Year 11 IT2 O-1 **GAMEMAKER FOLIO 1** **Name:** _____

Gamemaker uses a Programming Language to control the items in a game.
It is important to properly Plan the properties of all items in the game to ensure they perform correctly.
For each Folio, a Table will be provided outlining the properties of the item present in the folio's game.

1. Choose **Start -> PROGRAMS -> STUDENT APPS -> IT -> GAME MAKER**.
2. If asked about **Advanced Mode**, click on **YES**.

Opening a Game

3. To open a pre-written game, choose **FILE -> OPEN**. In the dialog box, double click on the **Examples** folder and open the **PACMAN** file.

Checking Item Properties

4. To see the properties of some of the items of this game, look at the items on the far left side of the screen. For each item below, complete the relevant section in the table below but do **NOT** change any values:
   - Click on the + in front of **Pacmans** and double click on any Pacman icon. Click on **OK** when ready.
   - Click on the + in front of **Monsters** and double click on **Wall_sprite**. Click on **OK** when ready.
   - Click on the + in front of **Backgrounds** and double click on **Level1**. Click on the **Settings** title and then when ready, click on the **Background** title. Click on **OK** when ready.
   - Click on the + in front of **Objects** and double click on **Monster**. Click on **OK** when ready.
   - Click on the + in front of **Rooms** and double click on **Room1**. Click on the **Settings** title.

Item	**1. Name Of Sprite** **2. List its Length and/or Width if applicable**	**Write if it is:** **1. Transparent** **2. Visible** **3. Solid**	**For each Event:** **Write down its Actions**
Pacmans: *This is an object in the Room*			Not Applicable
Monsters: *This is an object in the Room*			Not Applicable
Backgrounds: *This can be a picture or color*			Not Applicable
Objects: *These are the items that make your game come to life – they perform almost all of the actions of the game*			Event: Actions:
Rooms: *A room must be included to hold all other items*		Not Applicable	Not applicable

Running The Game

5. To run this game, choose **RUN -> RUN NORMALLY** or click on the **Green**  .
   You may play the game for no more than 5 minutes so Have Fun!
   *To stop the game at any time, press **ESC**.*
   To close off the game window if it does not do it automatically, click on the X on the top right corner.

Assessment

6. You do **not** have to prepare a Flowchart for this Folio but you **MUST** submit the sheet when completed.

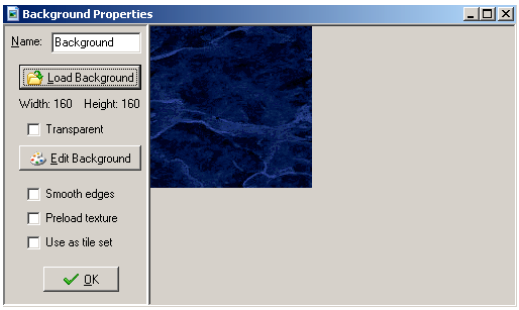
Year 11 IT2 O-1 **GAMEMAKER FOLIO 2** **Name:** _____

In this folio, you will create a simple Paddle game that includes walls, a moving paddle and a moving ball.

0. Complete the table below to choose the properties of the items in the game:

Item	**1. Name Of Sprite** **2. List its Length and/or Width if applicable**	**Write if it is:** **1. Transparent** **2. Visible** **3. Solid**	*For this folio:* *Think about how the Wall, Paddle & Ball will a). move and b). react if they strike something* **List the Event:** **Write down its Actions**
Background			
Wall			eg. It will not move. The ball will bounce off it unless it hits the bottom – then the ball dies
Paddle			
Ball			
Room			

1. Choose **Start -> PROGRAMS -> STUDENT APPS -> IT -> GAME MAKER**.
2. If asked about **Advanced Mode**, click on **YES**.

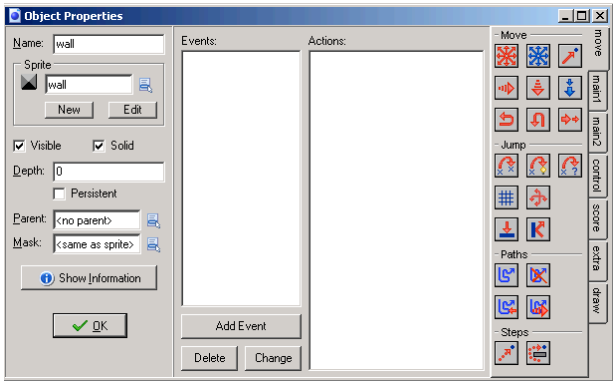


Adding A Background (a nice colourful backdrop)

3. Choose **ADD -> ADD BACKGROUND** and in the dialog box, in the **Name:** box, change the name to **Background**.
4. Then click on **Load Background** and in the dialog box, select any background and then click on **OPEN.**
5. Then click on **OK**.

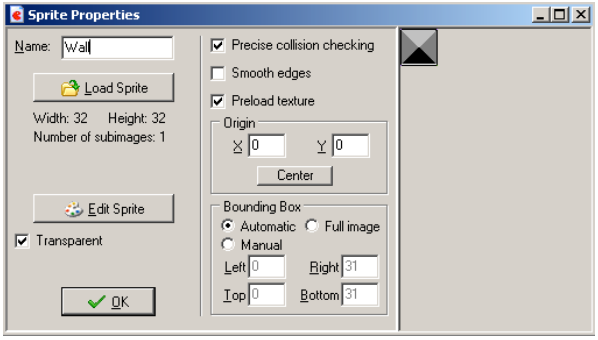
Creating Objects

A Wall: (This is the wall the ball will bounce off)



6. To create a wall, choose **ADD -> ADD OBJECT**.
7. In the **Name:** box, change the name to **Wall**. Click in the box to place ticks in front of **Visible** and **Solid** (otherwise objects can't bounce off).
8. In the **Sprite** (an image that can be animated) area, click on **New** and then in the Sprite dialog box, click on **Load Sprite** and then locate the **Square** Sprite in the **Various** folder and click on **OPEN**.
9. Then click in the **Name:** box and type in **Wall** (not Sprite0) and click on **OK**. Then click on **OK** again.

"Death" Wall: (This is the wall along the bottom. If the ball hits it, the ball dies and the game is over)



10. To create another wall, choose **ADD -> ADD OBJECT**.
11. In the **Name:** box, change the name to **Deathwall**. Click in the box to place ticks in front of **Solid** but **not** Visible (this wall will not be seen).
12. In the **Sprite** area, click on **New**, then click on **Load Sprite** and locate a small dot and click on **OPEN**.

13. Then click in the **Name:** box and type in **Deathwall** (not Sprite1) and click on **OK**. Click on **OK** again.

Paddle (This is actually the Player but the ball controls the game): You will alter an existing Sprite

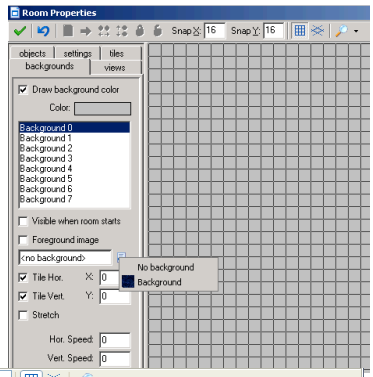
14. For a paddle object to move across the bottom of the board, choose **ADD -> ADD OBJECT**.
15. In the **Name:** box, type in **Paddle**. Click in the box to place ticks in front of **Visible** and **Solid**
16. In the **Sprite** area, click on **New** and in the Sprite dialog box, click on **Load Sprite**, then locate **Stone** in the **Various** folder and click on **OPEN**. Ensure there is a tick next to **Transparent**.
17. Click on **Edit Sprite** and choose **TRANSFORM -> STRETCH**. Remove the tick from the box in front of **Keep Aspect Ratio**, then change the **Width** value to **300** and the **Height** value to **70** and click on **OK**. *If you wish to totally change the colours or shape, double click on the image and use the Paint tools.*
18. Choose **FILE -> CLOSE SAVING CHANGES**. If asked to save the file, click on **SAVE**.
    Then click in the **Name:** box and type in **Paddle** (not Sprite2) and click on **OK**. Click on **OK** again.

Ball:

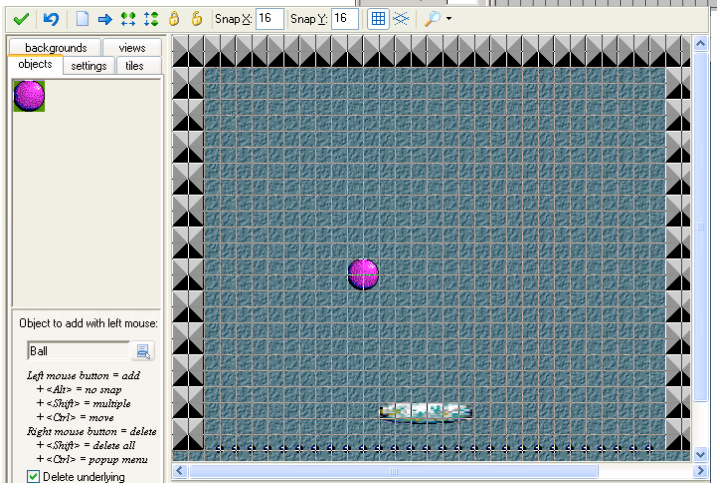
19. Choose **ADD -> ADD OBJECT**.
20. In the **Name:** box, type in **Ball**. Click in the box to place ticks in front of **Visible** and **Solid**.
21. In the **Sprite** area, click on **New** and then in the Sprite dialog box, click on **Load Sprite** and then locate the Ball sprite in the **Various** folder and click on **OPEN**. Ensure there is a tick next to **Transparent**.
22. Then click in the **Name:** box and type in **Ball** (not Sprite3) and click on **OK**. Click on **OK** again.

Adding a Room (This will hold all of the objects – Wall, DeathWall, Paddle, Ball)

23. To add a room for the game, choose **ADD -> ADD ROOM.** Click on its name on the far left side of the window and change it to **Room1**.



24. Maximise the screen by clicking on the box (middle icon (picture) ) at the top right of the screen.
25. To add the background you made, click on the **Backgrounds** title in the **Room Properties** window and click on the blue icon next to **<no background>** and select your Background**.**
26. To add the wall onto the background, click on the **Objects** title (above Backgrounds), then below this click in the large box and select **Wall**.
27. Carefully click on the Background area along the left, top and right sides of the screen but not along the bottom so as to make a continuous wall.
    To continuously add the same object onto the background, hold down the **SHIFT** key and click and drag the cursor.
    If you click on the wrong spot, right click on it to remove it.



28. To add the Paddle, click in the large box to the left of the Room Background and select **Paddle**. Carefully click about 4 rows up from the bottom of the screen in the middle to set the starting position of the Paddle. If it is the wrong spot, right click on it to remove and try again.
29. To add the "Death" Wall, click in the large box to the left of the Room Background and select **DeathWall**. Carefully click (use the **SHIFT** key to add it continuously) only along the bottom of the screen below your Paddle.
    If it is the wrong spot, right click on it to remove and try again.
30. To add the Ball, click on the large box again and select **Ball**. Click on the Room Background where you want to place it when the game starts (I suggest away from the Paddle and the bottom wall).

31. *If you want to alter the Sprite images, double click on the Sprite in the **Object** listing on the left side of the screen to show the Sprite dialog box. Click on **Load Sprite** and locate another sprite for the object and click on **OPEN**. As you click on **OK** the object in the Room will be updated to the new Sprite.*

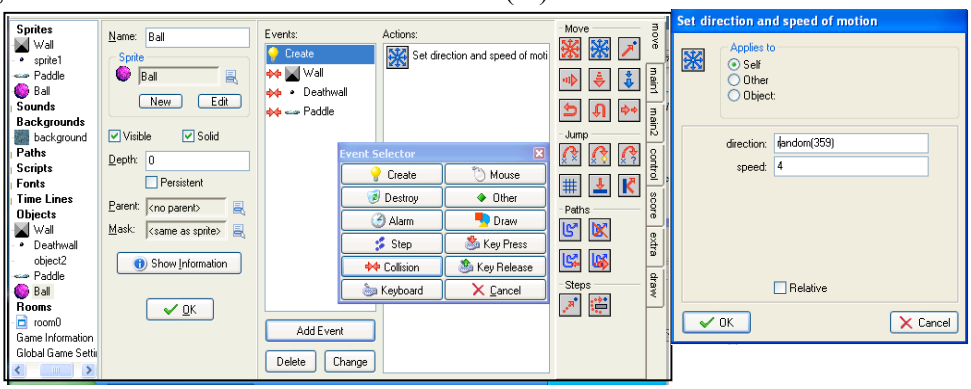
Adding Actions: If you set the wrong actions, double click on it to alter it or click on DELETE to erase it.

When using Actions, think about which object must have the Action and the object(s) it will affect. Sometimes a blank object is used to store game data (score, number of player lives, game level, etc).

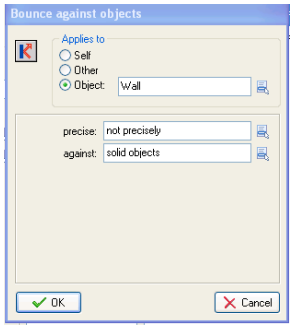
The Ball:

32. To set the ball's actions, double click on the **Ball** icon in the **Objects** area on the far left side of the screen.

33. To make the Ball move, click on **Add Event** then click on **Create** ( ). Then drag the **Blue Move** ( ) icon from the **Move** area into the **Actions** box. In the **Applies To** area, ensure there is a dot in front of **Self**. In the **Direction** box, type in **random(359)** (any random angle or direction). In the **Speed** box type in **4** (big values make it move faster). Then click on **OK**.



*Or drag the **Red Move** ( ) icon into the **Actions** box and in the **Direction** box, click on **all** of the arrows and set the **Speed** to **4** and click on **OK**.*



34. To make the Ball bounce off the Wall, click on **Add Event** then click on **Collision** and select the **Wall**. Then drag the **Blue Wall and Red Arrow** ( ) icon in the **Jump** area into the **Actions** box. In the **Precise** box change it to **Not Precisely** and in the **Applies To** area, set it to **Self** and click on **OK**.

35. To make the Ball bounce off the Paddle, click on **Add Event** then click on **Collision** and select **Paddle**. Then drag the **Blue Wall and Red Arrow** ( ) icon in the **Jump** area into the **Actions** box. In the **Precise** box change it to **Not Precisely** and in the **Applies To** area, set it to **Self** and click on **OK**.

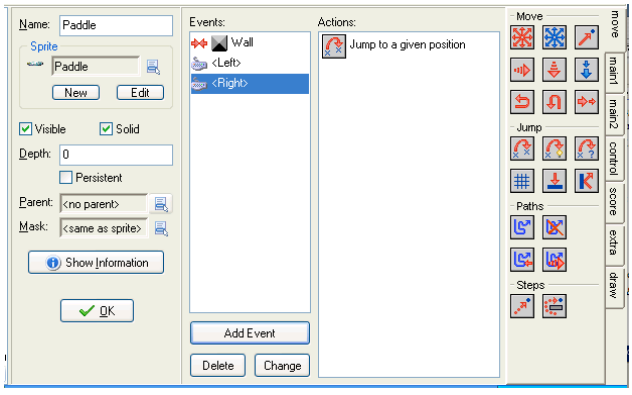
36. To end the game on a collision with the DeathWall, click on **Add Event** then click on **Collision** and select **Deathwall**. Click on **Main1** on the right side to show other actions and drag the **Trash** ( ) icon into the **Actions** box (to destroy the paddle). In the **Applies To** area, set it to **Self** and click on **OK**. Click on **Main2** on the right side of the window & drag the **Stop** ( ) icon into the **Actions** box (to end the game).

37. When ready click on **OK** to set all of these actions.

Paddle: (It needs to move using the keyboard and to only move when a key is pressed)

38. Double click on **Paddle** in the **Objects** area on the left side of the window. Click on **Move** on the right side of the window.

39. To make the **Paddle** bounce off the wall, click on **Add Event**, select **Collision** and then **Wall** and click on **Move** on the right side of the window and drag the **Blue Move** into the **Actions** box and set it to **Direction: 0** and **Speed: 0** but **not Relative** and click on **OK**.



40. To make the **Paddle** move using the keyboard arrows, click on **Add Event**, select **Keyboard** and then select **Left**. Click on the first **Jump** ( ) icon. In the **X:** box type in **–4** and place a tick in the **Relative** box and click on **OK**.

41. Add another Event for the **Keyboard** using **Right** and set **X:** to **4** and **Relative**. Click on **OK**.

42. When ready click on **OK** to set these actions.

*If you wanted to make **Me** move constantly instead of in jumps, replace the Jump action events with a **Key Press** Add Event with a red **Move** action and select one arrow direction (left or right or up or down) and **Speed 4** but **not Relative**. Then repeat these steps for the other directions.*
*But to stop it moving, create a **Key Press** Add Event with a red **Move** action for a **Spacebar** to have no direction (the middle icon) and **Speed 0**.*

Saving The Game

43. To save the game, choose **FILE -> SAVE** and locate your network folder on the **Z** drive and save the game using the Filename: **PadGame** and click on **SAVE**.

Running The Game

44. To run the game, choose **RUN -> RUN NORMALLY**. Show it off to your Teacher!
To close off the game window if it does not do it automatically, click on the X on the top right corner.
If you need to change any instructions, click on **Game Maker** in the task bar and double click on the Object in the **Object** area on the left side of the window to show its events.
To stop the game at any time, press **ESC**.

Prepare a Flowchart for this Folio and submit the First Page and the Flowchart after showing the game to your teacher.

Year 11 IT2 O-1 **GAMEMAKER FOLIO 3** **Name:** _____

In this folio, you will add extra features or make changes to the game you created in the 2nd folio.

1. Choose **Start -> PROGRAMS -> STUDENT APPS -> IT -> GAME MAKER**.
2. If asked about **Advanced Mode**, click on **YES**.

Opening The Game (from the 2nd Folio called PadGame): Only do this if the PadGame file is not Open:

*3. Choose **FILE -> OPEN** and locate the file **PadGame** in your **Z:** drive network folder & click on **OPEN**.*

Planning The Features To Add/Alter:

4. Think about the game and enter at least **2** changes and/or extra features in the following table:

Feature(s)	Relevant Object(s)	Action(s) Needed
The ball moves too slowly	Ball	Make the ball travel faster

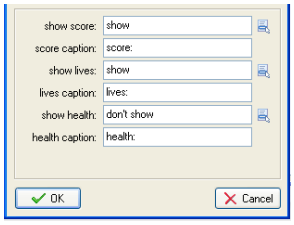
Saving The Game

5. Choose **FILE -> SAVE AS** and locate your **Z:** drive network folder.
   Change the **Filename:** to **PadGame2** and click on **SAVE**.

Instructions To Help With The Changes/Extra Features

* **Select at least 2 of the following changes to change/add to your game.**
* **After making each change, choose FILE -> SAVE to save the file.**
* **Then choose RUN -> RUN NORMALLY to test it.**

6. Setting A Score/Life Counter shown in the top left corner of the Game window (See Also Steps 9 & 10)

On Left side of screen in Object area, double click	Event	Action area (RHS) & Action to select	Setting Don't forget to click on **OK**
Ball 	**Other ->** Game Start	**Score ->**  **Set Number of Lives** **Score ->**  **Set the Score** **Score ->**  **Set the Window Info**	Change **New Lives** to **3** Set the **New Score** to **0** Only change the **Show Lives** to **Show**.

7. Making the Wall Invisible

On Left side of screen in Object area, double click	Event	Action	Setting Don't forget to click on **OK**
Wall			Remove tick from **Visible** box

8. Making the Ball Move Faster Initially

On Left side of screen in Object area, double click	**Event to change**	**Action to change**	**Setting to change** Don't forget to click on **OK**
Ball	Click on **Create**	Double click on the Blue **Set Direction**	Change **Speed** to **8**

9. Losing Lives to End the Game (Only do this if you have included and completed Step 6)

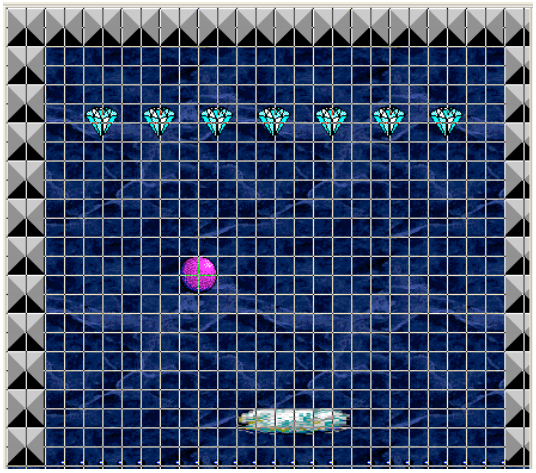
a). Choose **ADD ->ADD SOUND**, click **Load Sound**, select a sound in the **Sound** folder & name it **Sound**.

Click Object on left side, double click	**Event**	**Action submenu (RHS) -> Action to select**	**Setting** Don't forget to click on **OK** after setting all of the properties.
Ball	**Deathwall**	Click on the Deathwall Event and click on **DELETE** and click on **Yes**	
Ball To test this, allow the ball to miss the paddle & hit the bottom wall 3 times.	**Collision -> Deathwall**	**Score ->** **If Lives is a Value** **Control ->** **Start of Block** **Main1 ->** **Play A Sound** **Main2 ->** **Sleep for a While** **Move ->** **Jump to the Start Position** **Score ->** **Number of Lives** **Control ->** **End of Block** **Control ->** **Else** **Control ->** **Start of Block** **Main1 ->** **Play A Sound** **Main2 ->** **End the Game** **Control ->** **End of Block**	Change **Value** to **0** Change **Operation** to **Larger Than** Click in **Sound** box & select **Sound** Change **Milliseconds** to **1500** Change **Applies To** to **Object** and select **Ball** in the white box. Change **New Lives** to **-1** and click in box in front of **Relative** Click in **Sound** box & select **Sound**
Ball	**Other ->** ◆ No More Lives	**Main2 ->** **End the Game**	

10. Creating Items to Hit to Score Points (The score is only shown if you complete Step 6)

a). To create objects for the ball to hit to score points, choose **ADD -> ADD OBJECT**.

b). In the **Name:** box, type in **Diamant**.
Click in the box to place ticks in front of **Visible** and **Solid**.
In the **Sprite** area, click on **New** and then in the Sprite dialog box, click on **Load Sprite** and then locate the **Diamant** sprite in the **Various** folder and click on **OPEN**.
Ensure there is a tick next to **Transparent**.
Then click in the **Name:** box and type in **Diamant** (not Sprite4) and click on **OK**. Click on **OK** again.



c). Then in the **Rooms** area on the left side of the screen, double click on **Room1** and then click on the **Objects** area and then click in the large box below this and select **Diamant**.

d). Position the mouse about 6 lines from the top of the screen and carefully click to insert the Diamants leaving a space between each Diamant. If you want, you can create a 2nd and 3rd row of Diamants below the 1st row.

10. Scoring Points by Hitting the Diamants

Click Object on left side, double click	Event	Action submenu (RHS) -> Action to select	Setting Don't forget to click on **OK** after setting all of the properties.
Diamant	**Collision -> Ball**	**Score ->**  **Set the Score** **Main1 ->**  **Destroy the Instance**	Change **New Score** to **10** and place a tick in the box in front of **Relative** Change **Applies To** to **Self**

11. Creating Another Level (Use another Room with the same objects - but maybe increase the Ball Speed)

Create another room called **Room2**, add a **Background** & insert the **Wall** object to the left, top and right sides of Room2, insert the **Deathwall** object along the bottom of Room2, insert a **Paddle** object towards the bottom of Room2 and then the **Ball** object but away from the Paddle.
Add Diamants to hit to score points if you completed Step 10.

11. Setting the Script for the Next Level

Click Object on left side, double click	Event	Action submenu (RHS) -> Action to select	Setting Don't forget to click on **OK** after setting all of the properties.
Ball	**Step -> Step**	**Control ->**  **If the Number of Instances is a Value** **Control ->**  **Start of Block** **Main2 ->**  **Sleep for a While** **Main1 ->**  **If Next Room Exists** **Main1 ->**  **Go to Next Room** **Control ->**  **Else** **Control ->**  **Start of Block** **Main2 ->**  **End the Game** **Control ->**  **End of Block** **Control ->**  **End of Block**	Click in the **Object** box & choose **Diamant** & change **Number** to **0** Change **Milliseconds** to **2000** Click in the **Transition** box and choose any one

Saving The Game

12. To save the game, choose **FILE -> SAVE**.

Running The Game

13. To run the game, choose **RUN -> RUN NORMALLY**. Show it to your Teacher!
To close off the game window if it does not do it automatically, click on the X on the top right corner.
If you need to change any instructions, click on **Game Maker** in the task bar and double click on the Object in the **Object** area on the left side of the window to show its events.
To stop the game at any time, press **ESC**.

Prepare a Flowchart for this Folio and submit the First Page and the Flowchart after showing the game to your teacher.

Year 11 IT2 O-1 **GAMEMAKER FOLIO 4** **Name:** _____

In this folio, you will create a game where the player uses the keyboard to avoid hitting an invisible minefield.

1. Choose **Start -> PROGRAMS -> STUDENT APPS -> IT -> GAME MAKER**.
2. If asked about **Advanced Mode**, click on **YES**.

Planning The Features of the Objects/Background/Room:

3. Think about the game and complete the following table listing the properties of the objects:

Item	**1. Name Of Sprite** **2. List its Length and/or Width if applicable**	**Write if it is:** **1. Transparent** **2. Visible** **3. Solid**	*For this folio:* *Think about how the Player and Mines will a). move and b). react if they strike something* **List the Event:** **Write down its Actions**
Background			
Player			
Mines			
Room			

Adding A Background (a nice colourful backdrop)

4. Choose **ADD -> ADD BACKGROUND** and in the dialog box, in the **Name:** box, change the name to **Background**.
5. Then click on **Load Background** and in the dialog box, select a dark background and click on **OPEN.**
6. Then click on **OK**.

Creating Objects

Mine: (If the Player collides with this Invisible object, the game ends)

7. To create another wall, choose **ADD -> ADD OBJECT**.
8. In the **Name:** box, change the name to **Mine**
   Click in the box to place ticks in front of **Solid** but **not** Visible .
9. In the **Sprite** area, click on **New** and in the Sprite dialog box, click on **Load Sprite**, then locate any Sprite in the **Various** folder and click on **OPEN**.
10. Then click in the **Name:** box and type in **Mine** (not Sprite1) and click on **OK**. Click on **OK** again.

Player:

11. For the player to move around the screen, choose **ADD -> ADD OBJECT**.
12. In the **Name:** box, type in **Player**. Click in the box to place ticks in front of **Visible** and **Solid**
13. In the **Sprite** area, click on **New** and in the Sprite dialog box, click on **Load Sprite**, then locate any Sprite in the **Various** folder and click on **OPEN**. Ensure there is a tick next to **Transparent**.
14. Then click in the **Name:** box and type in **Player** (not Sprite2) and click on **OK**. Click on **OK** again.

Adding a Room:

15. To add a room, choose **ADD -> ADD ROOM.** Click on its name on the left side and change it to **Room1**.
16. Maximise the screen by clicking on the box (middle icon (picture) ) at the top right of the screen.
17. To add the background you made, click on the **Backgrounds** title in the **Room Properties** window and click on the blue icon next to <**no background>** and select your Background**.**

18. To add the **Mines** onto the background, click on the **Objects** title (above Backgrounds), then below this click in the large box and select **Mine**.

19. Place about 10 Mines onto the Background by clicking on the Background where you want them located. If you click on the wrong spot, right click on it to remove it.

20. To add the Player, click in the large box to the left of the Room Background and select **Player**. Click somewhere on the Background but away from any of the Mines.
If it is the wrong spot, right click on it to remove and try again.

Adding Actions: If you set the wrong actions, double click on it to alter it or click on DELETE to erase it. When using Actions, think about which object must have the Action and the object(s) it will affect.

Script: (This is not a game object but it is lines of code to control the player moving on the screen)

21. To create the script to make the player re-enter the room, choose **ADD -> ADD SCRIPT**.

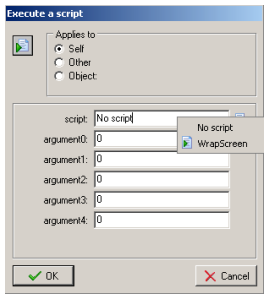
22. In the white box, enter this script (check spelling & lowercase/Capitals) & press **ENTER** after each line.

```
{
 if (x < 0) x = room_width + sprite_xoffset;
 if (x > room_width) x = -sprite_width + sprite_xoffset;
 if (y < 0) y = room_height + sprite_yoffset;
 if (y > room_height) y = -sprite_height + sprite_yoffset;
}
```

23. To check the script code, choose **SCRIPTS -> CHECK ALL SCRIPTS** and if no errors were found, click on the **green** ✔. Then click in the **Name:** box at the top of the screen and change the name to **WrapScreen** and then click on the green ✔ again to close off the Script window.

*If you need to alter the script, click on the + in front of **Script** on the far left side, double click on the **WrapScreen** script and make changes (check your spelling, use of Uppercase/lowercase and spaces)*

The Player:



24. To set the Player's actions, double click on the **Player** icon in the **Objects** area on the far left side of the screen.

25. To make the Player move, click on **Add Event** then click on **Other** and select **Outside Room**.

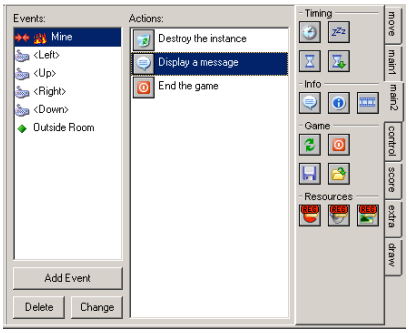
26. Click on **Control** on the right side of the window and drag the **Execute a Script** () into the **Actions** box. Then click in the **Script:** box (showing No Script) and select **WrapScreen** and click on **OK**.

27. To make the **Player** move using keyboard arrows, click on **Add Event**, select **Keyboard** & select **Left**. Click on the first **Jump** () icon.
In the **X:** box type in **–4** (minus 4) and place a tick in the **Relative** box and click on **OK**.

28. Add another Event for the **Keyboard** using **Right** and set **X:** to **4** and **Relative**. Click on **OK**.

29. Add another Event for the **Keyboard** using **Up** and set **Y:** to **-4** (minus 4) and **Relative**. Click on **OK**.

30. Add another Event for the **Keyboard** using **Down** and set **Y:** to **4** and **Relative**. Click on **OK**.



31. To end the game on a collision with the Mine, click on **Add Event** then click on **Collision** & select **Mine**. Click on **Main1** on the right side of the window to show other actions and drag the **Trash** () icon into the **Actions** box (to destroy the player).
In the **Applies To** area, set it to **Self** and click on **OK**.
To display a message box about losing the game, click on **Main2** and drag the **Display a Message** () icon into the **Actions** box.
In the **Message** box, type in **Bad Luck – you lost the game!**
Then click on **OK**.
Click on **Main2** on the right side and drag the **End the Game** () icon into the **Actions** box.

32. When ready, click on **OK**.

Saving The Game

33. To save the game, choose **FILE -> SAVE** and locate your network folder on the **Z** drive and save the game using the Filename: **MineGame** and click on **SAVE**.

Running The Game

34. To run the game, choose **RUN -> RUN NORMALLY**. Show it off to your Teacher!
    To close off the game window if it does not do it automatically, click on the X on the top right corner.
    If you need to change any instructions, click on **Game Maker** in the task bar and double click on the Object in the **Object** area on the left side of the window to show its events.
    To stop the game at any time, press **ESC**.

Adding Extra Features:
Don't forget to Save your game regularly – you may even wish to use FILE -> SAVE AS and use another name to prevent the original MineGame being "damaged".

35. Think about **2** options to add to your game and summarise their properties in the table below:

Feature(s)	Relevant Object(s)	Action(s) Needed
Add a Score Board	Not Applicable	Show the Scoreboard Set the original score to 0

Most of the above extra features were available as the options in Folio 3 so refer to Folio 3 for the instructions to follow to successfully add your extra features.

Saving and Running The Game

36. To save the game, choose **FILE -> SAVE**.
    To run the game, choose **RUN -> RUN NORMALLY**. Show it off to your Teacher!
    To close off the game window if it does not do it automatically, click on the X on the top right corner.
    If you need to change any instructions, click on **Game Maker** in the task bar and double click on the Object in the **Object** area on the left side of the window to show its events.
    To stop the game at any time, press **ESC**.

Prepare a Flowchart for this Folio and submit this Page and the First Page and the Flowchart after showing the game to your teacher.

Year 11 IT2 O-1 **GAMEMAKER FOLIO 5** **Name:** _____

In this folio, you will create a simple game that requires the player to input information.

1. Choose **Start -> PROGRAMS -> STUDENT APPS -> IT -> GAME MAKER**.
2. If asked about **Advanced Mode**, click on **YES**.

Adding A Background (a nice colourful backdrop)

3. Choose **ADD -> ADD BACKGROUND** and in the dialog box, in the **Name:** box, change the name to **Background**.
4. Then click on **Load Background** and in the dialog box, select a dark background and click on **OPEN.**
5. Then click on **OK**.

Creating Objects

Player:

6. To create a player, choose **ADD -> ADD OBJECT**.
7. In the **Name:** box, change the name to **Player**.
   Click in the box to place ticks in front of **Solid** but **not** Visible .
8. In the **Sprite** area, click on **New** and in the Sprite dialog box, click on **Load Sprite**, then locate any Sprite in the **Various** folder and click on **OPEN**.
9. Then click in the **Name:** box and type in **Player** (not Sprite1) and click on **OK**. Click on **OK** again.

Sound:

10. To create a sound when the player guesses the correct answer, choose **ADD -> ADD SOUND**.
11. In the **Name:** box, type in **Sound**.
12. Click on **Load Sound** and locate any sound in the **Sound** folder and click on **OPEN** and then on **OK**.

Adding a Room:

15. To add a room, choose **ADD -> ADD ROOM.** Click on its name on the left side and change it to **Room1**.
16. Maximise the screen by clicking on the box (middle icon (picture) ) at the top right of the screen.
17. To add the background you made, click on the **Backgrounds** title in the **Room Properties** window and click on the blue icon next to <**no background>** and select your Background**.**
18. To add the **Player** onto the background, click on the **Objects** title (above Backgrounds), then below this click in the large box and select **Player**. Place the player in the middle of the room.

Adding Actions: If you set the wrong actions, double click on it to alter it or click on DELETE to erase it. When using Actions, think about which object must have the Action and the object(s) it will affect.

Script: (The script must be typed in letter perfect – check the spelling, spaces and lowercase/uppercase)

19. To create the script to make the player re-enter the room, choose **ADD -> ADD SCRIPT**.
20. In the blank white box, type in the following lines of code, pressing **ENTER** at the end of each line.

```
x:=get_integer ("Please enter a number between 0 and 20",20);
y:=round(random(20))+1;
while (x<>y)
   {
   if
   (x>y)
   {show_message ("Too high, try again")}
   else
   {show_message ("Too low, try again")}
   x:= get_integer ("Please enter a number between 0 and 20",20);
}
show_message ("Well done!");
repeat (5) sound_play (sound);
```

21. To check the code, choose **SCRIPTS -> CHECK ALL SCRIPTS** and if no errors were found, click on the **green** ✔. Then click in the **Name:** box at the top of the screen and change the name to **Puzzle** and then click on the green ✔ again to close off the Script window.

    *If you need to alter the script, click on the + in front of **Script** on the far left side of the screen and double click on the **Puzzle** script.*

Setting the Actions:

The Player:

22. To set the player's actions, double click on the **Player** icon in the **Objects** area on the far left side of the screen.

23. To make the player activate the puzzle script, click on **Add Event** then click on **Create** (💡).

24. Click on **Control** on the right side of the window and drag the **Execute a Script** () into the **Actions** box. Then click in the **Script:** box (showing No Script) and select **Puzzle** and click on **OK**.

Saving The Game

25. To save the game, choose **FILE -> SAVE** and locate your network folder on the **Z** drive and save the game using the Filename: **MineGame** and click on **SAVE**.

Running The Game

26. To run the game, choose **RUN -> RUN NORMALLY**. Show it off to your Teacher!
    To close off the game window if it does not do it automatically, click on the X on the top right corner.
    If you need to change any instructions, click on **Game Maker** in the task bar and double click on the Object in the **Object** area on the left side of the window to show its events.
    To stop the game at any time, press **ESC**.

Prepare a Flowchart for this Folio and submit this Page and the Flowchart after showing the game to your teacher.

If you wanted to change the puzzle to a word match use:

```
x:=get_str ("Please enter a colour","");
y:="red";
while (x<>y)
   {
   show_message ("Bad Luck, try again")
   x:=get_str ("Please enter a colour","");
}
show_message ("Well done!");
repeat (5) sound_play (sound);
```

Answer these questions in the spaces below:

1. What does the command **get_integer ("message")** mean?

2. What does the command **random(20)** mean and why is **round** used (hint: not all random numbers are whole numbers)?

3. What purpose does the command **while (x<>y)** play in controlling the game?

4. If I wanted a player to enter their address, would I use **get_integer("message")** or **get_str("message")**?

Year 11 IT2 O-1 **GAMEMAKER TEST** **Name:** _____

1. Choose **Start -> PROGRAMS -> STUDENT APPS -> IT -> GAME MAKER**.
2. Create a light **Background** called **Background**.
3. Create a visible, transparent and solid **Object** called **Baddy** using any Sprite.
4. Create another visible, transparent and solid **Object** called **Player** using any Sprite.
5. Create another visible, transparent and solid **Object** called **Wall** using any Sprite.
6. Create a **Room** called **Room**.
7. Add the **Background** to the Room.
   Place the **Wall** around the outside perimeter of the Room.
   Place **10 Baddies** on the Room Background.
   Place **1 Player** on the Room Background.
8. For the **Player**, add **Actions** to do the following:
   a). Make it move in steps of **4** by pressing the **Left**, **Right**, **Up** or **Down** arrows only.
   b). On **Collision** with the **Wall**, it will **bounce** off **precisely**.
   c). On **Collision** with a **Baddy**, it will **Die** and **End the Game**.
9. For the **Baddy**, add **Actions** to do the following:
   a). Make it move in any **random(359)** direction with **Speed 4**.
   b). On **Collision** with the **Wall**, it will **bounce** off **precisely**.
10. **Save** the Game using the name **GameTest**.
11. **Run** the game and show it to your Teacher for assessment.