### The Piano Artist

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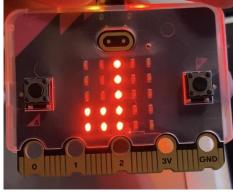
### Main Idea

Integrate working with the microchip with sound in an interactive and fun way!

# Integrating Different Projects







Play the notes to make music and start the canvas to see your painting!

C D

Start Canvas

Clear Canvas

## Main Concepts

- Getting sound from the microbit while using the buttons and images
- Using the piano keys to send sound to the microbit
- To create random colored drawings when the piano is playing

#### Some code

- Sending a
   message to
   the Microbit
   when the note
   is pressed
- Calling the change square colors procedure

```
CNoteButon - Click
        MicrobitDataChannel . SendMessage
                                              join
                                  message
        changeSquareColors -
      DNoteButton - Click
do
        MicrobitDataChannel ... SendMessage
                                             join
                                  message
        changeSquareColors -
```

#### More code

- Creating a procedure to change square colors
- Using a list to create a random color
- Using random from 1 to 255 for r,g,b values



## Simplify code



```
to changeColors
do for each item in list get global squares
do set item to make color make a list random integer from 1 to 255
random integer from 1 to 255
```

#### Microbit

- Detect message using an if-else if-else if statement to determine which note to play
- Show the icon (for fun!)
- Play the note for 1 beat for every time the button is pressed

```
bluetooth on data received (, ▼
  set message ▼ to bluetooth uart read until
                                then
         message •
   show icon
   play tone Middle C
                           1 ▼ beat
  else if
                                   then 😑
            message -
   play tone Middle D
                            1 ▼ beat
                                      until done ▼
   show icon ... -
                                   then 🖯
  else if
            message *
       tone Middle E
                             ▼ beat
   show icon
```

