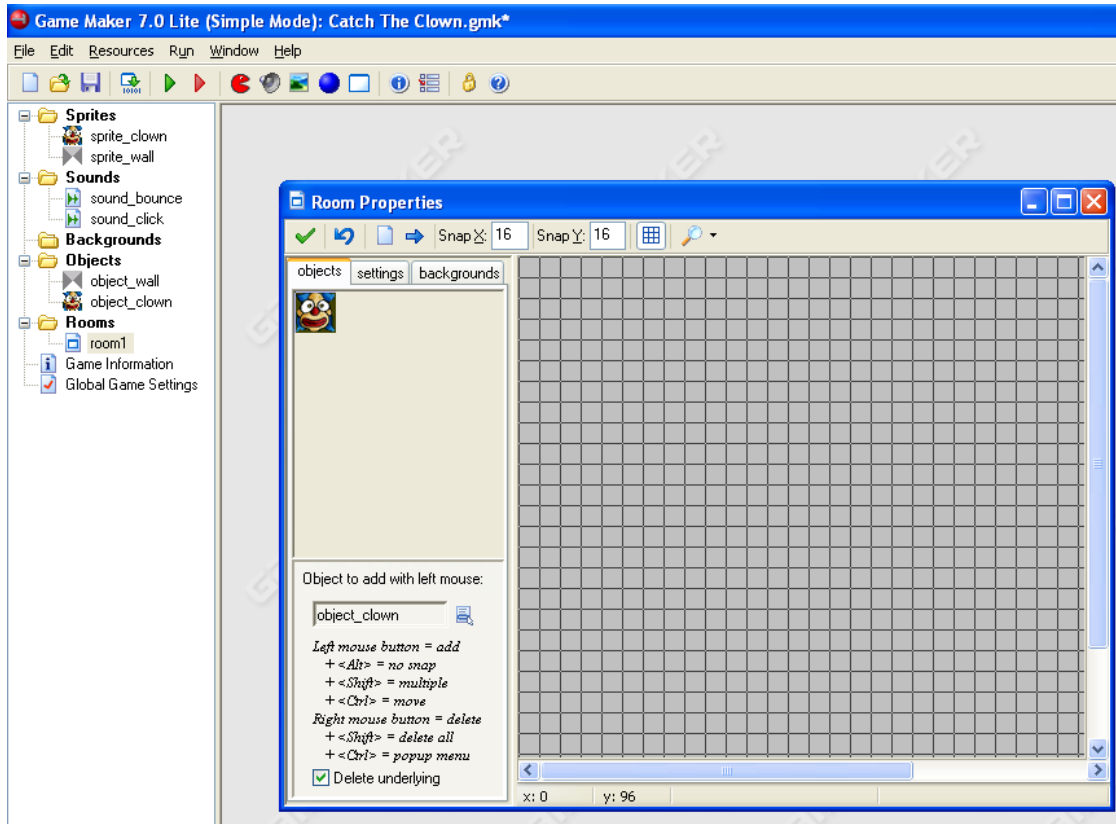
Click the **OK** button.

Our game is nearly ready now the only thing we have left to do is to create a room for our game to be played in.

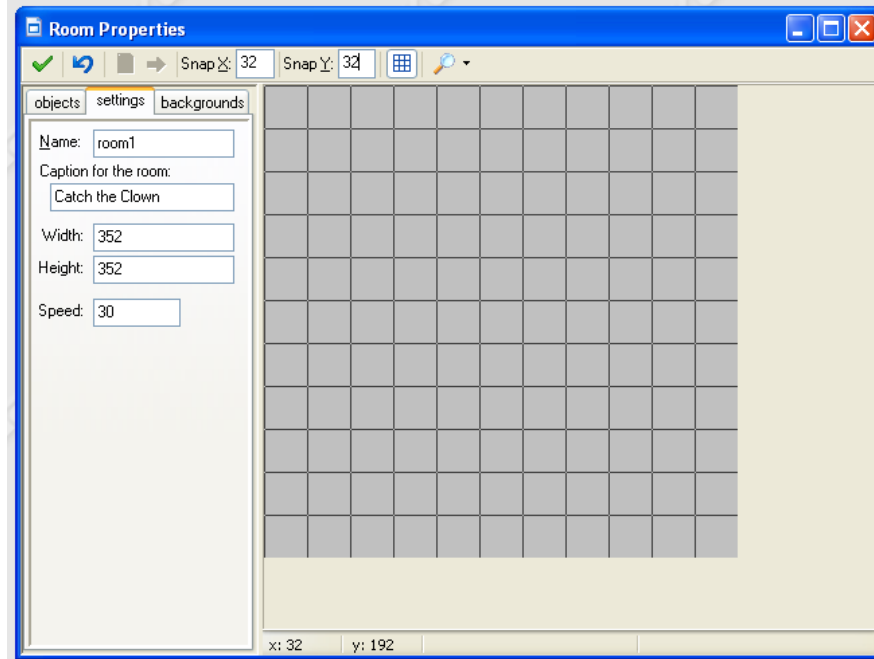
## 12. Select **Create Room** from the **Resources** menu



You'll see the Room Properties popup window like below:

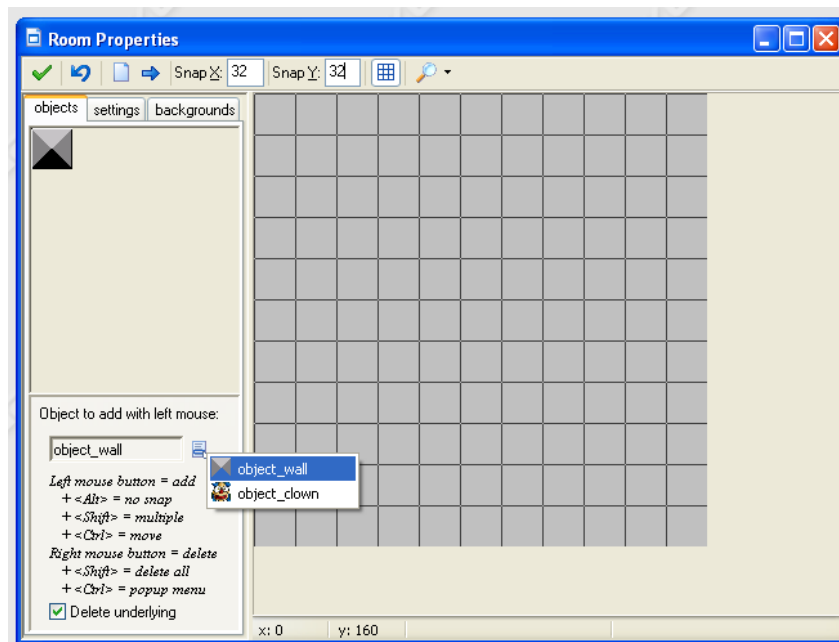


There are 3 tabs in the Room Properties window **objects**, **settings** and **background** (just above the clown's head in the image above). First of all we will use the **settings** tab to change the size of our room and create a name for the game. Click on the **settings** tab and set it up like the next image. Change **Snap X:** to **32** and **Snap Y:** to **32** – the reason for doing this is that our sprites are 32 wide and 32 pixels long and this makes it easier to draw them in a minute. Leave the **Name** field as **room1**, Set **Caption for the room:** to **Catch the Clown**, Set **Width:** to **352** and **Height** to **352**. Leave the **Speed:** at **30**

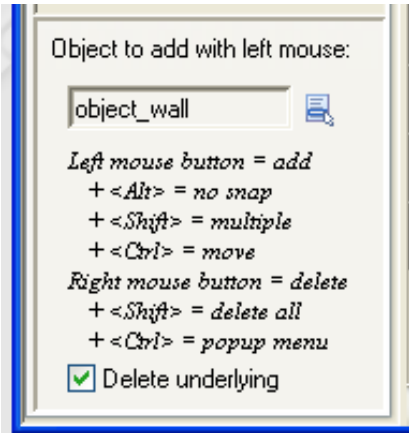


You will now see that the size of the room has changed. Changing the **Caption for the room:** to **Catch the Clown** will make sure the name of our game is displayed when we play it.

Next click on the **objects** tab. This is where we draw the room. You need to select which object you want to draw using the little blue button under where it says **Object to add with left mouse:** First select our wall object.

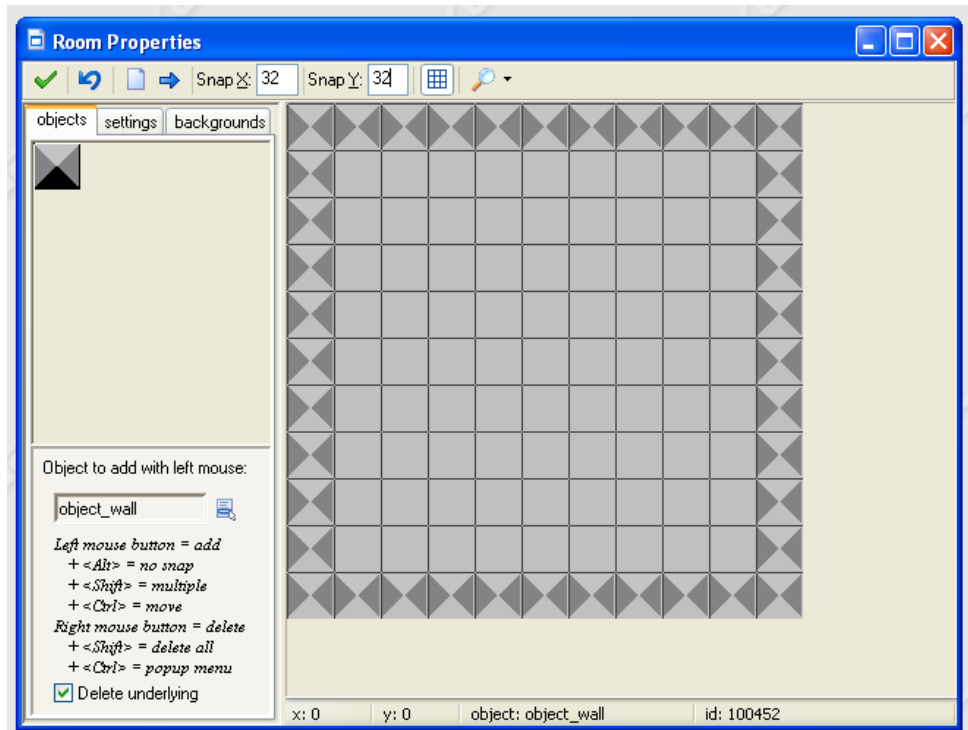


You can now click into the boxes where you want each of the wall blocks to appear. We can do them one by one but you can hold down the <shift> key and click the left mouse buttons to draw lots of squares at the same time. The full list of drawing instructions can be seen at the bottom of the **objects** tab window. The right mouse button is used to delete objects.

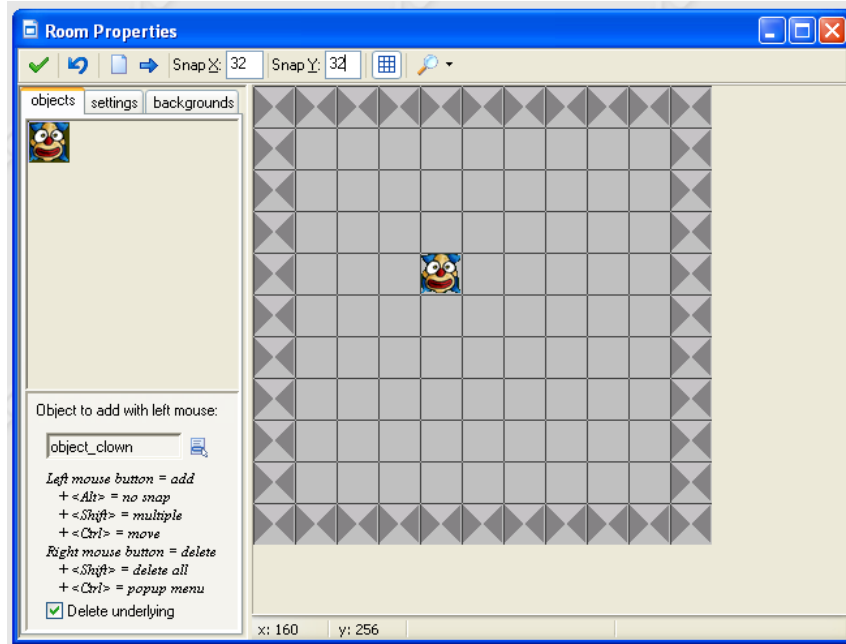


You will need to practice to be able to use these skills!!!

Draw a wall around the outside of your room like below:

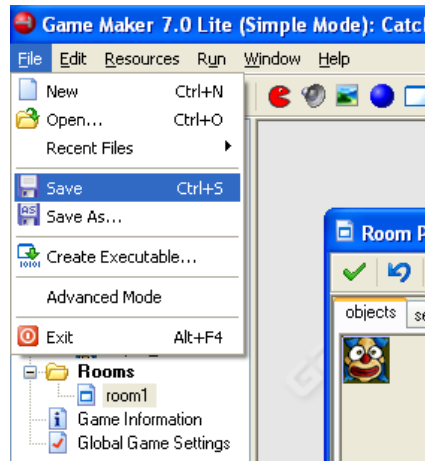


Now we need to add our clown. Use the small blue button to select our clown object like below:



Now click the left mouse button where you want your clown to appear at the start of the game.

Guess what? your game is now ready if it looks like above!!! Save it again using the **File >> Save** menu.



We now need to test our game by playing it 😊 to play the game. Press the little green arrow at the top of your screen.



**Testing:**

!!!!!! Testing is one of the most important things in game design !!!!!!

Check that the game is working correctly using the following checklist.

What to Check	Does it work
Does our clown appear at the beginning of the game?	Yes or No
Does the clown move at the beginning of a game?	
Does the clown bounce off the wall when it hits it?	
Does a sound play when it bounces of the wall?	
Can you catch the clown with the left mouse button?	
Did a sound play when you clicked on the clown?	
Did the clown jump to a random place when you clicked it?	
Did the clown change directions after it jumped?	
Does the clown speed up after you catch it	
Does the name appear in the blue bar at the top of the game?	
Does the score appear in the blue bar at the top of the game?	
Does the score go up every time you catch the clown?	

If all the answers are yes, then you're game has passed the test. If you have one or more No answers you will need to edit your game to make sure it works.

**Congratulations!** You're now a **game designer** and a **game tester**

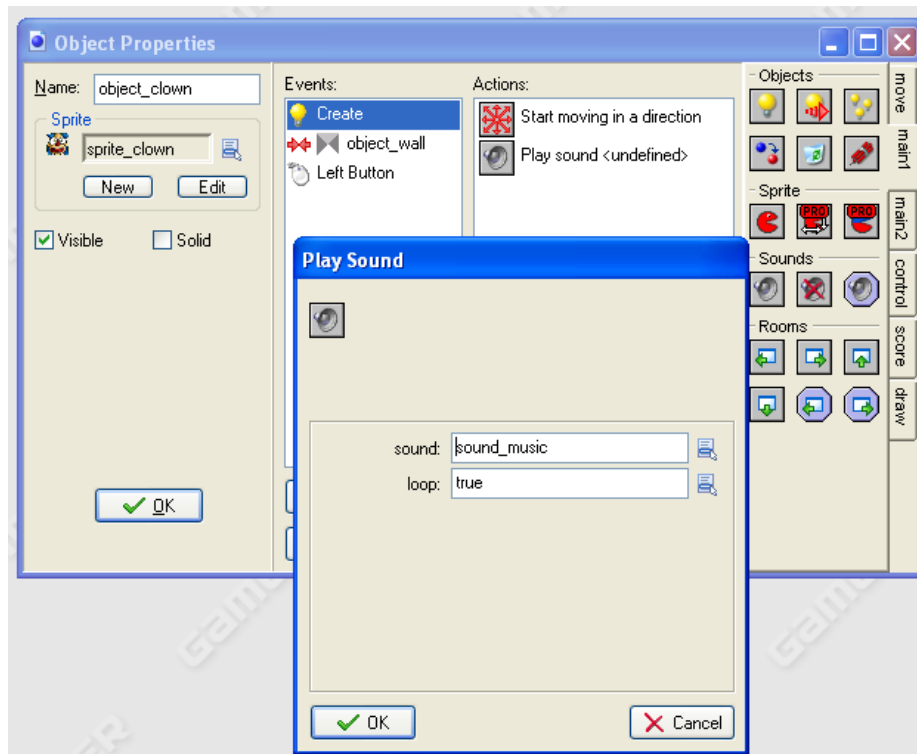
Now let's improve the game by adding a background to our room and playing some music during the game.

## Adding the music

To add the music. On the **Resources** menu select **Create Sound**. In the Sound Properties popup box change the **Name** field to **sound\_music** and press the **Load Sound** button and browse to **S:\ICT\My Teacher\Mr Crossan\Game Maker\Catch the Clown\Resources\** and click on the **music.mid** file, then click **Open** to load the sound. It should look like this, Press **OK**



You now need to make the sound play. Double click the clown object to open the Object Properties window for the clown. Now select the **Create** event it should highlight in blue when you do this like below:

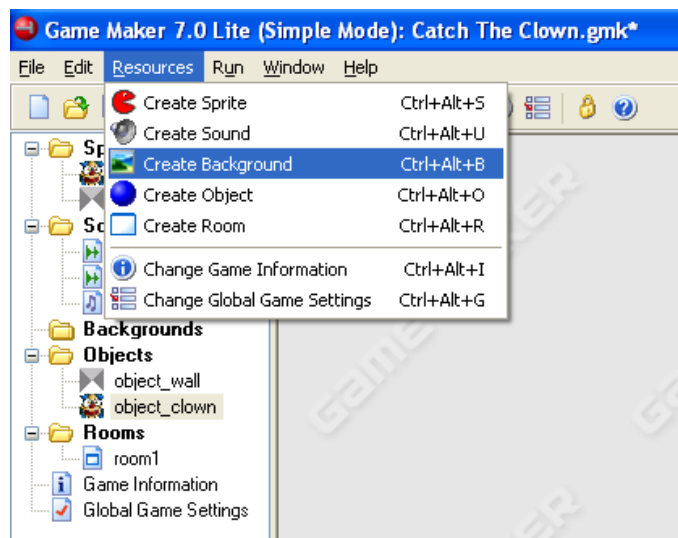


Click on the **main1** tab in the actions list on the right hand side of the Object Properties window. Then drag the Play Sound action into the Actions: window.

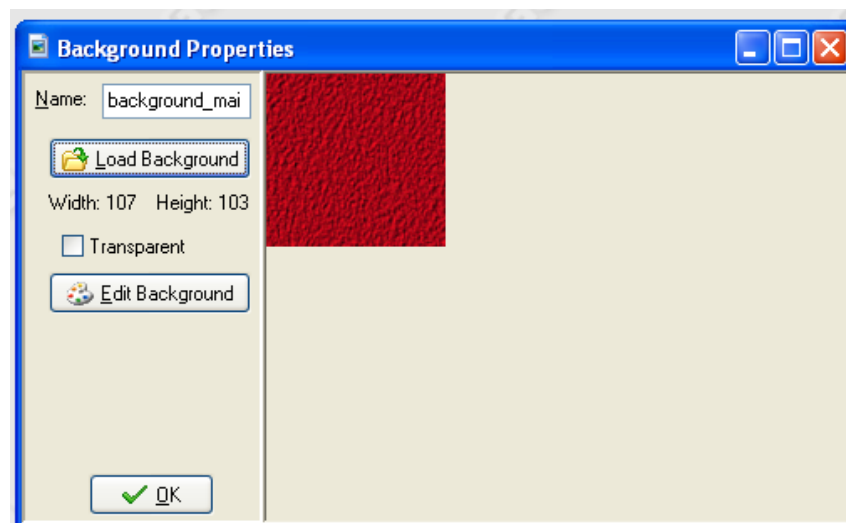
Using the small blue buttons on the Play Sound popup window select the **sound\_music** file and set **loop: = true**. Setting loop = true means that the sound will play . Click the **OK** button when done.

## Adding the Background

Select **Create Background** from the **Resources** menu



When you see the Background Properties popup window set it up like this:

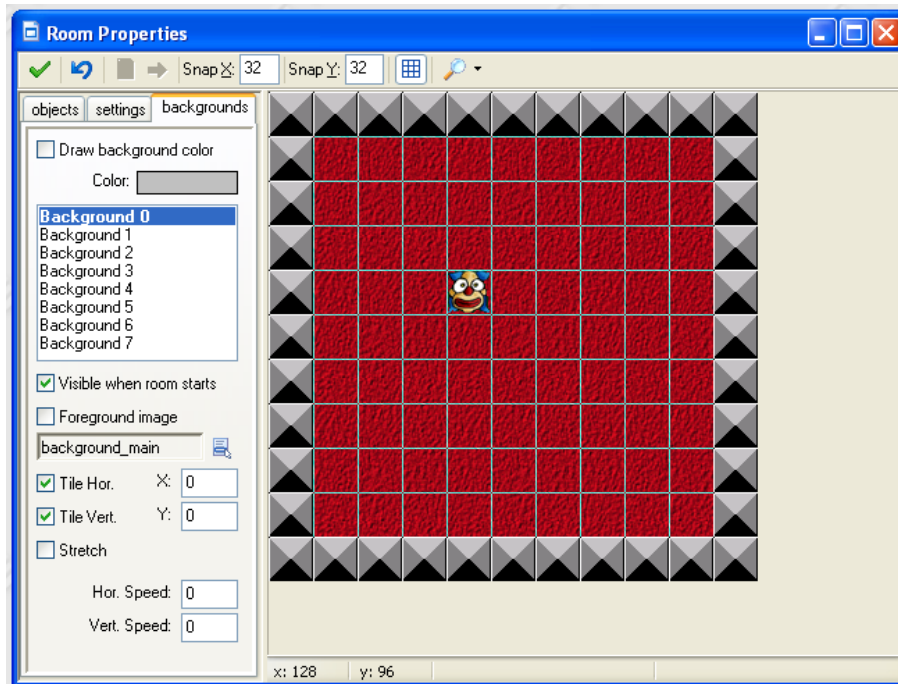




Change the **Name** field to **background\_main** use the Load Background button to load the **background.bmp** file located in the **S:\ICT\My Teacher\Mr Crossan\Game Maker\Catch the Clown\Resources** folder. Leave the **Transparent** check box blank. Press the **OK** button.

Now go back to the Room Properties window of **room1** by double clicking on room1 on the resources menu on the left hand side. Set it up like this Uncheck the **Draw background color**. Check the **Visible when room starts** box. Select the **background\_main** using the small blue button. Check the **Tile Hor.** and **Tile Vert.** boxes. Set **X: = 0** and **Y: = 0**. Uncheck the **Stretch** box and set **Hor. Speed: = 0** and **Vert. Speed: = 0**

Just like below:



That's it you've finished the game and added some improvements! Well done! You could make £50,000 per year as a game designer if you work hard in your ICT classes!!!



Now go and play your game to enjoy it!!!