

CLICKBALL: INTRODUCTION TO GAME MAKER

Build a basic game in 50 simple steps

NAME _____

A) Make a wall sprite and a ball sprite

1. Sprites > Create Sprite > Load Sprite Button > Year 6 G&T ICT > Clickball resources > wall.gif > Open
2. Name the sprite sprWall
3. Uncheck the Transparent checkbox for the wall sprite, since there is no background. Click OK
4. Sprites > Create Sprite > Load Sprite Button > Year 6 G&T ICT > Clickball resources >> Ball.gif > Open
5. Name the sprite sprBlueBall. Keep the Transparent checkbox checked for the blue ball sprite to keep the background transparent

B) Add a sound

6. Sounds > Create Sound > Load Sound Button > Year 6 G&T ICT > Clickball resources >> Sounds > beep1.wav > Open
7. Test the sound by pressing the green play button
8. Name the sound beep1

C) Create wall and ball objects

9. Objects > Create Object
10. In the Objects Properties box pick the sprWall sprite from the pull down menu, as shown in the screenshot
11. Name the object objWall
12. Check the solid check box
13. Click OK to close
14. Objects > Create Object
15. In the Objects Properties box pick the sprBlueBall sprite from the pull down menu
16. Name the object objBlueBall
17. Check the solid check box



Keep the Object Properties window of the ball object open

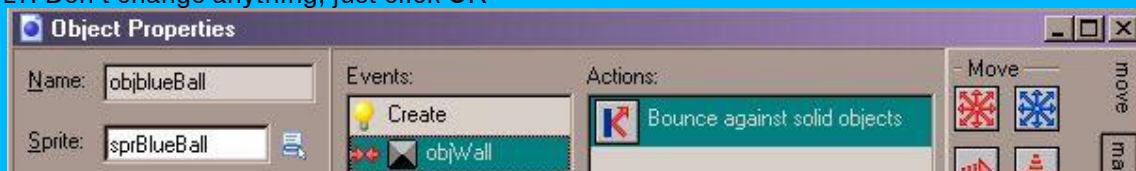
D) Program Events

In the middle of the ball Object Properties window you'll see the Add Event button

18. Click the Add Event button
 19. Click Create from the Event Selector pop up menu
- On the right hand side you'll see all the possible actions in a number of groups (tabs)
20. From the move tab choose the Action with the 8 red arrows and drag it to the list in the middle
 21. Now click all of the 8 arrows to randomize the initial motion
 22. Change the speed to 2
 23. Click OK to close

Keep the Object Properties window open. To program the collision of the ball with the wall:-

24. Click Add Event and this time choose Collision from the Event Selector
25. From the drop down menu of the Collision Event select objWall
26. From the actions on the right, select the bounce icon and drag it to the list in the middle. A window will pop up, called bounce against objects
27. Don't change anything, just click OK



To program user interaction:

The user will attempt to click on the moving balls with the left mouse button

28. Add Event > Event Selector > Mouse > Left button
29. From the actions on the right hand side click on the main1 tab
30. Drag "play a sound" to the middle
31. Select the beep1 sound from the pull down menu

Find Set the Score on the Score tab on the right hand side

32. Drag Set the Score to the action list in the middle
33. For the score action, type in the value of 1 and check the Relative box. This means that 1 is added to the current score for each successful mouse click

Stay on the left button Event

34. Click on the move tab
35. Find the jump to random button and drag it to the actions list. Click OK. Click OK again.

E) Define a room

36. Rooms > Create Room
37. Click on the Settings tab of Room Properties
38. Make Width: 240 and Height: 240
39. Set both SnapX and SnapY to 24, because the wall sprite has both a width and height of 24
40. In the Caption box type in Level One
41. Click on the Objects tab of Room Properties
42. Select the wall object from the pull down menu
43. By left clicking in the room place a wall object in there
44. Keep clicking to build the whole wall around the room. To build the wall quickly try shift + hold down left mouse button + drag mouse.
45. Use the right mouse button to remove bits of the wall you don't want
46. Finally place 2 ball objects in the room

F) Play the game

47. Press the Run Game green arrow
48. Click on the moving balls with the left mouse button and see what happens
49. Stop the game by pressing the <Esc> key
50. Save your game if you haven't already, call it something like 'Clickball' and show it to the teacher for marking

CONGRATULATIONS, YOU HAVE MADE YOUR FIRST GAME!

CLICKBALL VERSION 2

- Introduce variations, work things out for yourself more
- Ask for help if not sure how

IMPORTANT: Save your Clickball game again, version 2
File > Save as > Clickball_v2

IMPROVEMENTS


- make the ball move faster every time you click it
- double the size of the room
- build extra walls and barriers inside the room
- vary the number of balls inside the room
- put gaps in the wall
- introduce new balls with different colours (red, green)
- add new sorts of sprites and objects to the game, eg. ghosts
- vary the speeds of different coloured balls

SLIGHTLY HARDER IMPROVEMENTS

- change the background appearance
 - Hint: background tab of Room Properties
- vary the size of different coloured balls
 - Hint: Go into the sprite image editor
- make other changes to the appearance of the sprites, eg. smiley faces
- play some music in the background, use midis
 - Hint: main1 > play a sound
 - Hint: put the music on a controller and put the controller in the room
- Write down how to play the game in Game Information
- Show your own image while loading the game
 - Hint: Global Game Settings > Loading tab

HARD IMPROVEMENTS

- make new things happen when different coloured balls hit each other, such as bounce, be destroyed, turn into another colour or type of ball
 - Hint: main1 > change the sprite (changes appearance only)
 - Hint: main1 > change the instance (changes the type of object)
- introduce random motion for collisions
 - Hint: main1 tab > icon with 8 blue arrows, instead of 8 red arrows
 - set **direction**: random (360)
- adjust the speed of the ball depending on the score
 - Hint: On the score tab, find the test score icon

Continued over 

VERY HARD IMPROVEMENTS

Add **controller objects** to achieve the following more complex outcomes:

- create new rooms, learn how to move from one level to the next when the score reaches a certain value – put the code on a controller object and put the controller in the rooms where you want the actions to happen

▪ Event	▪ Actions
▪ Step > Begin Step	▪ Score tab > Test the value of the score ▪ main1 tab > Go to next room

- use the alarm event and alarm clocks to create new balls out of thin air at certain times – once again, this should go on a controller object

First **set an Alarm** on a **Create Event** of a controller object

main2 > Set an Alarm clock

number of steps: 30 is equivalent to one second

Then on an Alarm Event, create new balls

main1 > Create an instance of an object

- Use alarm clocks and draw tools to develop a timer which shows how much time is left to play the game

The End