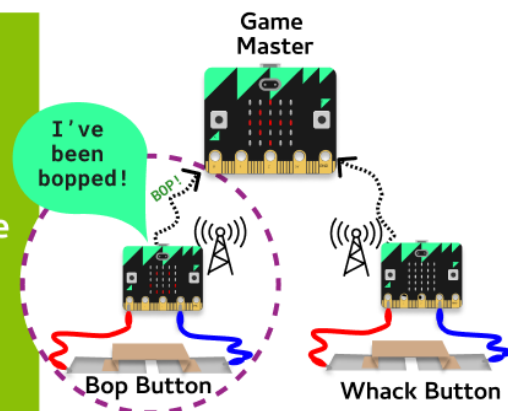# Extension

Co-op Bop!
(Radio Button Code)

Link more buttons to your game using radio to communicate!

Spread them around the room and play as a team!

Task 1.1: Configure the Radio

We'll need to start a new file for our game master!

1. Go to the **Co-Op Bop (Button) Playground** in the Grok course.

2. At the top of your file, **import** the **micro:bit** and **radio** modules.

3. **Turn the radio on** with **radio.on()**.

4. **Configure the radio to use the channel** that your tutors gave you using this code: **radio.config(channel=10**)

Next we'll make a loop that sends a message every time the button is pressed!
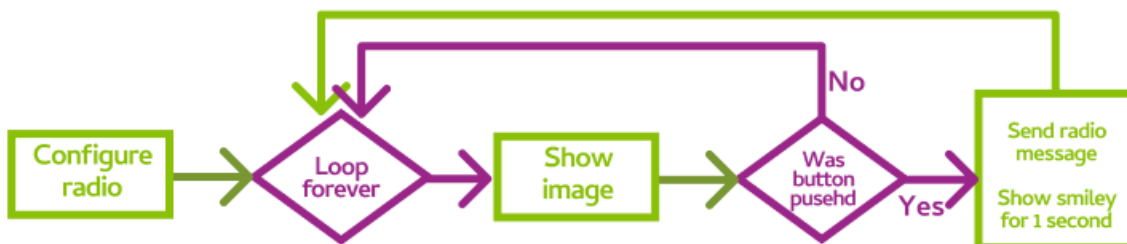
Task 1.2: Loopy for radio

1. **Create an infinite loop** after you have set up the radio

2. Inside the loop make the Micro:Bit display an image that will be it's identifier.

3. **Inside the loop create an if statement that checks for an action. (Use any action you like!)**

   Actions: We have the Micro:Bit buttons, shake and other gestures, and buttons you craft yourself! Remember to use the correct code, e.g. `is_pressed()` *or* `read_digital()`.

4. **In the if statement, send your action to the game master**: *Remember to use your own action name:* `radio.send("bop")`

5. After you send a message **show a smiley face** for 1 second

6. **Run your code** in the Grok simulator to see it communicate to the other MicroBit!

Task 1.2: Join the game

Now you have working code you can get your button to join the game! You need to add your action to Master Game Code.

1. **Go to the Game Master Code** (for your game, or a game you want to join)

2. **Add your action name to the list of actions.**
   (Your action name is the message that your button sends over the radio)
   Make sure your name is different to all the other action names.

3. **Copy the if statement code that checks the action and shows an image.** Show the image you chose to show you Micro:Bit. Make sure it's unique!

☑ CHECKPOINT ☑

If you can tick all of these off you have finished this Extension:

☐ You have configured your radio with hte channel your tutor gave you

☐ When you press your button it sends a radio message to Game Master.

☐ You show a smiley face every time you press your button

☐ You added your button to an existing Co-op game!

🧍 | Extension