

MICRO:BIT DIGITAL PET

Part 1 - Coding a mood

Let's give our pet moods!



Now that we have one or more ways to interact with our creature its time to give our digital friend a little bit of personality. Usually a pet will get sad if they are ignored so we want our creature to also react to being left alone for too long. To do that we'll code a timer that tracks how long our virtual pet has been left alone for.

Our pet will get sad if left alone for 5 minutes
That could be expressed as:
IF no button is pressed for 5 minutes **THEN** show the creatures sad expression

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show icon

show string "Hello!"

clear screen

forever

on start

pause (ms) 100

forever

pause (ms) 1000

100 ms
200 ms
500 ms
✓ 1 second
2 seconds
5 seconds

To create the timer we'll create a variable to keep track of the time. First click and drag the 'pause (ms) 100' block from the bottom of the **Basic** menu into the forever block.

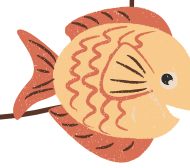
Then change the time from 100 ms to 1 second (this will show as 1000).



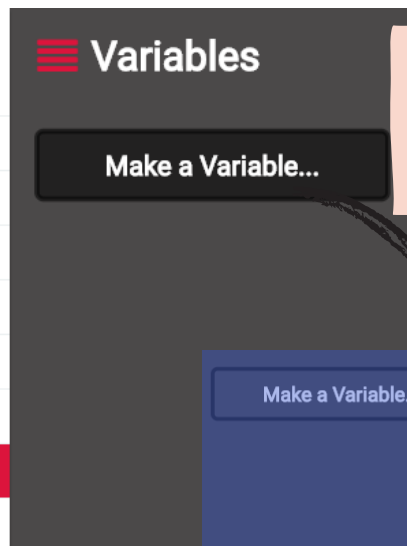
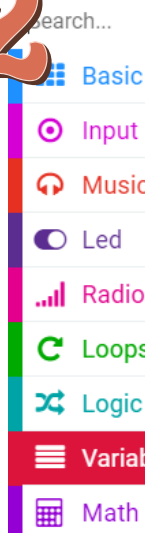
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Part 2 - Coding a mood

Making a variable to keep track of time

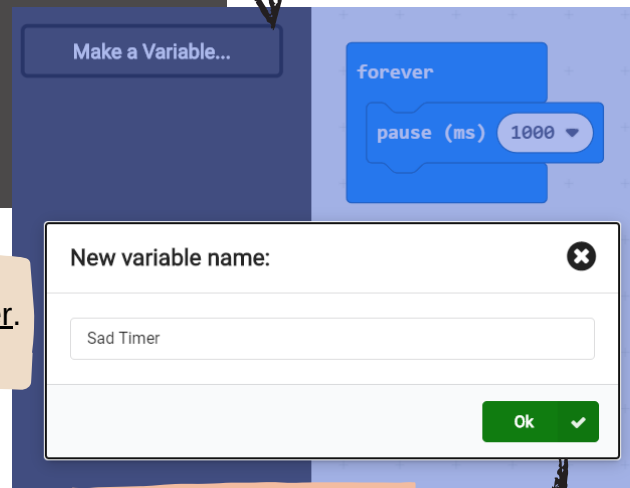


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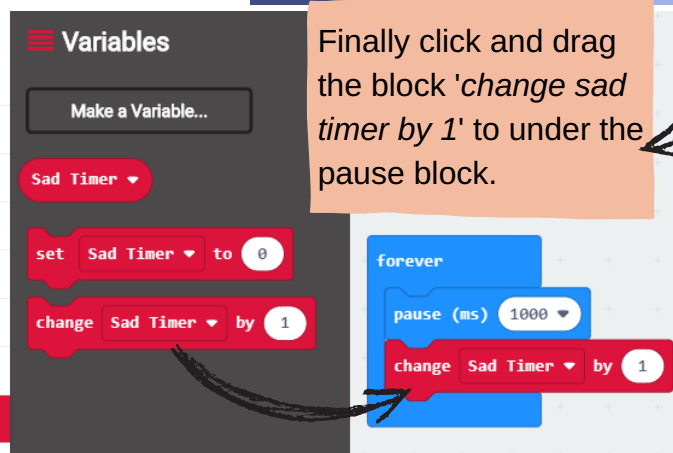
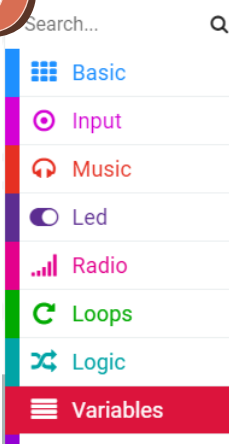


Head to the **Variables** menu and click 'Make a Variable'

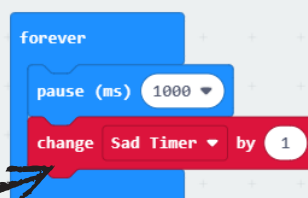
Then name that variable sad timer.



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Finally click and drag the block 'change sad timer by 1' to under the pause block.



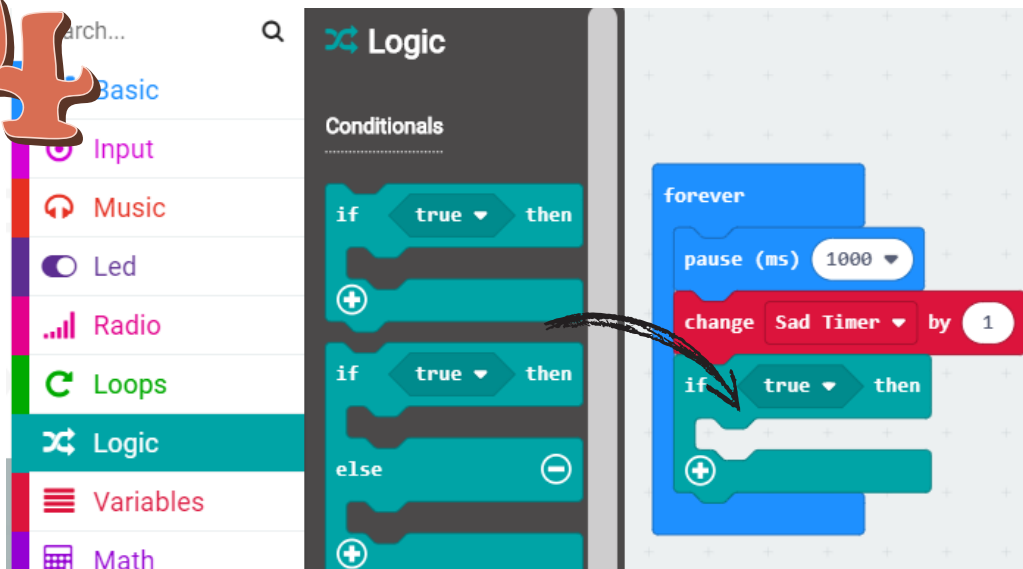
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Part 3 - Coding a mood

Using conditions to determine our pets mood

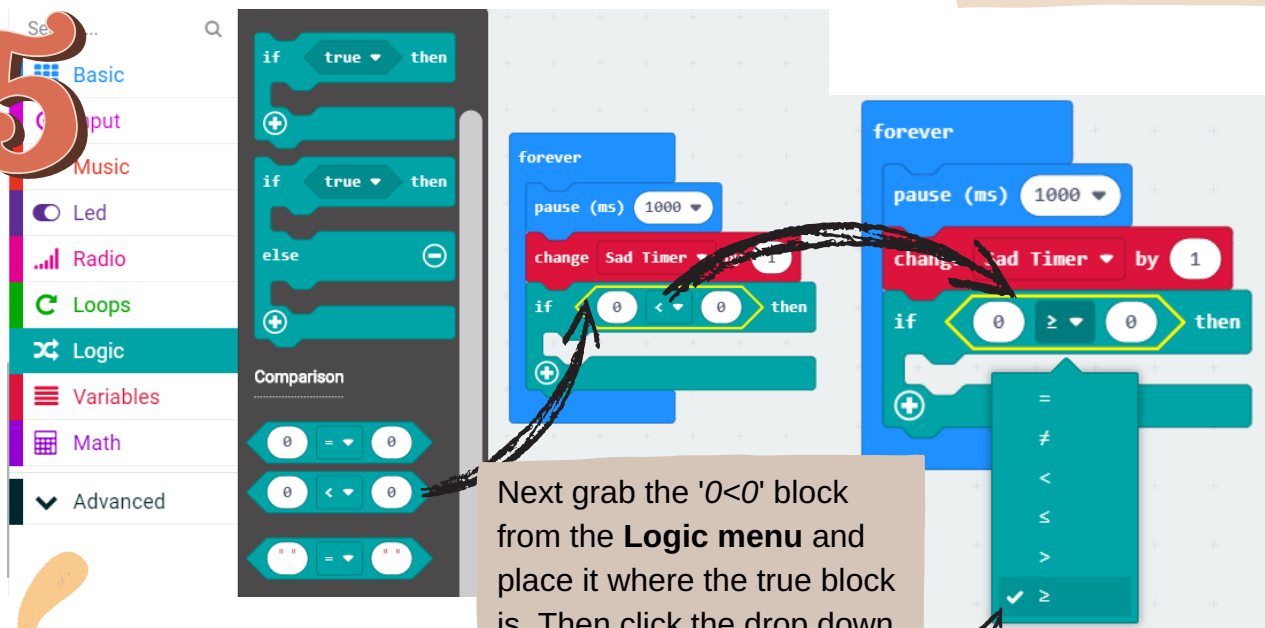


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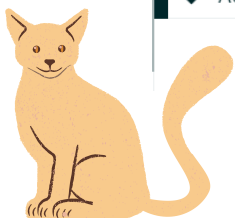


Now the sad timer will go up 1 every second. We want to check if the sad timer has reached 300 (5 minutes expressed in seconds). Go to the **Logic** menu and pull across the 'if true then' block, placing it under the sad timer variable block.

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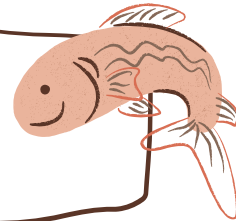
Next grab the '0<0' block from the **Logic** menu and place it where the true block is. Then click the drop down arrow and choose this one.



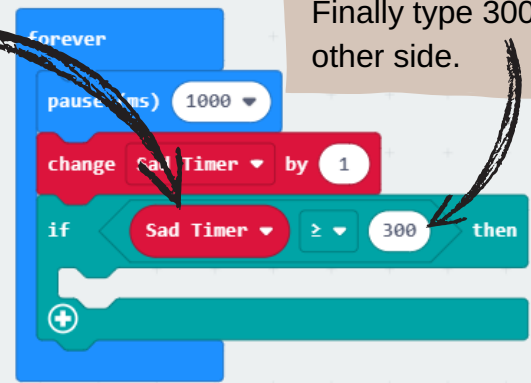
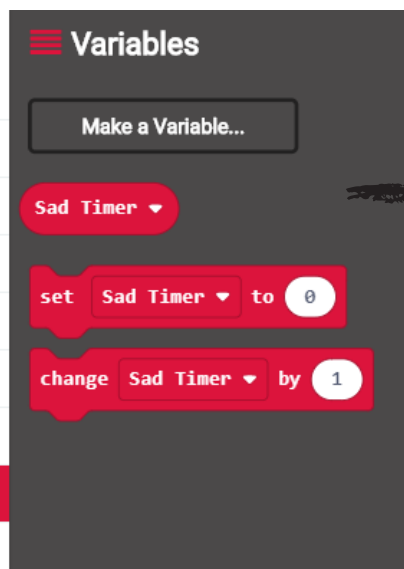
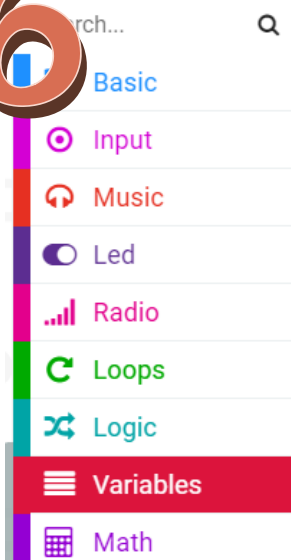
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Part 4 - Coding a mood

How long until our pet gets lonely?

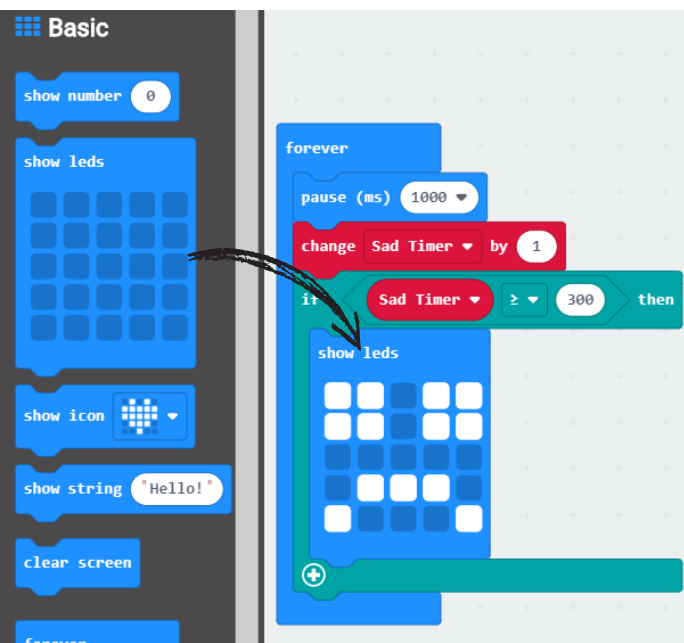
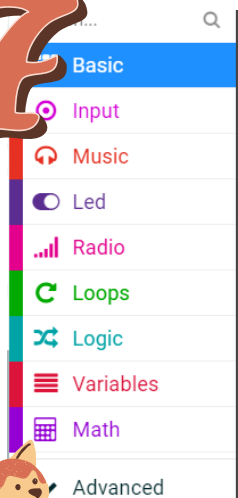


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Now go to the **Variables** menu and pull out the 'Sad Timer' block. Place it where the first 0 is. Finally type 300 into the other side.

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Now what do we want to happen if our creature gets ignored? We want the pet to look sad so we'll go to the **Basic** menu and grab a 'show leds' block. Place it in the 'if sad timer...then' block and draw a sad face with the leds.



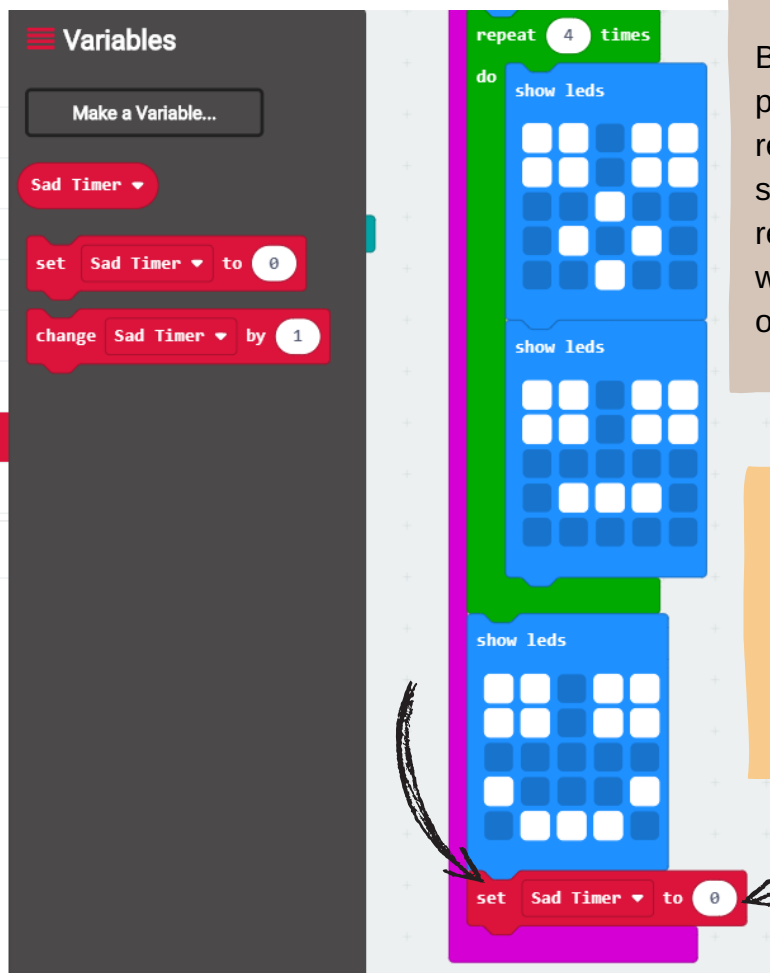
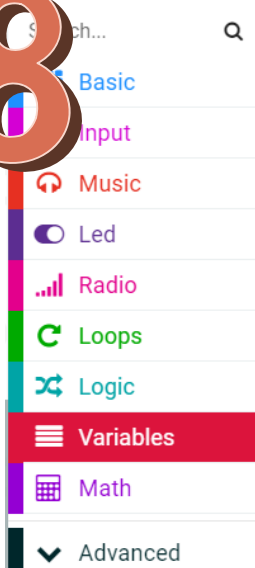
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Part 5 - Coding a mood

But now our pet will stay sad!

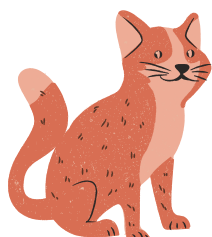


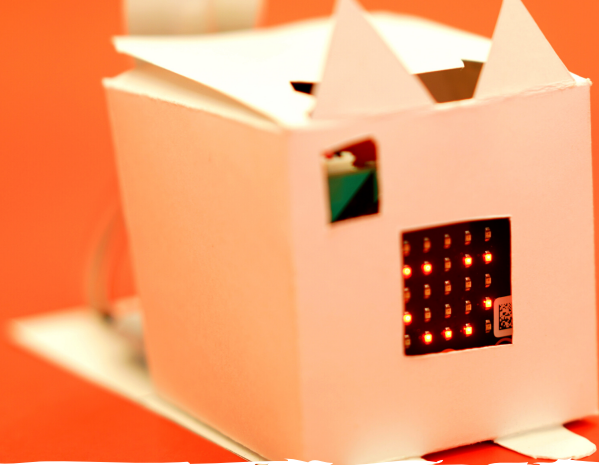
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But now if we play with our pet's 'sad timer' doesn't reset and our digital friend stays sad! Let's fix that by resetting the timer whenever we interact with our pet.

Head to the **Variables** menu and click and drag the 'set Sad Timer to 0' block to under any pink input blocks you've made.





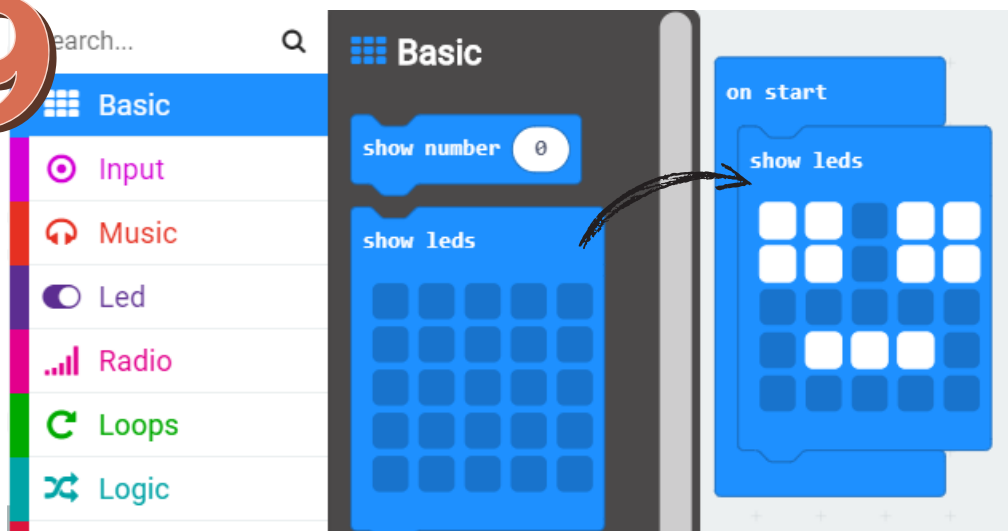
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Part 6 - Coding a mood

What other moods can we code?



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Finally under the '*on start*' block place a '*show leds*' block and create a neutral expression. Now when we start our digital creature it will show a neutral expression.

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What other moods could you code? How do you want your digital pet to act? If you want to make another mood you'll need to create a new timer for it.

IF pet isn't
fed every 10
minutes
THEN show
hungry face

For example, if you wanted your pet to get hungry if you don't feed it then create a hunger timer. Every time you press A and feed your creature it will reset the timer. But if you don't feed your pet for 10 minutes then it'll get sad and complain! The options are endless so have a go and see what you can create.

IF pet isn't
walked every
2.5 minutes
THEN show
energetic pet

