



Deck the halls

Code Playground

December 2022



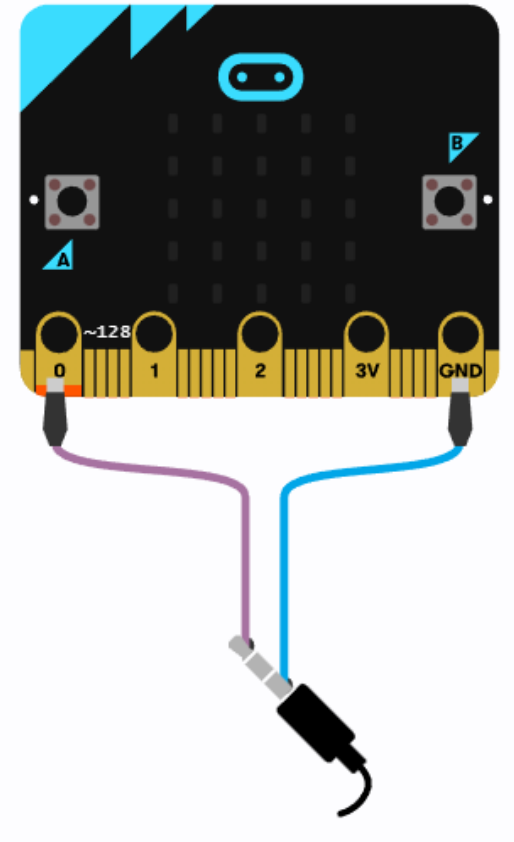
Introduction to Micro:bit

Learn the basics of coding using the BBC Micro:bit in this project.

Using the micro:bit coding editor, we'll code music blocks to change the notes and length of the tone, coding the popular Christmas carol, Deck the halls.

All you need is an internet browser and access to <https://makecode.microbit.org/>

Click on New Project and give your project a name to get started.



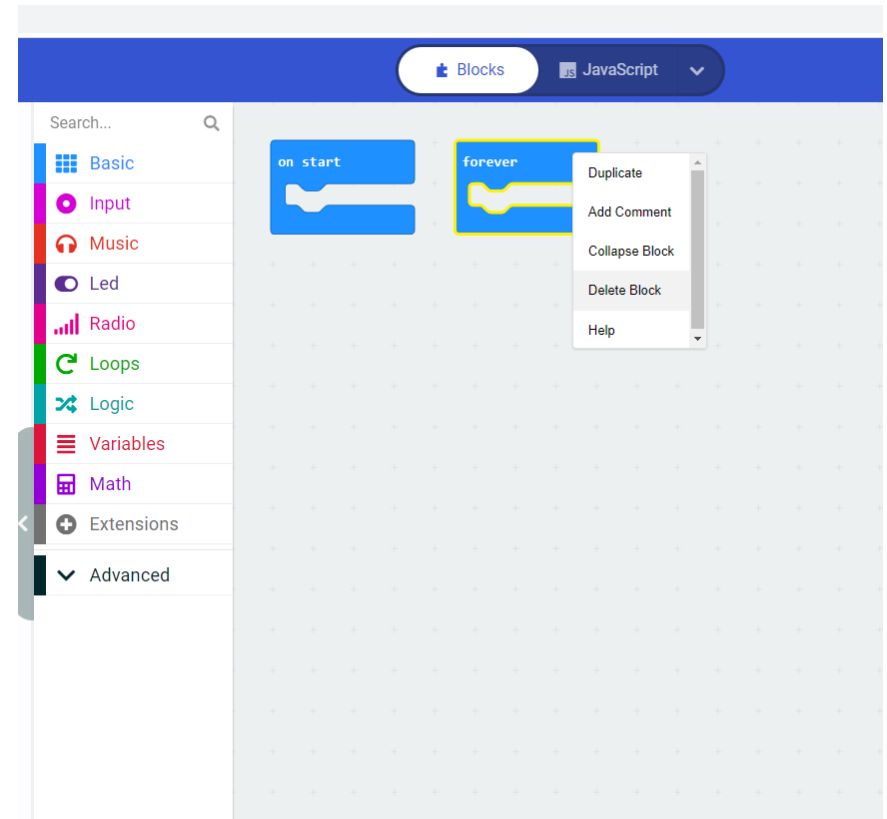
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Step 1

Once you've named your project, you'll see the coding area.

Two blocks will be available for you to start your code. For this project, we'll only need to use the **on start** block. Rightclick on the **forever** block and select **Delete Block**.

All the code we add from here will be placed within the **on start** block.



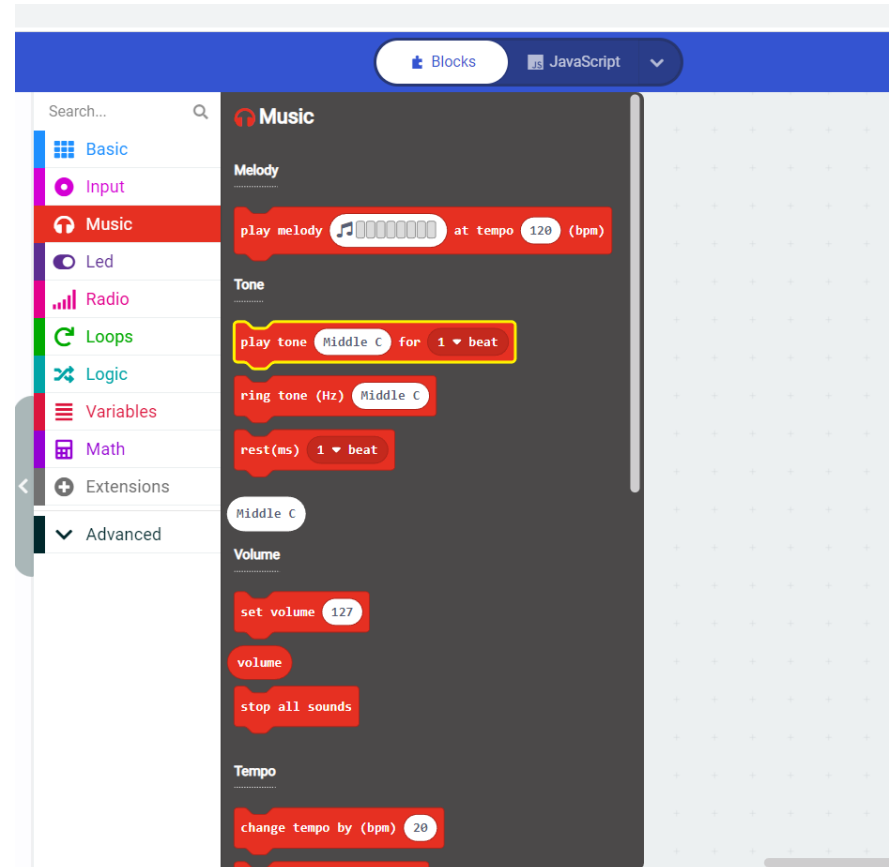
Step 2

We're now ready to start adding our music notes.

From the **Music** tab, select the **play tone Middle C for 1 beat** block, and drag it into the **on start** block in the coding area.



If you press the play button now, you'll hear the Middle C tone.



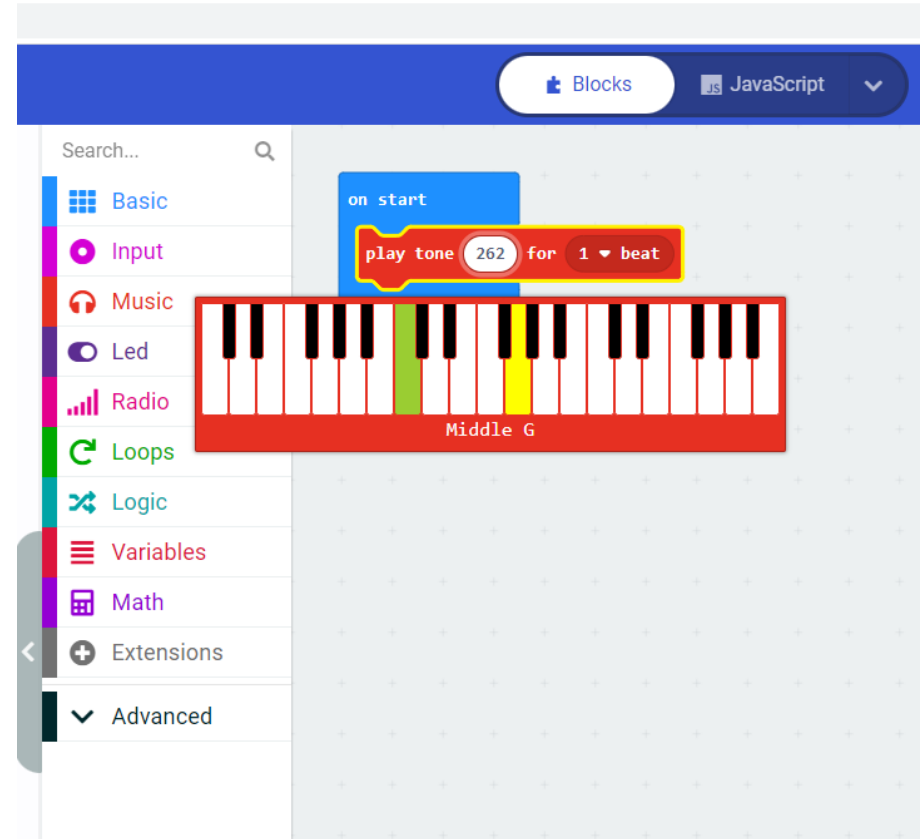
Step 3

The next part of the code is to change the tone of the notes we'd like to play.

Click on the **Middle C** wording to bring up the keyboard. Locate the **Middle G** key and select this note.



If you press the play button now, you'll hear the Middle G tone.



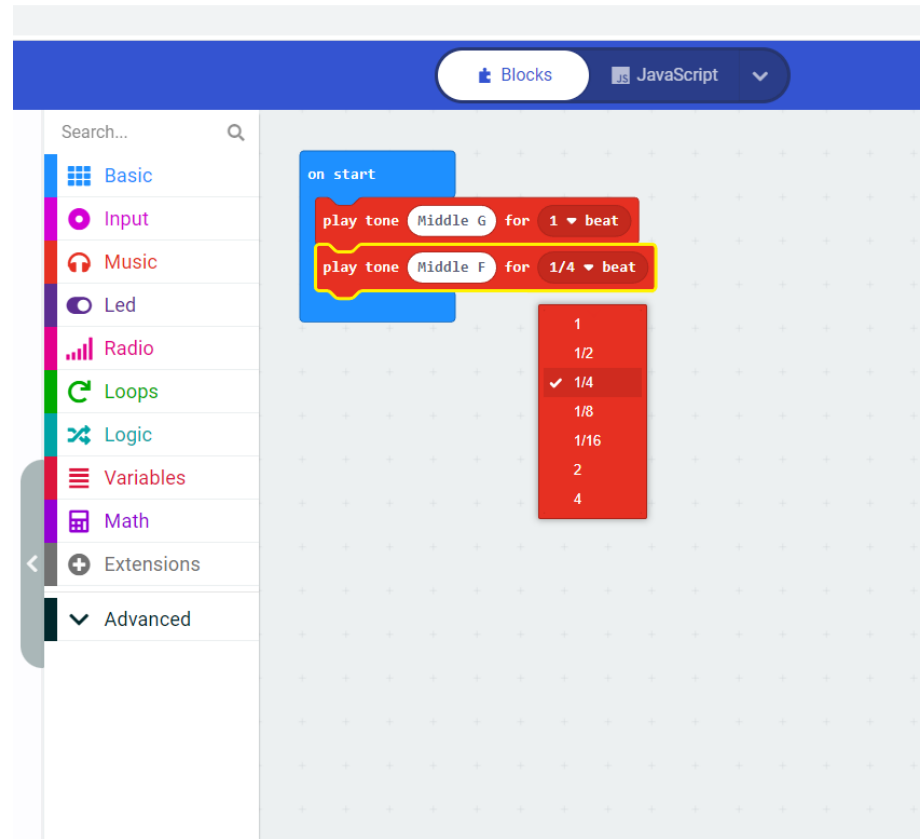
Step 4

We now need to add another note, and change the length of the tone.

Click on the **Middle C** wording to bring up the keyboard. Locate the **Middle F** key and select this note. Change the length of the tone by selecting $\frac{1}{4}$ **beat** from the dropdown.



If you press the play button now, you'll hear the first two notes.



Step 5

Now we've added the first two notes, we need to code the remaining notes.

Continue selecting the notes from the music tab, matching the key and length to the full code shown here.

Once you've completed the code, press play to listen to your Christmas carol!



on start

```

play tone Middle G for 1 ▾ beat
play tone Middle F for 1/4 ▾ beat
play tone Middle E for 1/2 ▾ beat
play tone Middle D for 1/2 ▾ beat
play tone Middle C for 1/2 ▾ beat
play tone Middle D for 1/2 ▾ beat
play tone Middle E for 1/2 ▾ beat
play tone Middle C for 1/2 ▾ beat
play tone Middle D for 1/4 ▾ beat
play tone Middle E for 1/4 ▾ beat
play tone Middle F for 1/4 ▾ beat
play tone Middle D for 1/4 ▾ beat
play tone Middle E for 1 ▾ beat
play tone Middle D for 1/4 ▾ beat
play tone Middle C for 1/2 ▾ beat
play tone Low B for 1/2 ▾ beat
play tone Middle C for 1 ▾ beat

```

```

play tone Middle G for 1 ▾ beat
play tone Middle F for 1/4 ▾ beat
play tone Middle E for 1/2 ▾ beat
play tone Middle D for 1/2 ▾ beat
play tone Middle C for 1/2 ▾ beat
play tone Middle D for 1/2 ▾ beat
play tone Middle E for 1/2 ▾ beat
play tone Middle C for 1/2 ▾ beat
play tone Middle D for 1/4 ▾ beat
play tone Middle E for 1/4 ▾ beat
play tone Middle F for 1/4 ▾ beat
play tone Middle D for 1/4 ▾ beat
play tone Middle E for 1 ▾ beat
play tone Middle D for 1/4 ▾ beat
play tone Middle C for 1/2 ▾ beat
play tone Low B for 1/2 ▾ beat
play tone Middle C for 1 ▾ beat

```

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