Pacman Beta

1. Open the Alpha version of Pacman. The Alpha is a pretty strong start, but there are things that can be added to make it better. For starters, Splash screens!
2. In Illustrator, make a welcome, win and lose splash screen. The default room size is 1366 x 768 so make a new document, choose Web to set up the resolution, color mode and units. Change the width and height to the size of the room. Somewhere on the welcome screen should be the title of the game and text that says press space bar to go to the next room as well as an attractive layout the matches the tone of the sprites and game. Once completed, save the files as an Illustrator document and then export them as PNG's.

3. In the Asset Browser, click Create Asset, Sprites, 3 and press Create. Name the each rm_welcome, rm_win and rm_lose. Press the Import button and load the appropriate image for each as well.
4. Next make 2 more rooms and name them after each of the sprites that were just created. Open each room, click on the Background Layer along the left side panel and then at the bottom of the same panel, load the appropriate sprite.

5. Open the Rooms tab and click on the area in front of the room names to open the Room Manager. Drag rm_welcome to the top to make it the home screen. This will make it appear first. The only problem is that at the current time there isn't a way to advance past this screen. Create a new Object (Create Asset in the Asset Browser). Change the new objects name to obj_control. Press Add Event>Create and add a Go to Room block to the Actions area. Change the Room to rm_game1 then close obj_controls properties. Now open rm_welcome and add obj_contol to the room. It should show up as a gray circled question mark since it doesn't have a sprite. Close the room, save the game and run it to test it.
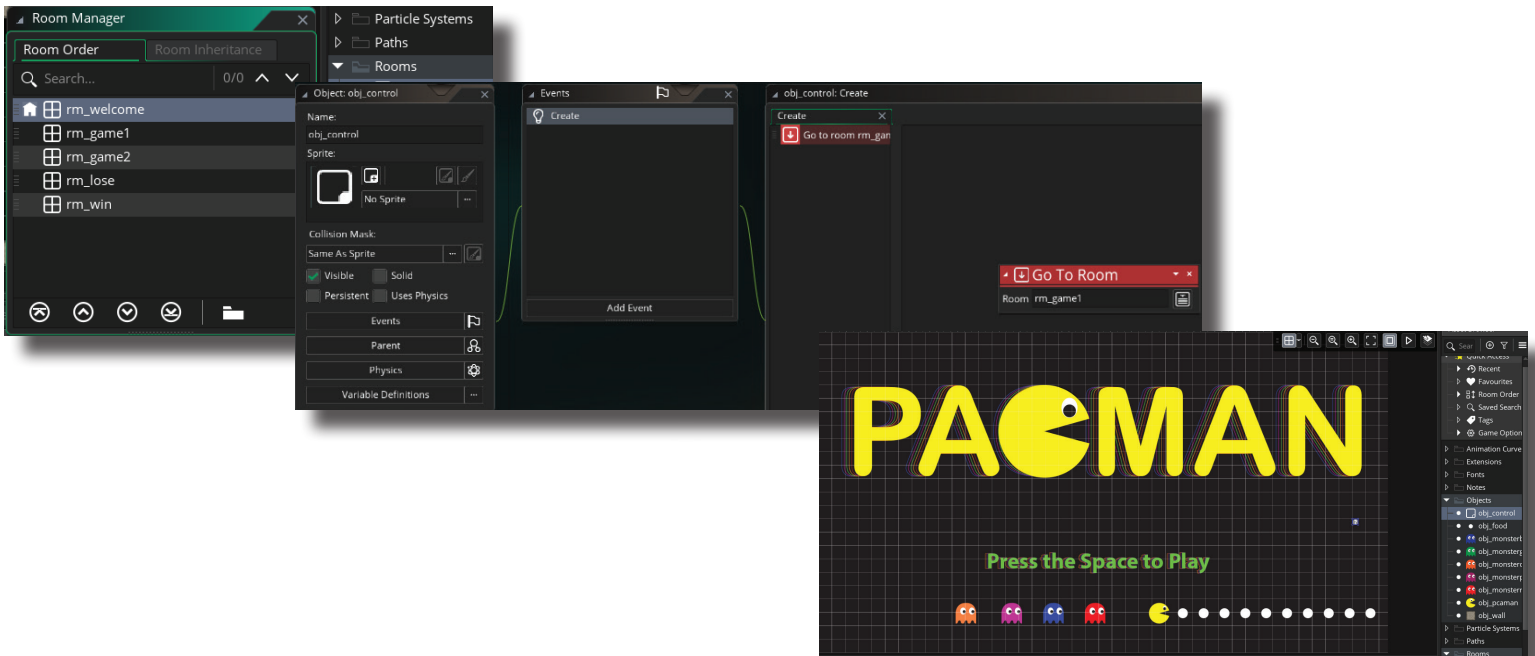

6. Now it's time to use some animation skills! In the example, Pacman is going to be animated just like the practice animation was in class. However, Pacman doesn't **have** to be animated... it could be any sprite actually but to earn full create at least one item must be animated. If animating pacman, and he turns to face different directions, then each directions need to be animated though! If unsure how to animate, refer back to the lesson or video on animating.

7. The next step is to make the second room a bit more challenging. One way to do this is to make the ghosts follow a path rather than simply having them patrol back and forth. This is not difficult to do, but is something new that will require planning.

8. Open rm_game2. Select and delete each of the monsters from the game room. Those monsters will be replaced with ones that look the same but are programmed to follow the path to make the movement more complex and harder to predict without extensive study.

9. In the Asset Browser, choose one of the monsters to start with. In the example, the green one is used. With it selected, right click on it and choose duplicate. To tell them apart, add a 2 behind the name of the new object since it's in room 2. Now place obj_monstergreen2 in the same spot as it was in for room 1. Repeat this for the other four monsters.
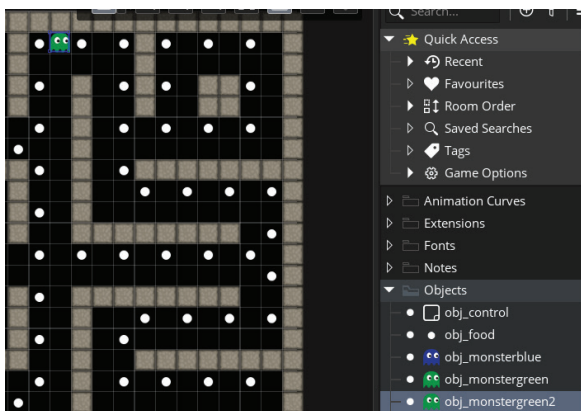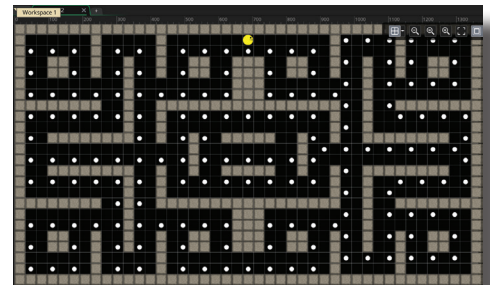
10. Open rm_game2 and choose a monster to start with. In the example the obj_monstergreen will be the first one. Hovering over the green monster will display the objects coordinates in the lower left corner of the Room Panel. In the example green should move down to the center pathway, right to the wall, up toward the vertical wall and then back toward the starting point making a L shaped pattern. See the example for more details. While hovering around the room, find the coordinates for this path and right them down.

Green
1002,44
1002,372
1323, 372
1323, 266
1098, 273
1098,44
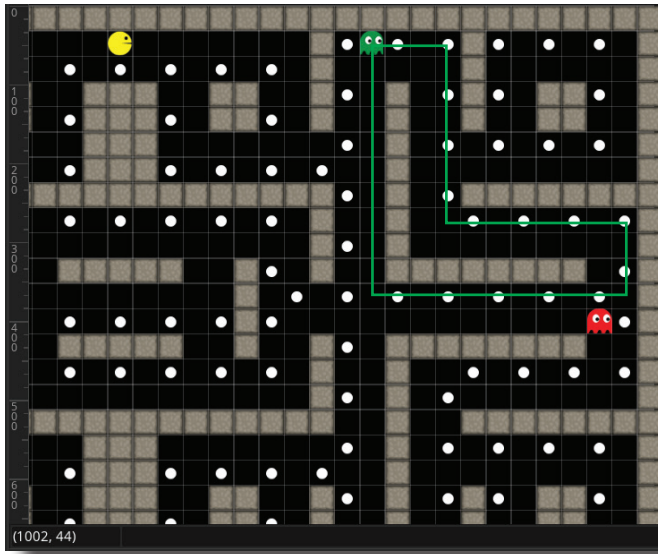
| Red	Orange	Purple	Blue
1295,462	910,593	396,398	78,458
1102,462	745,593	498,398	302,458
1102,688	745,722	498,272	302,722
973,688	621,722	879,272	366,722
973,369	621,592	879,365	366,81
1294,369	491,590	974,365	303,81
	491,722	974,206	303,272
	908,722	747,203	72, 272
		747,80	
		622,80	
		622, 209	
		396,204	

11. With the coordinates for the movement identified, press Create Asset, Path, 1 and then press Create. In the Workspace a path window will appear. Name the path green (or something similar for the given monster). Leave the Connection Kind at Straight Lines and check Closed to make the path a loop. Now click around the grid to make some coordinates and then change the X and Y values to those needed for the monster. In this case, obj_monstergreen's coordinates were added to make the L shaped path that the object will follow.
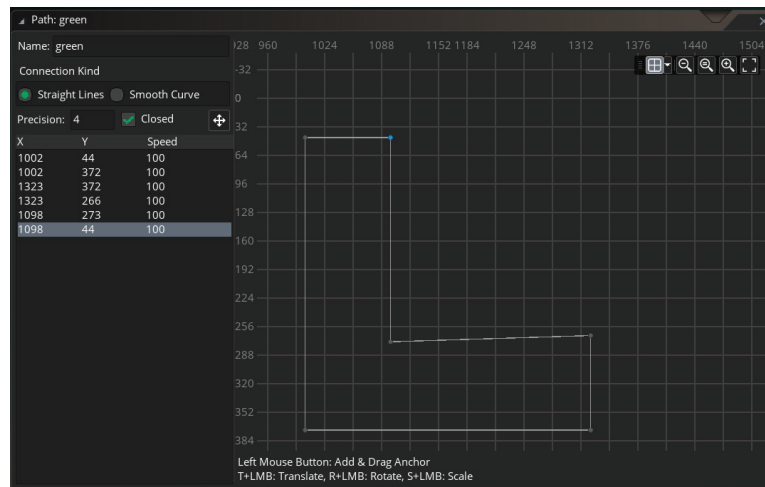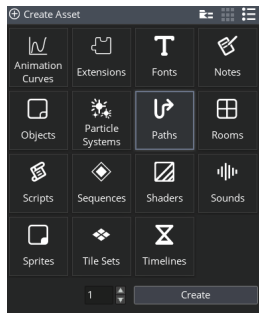

12. Open obj_monstergreen2. Open the Create event and delete both of the actions in the event. Also, delete the entire wall collision event.
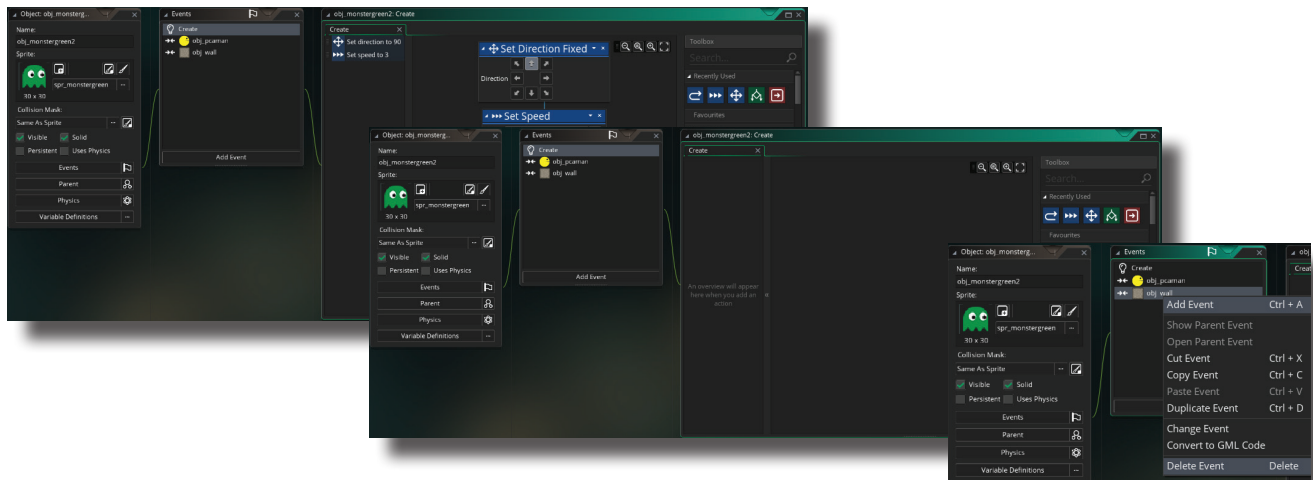
13. In the top left panel is layers. A new path layer needs to be created so click on the fourth button (hovering over it will reveal that it's called Create New Path Layer) to make the layer. Now drag the path from the Asset Browser onto the room and position it over the room where it should be. It may be useful to change the path's color to that of the object to aid in organization too.
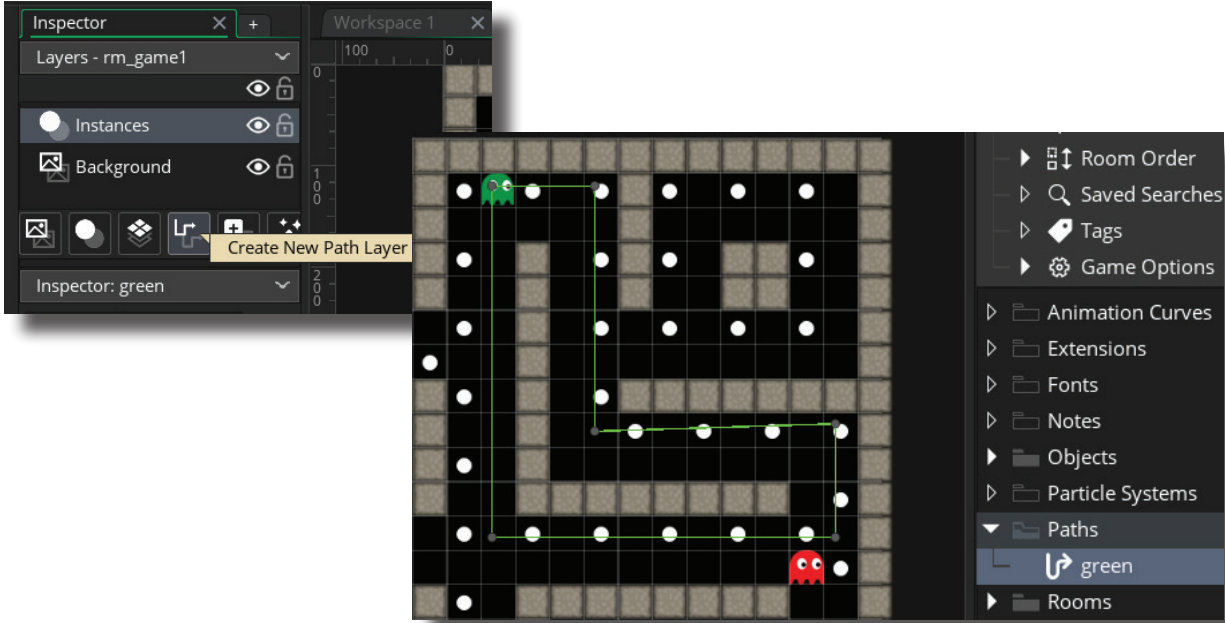
14. Now open obj_monstergreen (or whatever object the path is meant for). The create event starts the movement by setting the direction and the speed. From the Path section of the Toolbox drag a Start Following Path icon into the actions. The Path should be changed to green, the Speed should be 3 just like the other monsters and On End, set the movement to loop so it just continues on in that same motion. Absolute should be true so it uses those exact coordinates. Save and run the game. The monster should travel on the newly created path. That should complete the first monsters path. Now do the same thing for the other four using the previously planned routes.
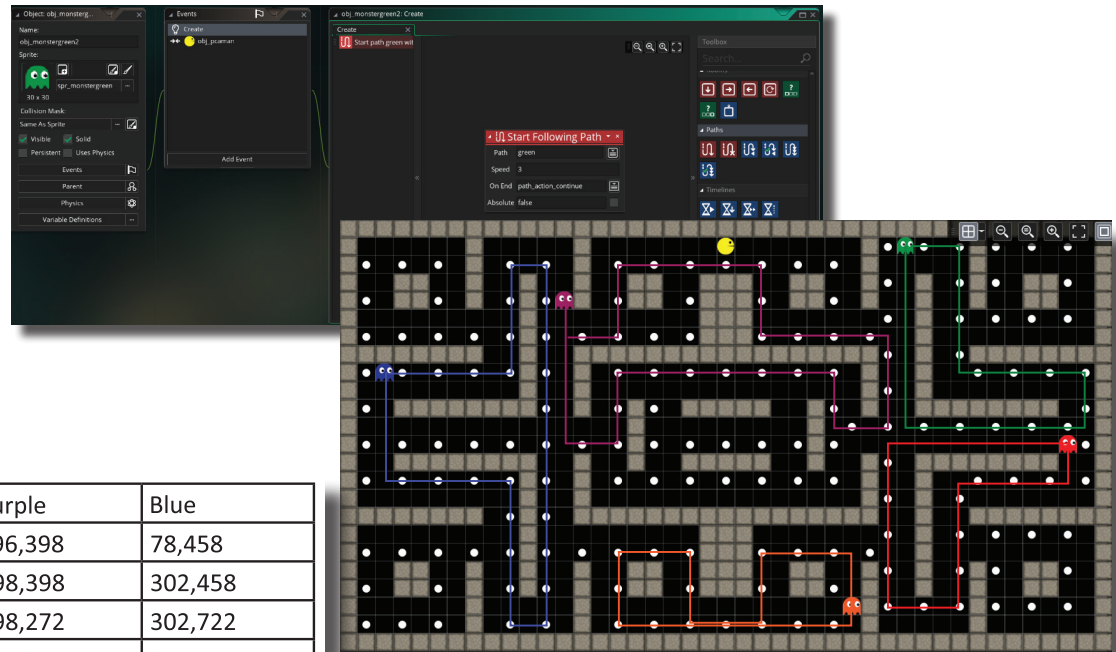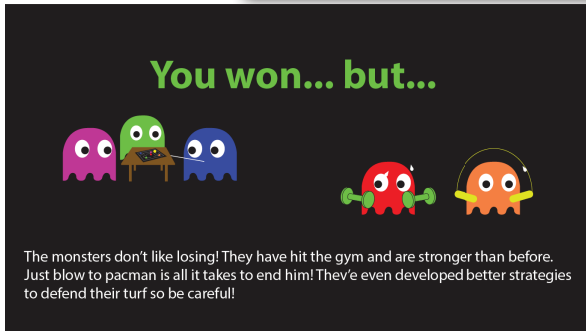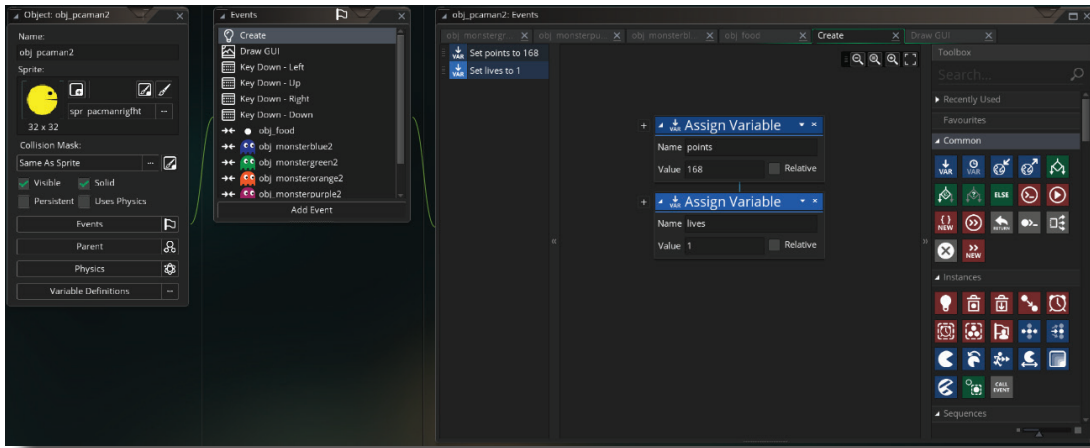

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		747,80	
		622,80	
		622, 209	
		396,204	

15. Playing the game should show that the monsters now follow a path but a new issue should noticeable... Pacman functions under the same situations as the first room. This means that the collisions with the monsters don't work and the score needs to carry from the first room. This shouldn't be too tough.

16. In the Asset Browser, find and duplicate obj_pacman. Change it's name to obj_pacman2 since he will live in room 2. Open the object to get into it's properties. Right click on one of the collisions with a monster and choose Change Event>Collision>obj_monstergreen2 (or whatever the name same monster is for room 2). While in Pacman, open the Create event and change the Assign Variable for points to the score that was required to enter the second room so that the points carry over to the new room. Adjust the collision for the other monsters too.

17. To make this room even more challenging, the player will only have one life. Collect all the food, and they win; fail to do so and they are branded a loser! In the Create event for pacman, drag an Assign Variable block in and change the Variable to Lives. The value should be one so the player only has one life.

You won... but...

The monsters don't like losing! They have hit the gym and are stronger than before. Just blow to pacman is all it takes to end him! Thev'e even developed better strategies to defend their turf so be careful!

18. Now since this room is going to play differently than the first is many ways, it's only fair to warn the player. In Illustrator, make a new splash screen congratulating the player for successfully navigating room one but also alerting them the monsters are now smarter than before and they only have one try at defeating them. Once complete, save the Ai file and export the new Splash Screen as a PNG.

19. Back in GameMaker, create a new sprite, name it appropriately and use the newly created PNG for it.
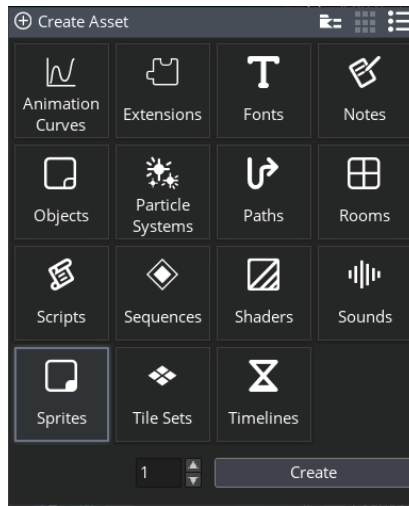
20. Now make a new room and name it. Then, in the Layers Panel, select the background layer and apply the new sprite to it. Finally, the control object (that was made solely to advance to the next room on space bar) should be added to the room.
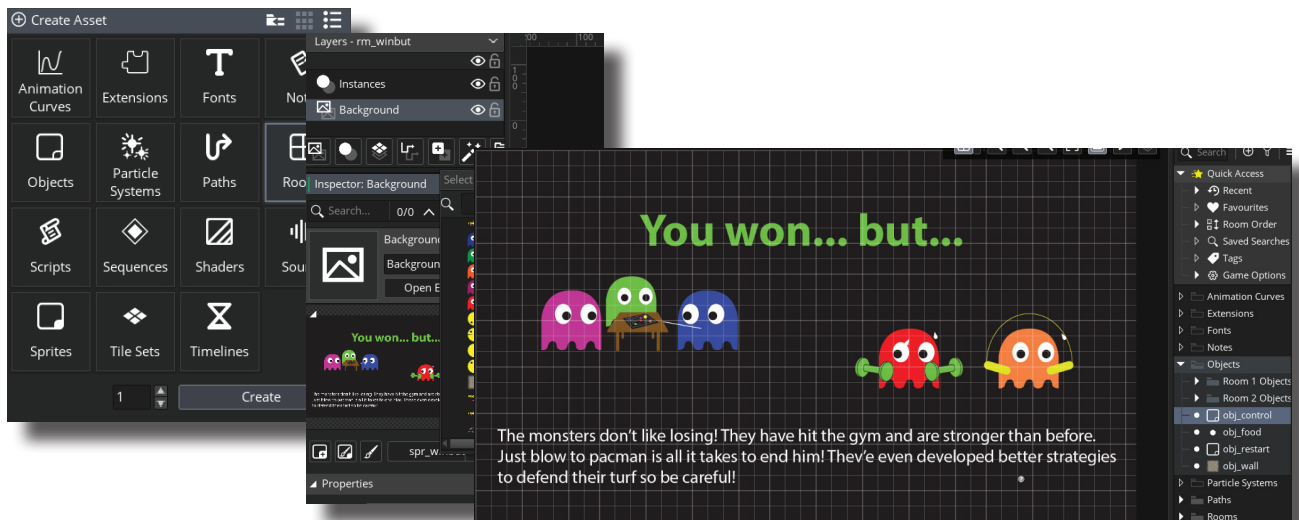
21. With the room set up, now programming needs to be created to make the room display before going to the second game room. Open the original pacman; in the example it's named obj_pacman. The collision between pacman and the food has test variable to determine if the score is high enough to proceed past the first game room so open it. Under the If Variable, change Go to Room to the newly created win. In the example this room is rm_winbut. Save the game and test it to see if the new room appears and advances with the space bar.
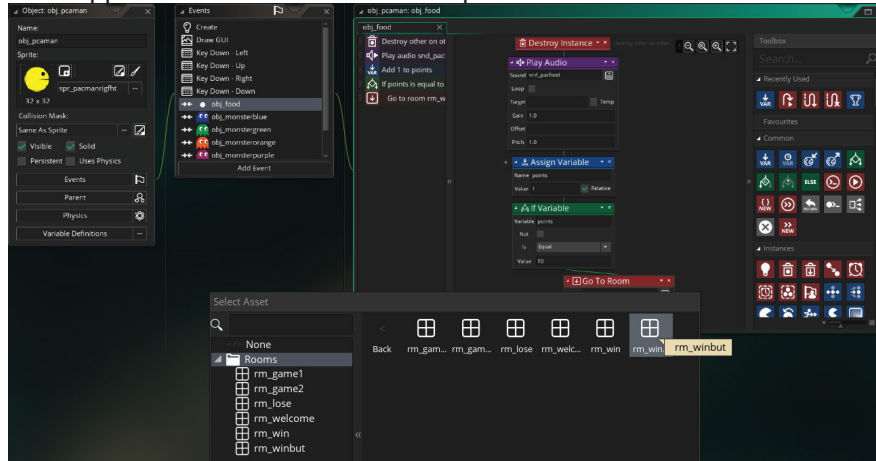
22. The last thing to add is the sound from Sonic Pi. To add the sound, start by making a new sound and naming it snd_music. Make a new object for the sound and name it obj_music or something similar. If the sound should play and then restart and play continuously, be sure to choose loop. The sound object will need to be added to the room in which it should play in so open the that room, and drag the objetc in.