

Task II – Creating Wildfires

In the last video, we coded our plane successfully. It is now time to move to our second task of creating wildfires.

Create a new sprite called fire. As in the case of the plane, you can either upload an image or draw an image. Convert the image into a vector and rename it to 'Fire'.

Resize the fire in the sprite window so that it appears properly. Drag it to the bottom and align it properly.

Now, let's begin coding. The fire has to keep appearing on the bottom of screen and also moving from one side to the other.

How will this happen? We will have to create clones or copies of the sprite fire so that we can have more than one fire on the screen at any given time.

Go to the < events > section. Drag the green flag to the editor. Drag the Forever loop block from the control section and move it to the editor. Then drag 'create a clone' block and place it inside the 'forever' loop. This will start cloning the fire.

Drag 'When I start as a clone on the Screen' block to the editor and attach 'show' block from the looks section so that you can see it on the screen.

You will see fires cloning on the screen.

Let us add a delay of 1 second in the creation of clones. Go to the control section, drag 'wait 1 seconds' block inside the forever loop, after the create clone block. You can increase or decrease the speed at which clones are created.

Position the fire correctly to the starting point. It should move from right to left from the edge of the screen. Go to the motion section, drag 'go to x & y' block and place it after 'show' block. In order to set the starting point, you have to adjust the x & y values to suit your requirements. You may set x to 300 and y to -140.

To move the fire, go to control, drag a 'repeat until' block and place it after the 'go to x & y' block. The repeat until block keeps doing something as long as the command in the hexagon slot is true. If the command becomes false, then the loop terminates itself.

The fire should disappear or delete itself once it reaches the left edge of the screen or the extreme x position. Go to the operator section, drag the 'lesser than' operator and place it inside the hexagon slot. Go to the motion section, drag 'x position' block and place it inside the repeat until block. Check the extreme value for the left x-axis and set accordingly. We are using -300.

Go to control, drag 'delete this clone' block and place it after the 'repeat until' block.

To move the fire from right to left, go to the motion section and drag 'change x by 10' block and put it inside 'repeat until' block. Change the value to -10 and test.

The fire has started moving from right to left but does not disappear at the edge of the left screen because the hide instruction to the sprite is missing.

Drag 'hide' from the looks section, place it after 'when flag clicked' and also between 'repeat until' loop and 'delete this clone' block to accomplish this task.

There is still a small problem with the fire. The intensity of the flames are uniform. To randomise the flames to make the game interesting, create a new variable. Go to the variable section,

click on 'Make a variable' option, and name it as 'RandomFlames'. Select 'for this sprite only' and click ok. Your variable has now been created in the block area.

Set a random Y-position of the flames such that the plane can save itself. Drag 'Set my variable to 0', place i inside the 'forever' loop before creating the clones and change the 'my variable' to 'RandomFlames' Go to the operator, drag 'pick random 1 to 10' block and place it inside the operator. Test the flames to find the right y-value.

We think that -140 in the Y-axis as the position for the highest flame and -190 as the position for the lowest flame seem appropriate. Change the values in the operator. Go to variables, drag the 'RandomFlames' variable and place it in the Y-value of 'go to x & y' block placed after show. The resultant code will be 'Set 'RandomFlames' to pick random -140 to -190' block'.

You can now test the randomisation of the flames.

To make the game more interesting, we can also randomise the creation of clones of the fire which was earlier set to 1 second. Go to the operator section and drag 'pick random 1 to 10' and place it inside the 'wait 1 second' slot. Change the values according to your choice. We are using .3 to 1 second. Do not forget to hide the 'RandomFlames' option.

Till now we have finished the following. The plane is jumping when the space bar is pressed and the fire is moving from right to left with random intensity. However, if the plane falls on the fire, nothing happens either to the plane or to the fire.

Since our mission is to save the plane from the fire, the game should stop if the plane touches the fire.

To accomplish this, Go to the plane sprite. Drag the 'if then' block from the control section and put it inside the 'forever' loop. Go to sensing section and drag 'touching mouse pointer' to the hexagon slot of the if loop and place it there. From the drop down select the fire option so that if the plane touches the fire, the game stops. Go to the control section, drag 'stop all' block and place it inside the 'if' loop.

Test your code. The moment the plane crashes into the fire, the game stops.

At this point it is also important to check the proportion of the plane and the fire. Standardise the size of the plane by going to the looks section. Drag 'set size to 100%' and place it between go to x & y and forever loop. Change the value from 100% to 50% or an appropriate value.

Congratulations you have successfully completed the first two tasks of our game development process.

In the next video we will complete our game so that you can play it with your friends.

Bye. See you soon.