Minds in Motion

# Coding Rave

## What's The Plan?

Want to have a dance party but don't have anyone to dance with? Let's use the power of technology to program some dancing friends! You'll use Scratch to learn the basics of block coding, and program your very own digital dance party!

## What You'll Need:

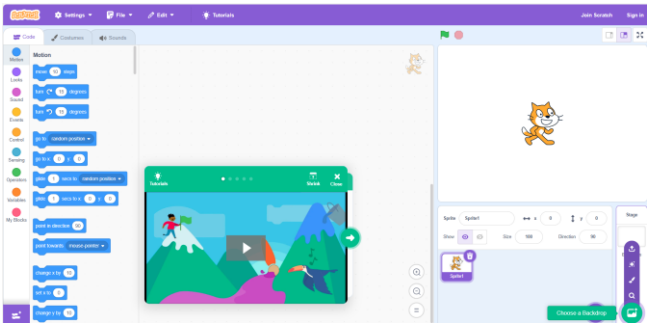
- A laptop or iPad, with access to the internet (Make sure you ask an adult first!)

## What To Do:

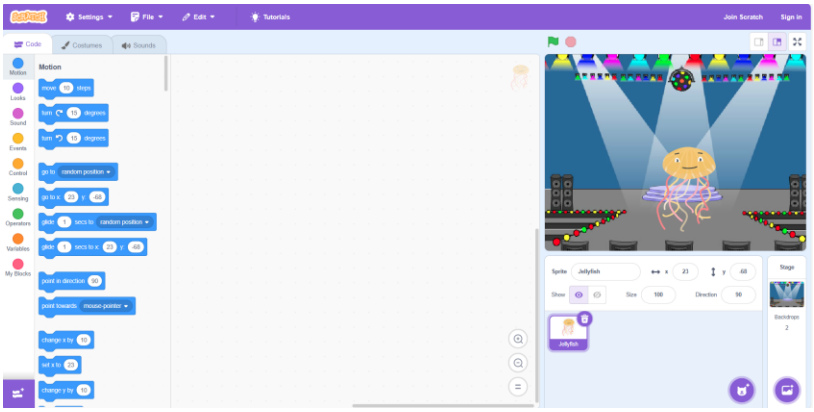
**Set the Scene:**

1. Go to scratch.mit.edu and select "start creating."
2. First, you need to pick a background for your character to dance on. Go to the bottom right hand corner of the screen, hover the mouse over the purple circle with the picture frame, and select "choose a background". Browse through all the backgrounds until you find one you would want to use. If you're feeling adventurous,

you can also find an image on google to be your dancing background, and upload it to scratch using the upload option under choose background.

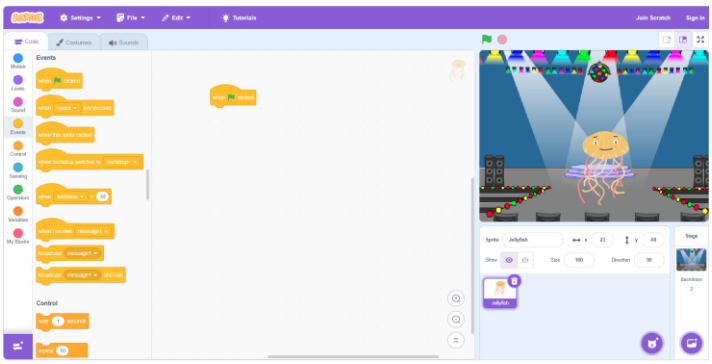


3. Now it's time to choose a character or *sprite*. First, hover the square with the cat inside of it at the bottom of the screen until a garbage symbol appears, then push the garbage symbol to delete the cat character. Go to the purple circle just left of the upload a background one, and hit choose a sprite.



**Code the First Loop:**

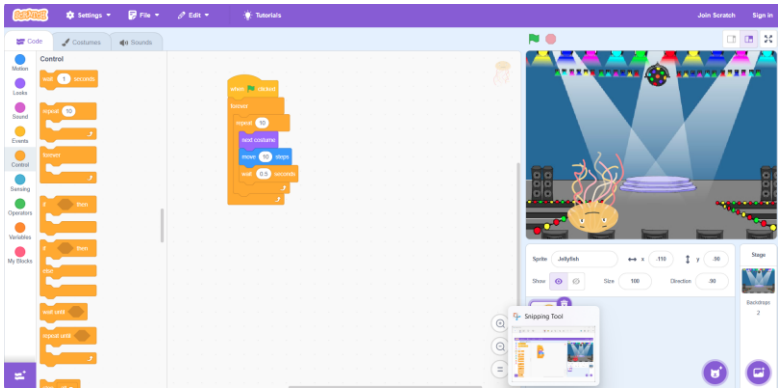
1. Under the code blocks on the left side of the screen, go to the yellow circle called *events* and drag/drop "when flag clicked."



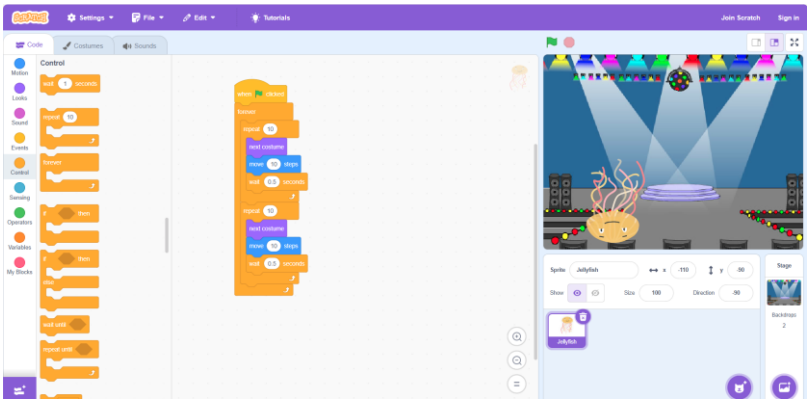
2. Go to the orange circle labelled control, and add a forever *Loop* to your code, connecting it to the yellow "when flag pushed" block. Then choose another orange control block labelled *repeat* and put that inside of the *forever loop*. Inside of the repeat block, change the distance your sprite travels by pushing on the number 30 and changing it to 10, so your block reads "repeat 10."
3. Next go to  the purple block labelled looks and insert the "next costume" block into the *repeat loop*.
4. Go to the blue circle labelled "motion" and select move 10 steps. drag and drop this block into the repeat loop under the next costume.
5. Finally, end this repeat loop by going to the control circle and choosing wait 1 seconds, drop this underneath the move 10 steps block, and change the 1 second to 0.5.

**Code the Second Loop:**

1. As you are building, you can test out your coding by pushing the green flag on top of the image on the right side of the screen. If you don't like the way your sprite is dancing, play around with the blocks/numbers in your code so far, until you get movements you like.

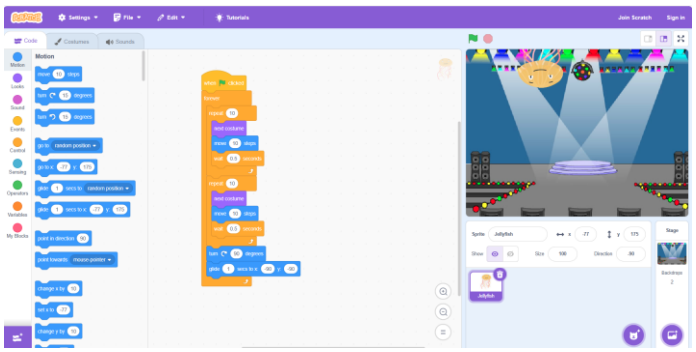


2. Next, we are going to add another repeat loop. Go to control, select "repeat 10," and insert it into the forever loop underneath the first repeat block.
3. Insert another purple "next costume" block into this loop.
4. Go to the blue motion circle and select "move 10 steps." Insert it under the next costume block in your second repeat loop, and then change the number of steps to -10.
5. End this loop the same way you ended the first one. By going to control, choosing "wait 1 second," putting it underneath move -10 steps, and then changing the 1 second to 0.5.



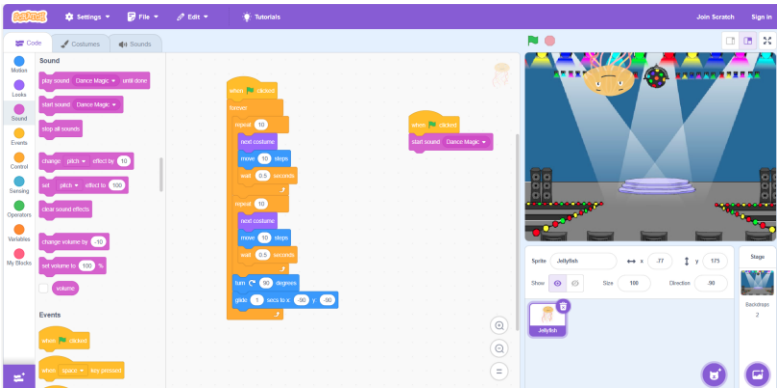
6. Finally, go to motion, and choose a "turn 15 degrees" block. You can choose either the clockwise or the counterclockwise arrow. Insert this block under the second repeat 10 blocks and change the 15 to 90.

7. Then go to motion again, and choose glide 1 seconds to x:-90, y:-80. Place this block underneath the turn 90 degrees block, keeping it inside the big forever loop, and change these numbers so both x and y are set to -90.

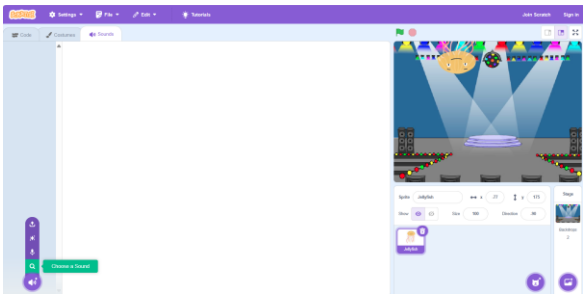


**Add Some Music:**

1. Lastly, we will need to add some music for your character to dance to! Go to the yellow events circle, and drag and drop a new "when flag pushed." Then go to the pink sound circle on the left side of the screen and insert a "start sound" block underneath the new when flag pushed button.



2. Choose your music by going to the big sounds tab that is beside the code tab on the very top left of the screen. Go to the bottom left of the screen where it says "choose a sound" and browse through your options until you find one you like.

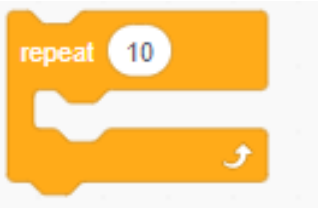


3. Now it's time to test out your dancing sprite! Push the green flag on the top right side of the screen and watch your character go! Once you think you have the hang of their dance moves, see if you can go through the blocks and choose new ones to add! Keep exploring scratch for new scenes to create and cool codes to build!

# Why Did We Do It?

***Here is a list of important words we use during the project!***

- *Coding:* Coding, or as some people call it programming, is a type of science where people give computers instructions and tasks to complete.
- *Loop:* When instructions given to a computer tell it to do something over and over again.




- In your code, you used two types of loops: A repeat loop and a forever loop. A repeat loop lets you pick how many times you want an action to be repeated before the computer moves on to the rest of the code, while a forever loop has no end, and the computer will do the action over and over forever.

- *Sprite:* an image or animation that you can give instructions to when coding.
- Events: in your code, an event was the block "when flag clicked." Events cause things to happen in coding, and often tell the computer to start carrying out whatever instructions you gave it.


## How Did It Go?

We'd love to hear about all the amazing STEM projects you're doing! Show us your finished projects on any of the following social media platforms by tagging us!

Twitter: @MyMindsInMotion
Facebook: @mindsinmotion2014 || @ucactiveliving
Instagram: @ucalgaryactive

SCAN ME

Let us know how you felt about the project! Please click here or scan the QR code above to fill out a short survey!